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Shire Horses.

Importers and breeders of Shires may well feel encouraged at the outlook for these noble horses. They have grown gradually in public favor in the United States for 14 years, and rapidly during the past five; they have gone ahead with a rush the last two years, carrying everything by storm, having won first prize at every prominent show throughout the West where they have come in competition with other draft breeds.

At the Chicago Fat-Stock and Horse Show they have won first for three years in succession. For two years it was won by Geo. E. Brown & Co.'s Holland-Major (3135), and was open to the world for draft horses of any breed.

The reason why the Shire impresses every practical horseman favorably at a glance, and bears a critical examination, is because of his nicely balanced proportions, together with his wonderful bone and muscular development. There is no surplus or useless weight about him—every part being available and every part in proper proportions. We refer our readers to the picture of the imported Shire stallion Scampston Tom, which appears in this issue. He is a grandson of old Honest Tom 1111, one of the most noted Shires and greatest prize-winner in England.

How many times we see heavy horses whose weight is a positive disadvantage to them, for the reason that their bone is too light and muscle and sinew deficient. Some that appear to have strong legs will not bear close inspection, for the bone is found to be round and covered with meat instead of being backed by sinew. This fault is rarely found in the Shires; their legs are not only large, but the bone is flat and flinty in quality and the sinew well defined and not hidden by fat or flesh.

A well-bred Shire has a clean, bony head; prominent, bright eyes; neck well set on massive shoulders, and carried high, rising gracefully from his withers; the body is deep; ribs, well sprung; loin, strong; quarters, long and carried well out to the tail and not drooping; thighs, heavy and extending well down to the hock, a point where many others are deficient. They vary in weight from 1600 to 2000 pounds; the larger ones measure 11 to 12 inches below the knee and 14 inches below the hock; and their feet are exceptionally good. English breeders are compelled to be particular on this last point, for a poor foot could not stand the stone roads of the country nor the granite pavements of the city.

No other horse has the hardy constitution or natural energy of the Shire, and it is these qualities that are bringing him to the front.

They are worthy the careful attention of all breeders of heavy horses for practical purposes. They are commanding high prices in the Eastern cities and in the lumber regions.

INCREASING USE OF BISULPHIDE OF CARBON.—M. Pasteur anticipates that bisulphide of carbon will become the most efficacious of all antiseptics, as it is also the cheapest, costing but a fraction of a penny per pound in large quantity. It is also the best insecticide known, and for this purpose may perhaps be useful to preserve woodwork in tropical coun-

A Great Canal in Asia.

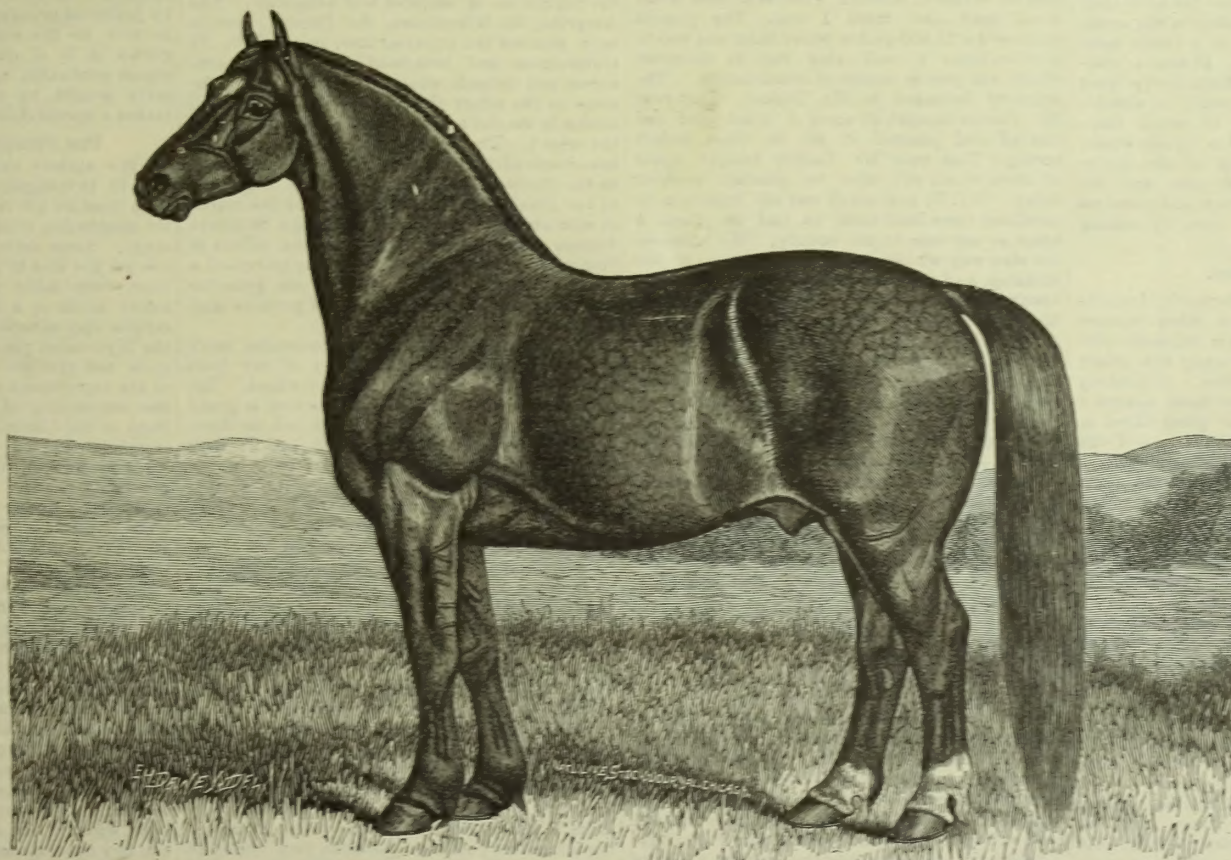
The proposed canal between India and Europe by way of the Euphrates Valley, the Persian Gulf and Syria, has been discussed in all its bearings by the French Academy of Sciences, a communication on the subject from M. Eude forming the basis of the discussion. The line marked out by M. Eude is stated to be what was the great route of commerce in ancient times, before the founding and development of Alexandria diverted it on Suez, eventually leading to the Suez canal. This new route is avowedly put

Our Wool Product.

In view of the tariff agitation the statistics of the California wool crop for the year become of special interest. We will give in our next issue an annual review in detail of the subject, but may state at this time that statistics show the yield of last year to have been the smallest since that of 1873, and a decline of over 25,000,000 pounds from the crop of 1876, which was the largest in the history of the State. Another way of stating it is that the crop of 1887 was less than three-fifths of the crop of the centennial year. Of course this decrease has been in part directly due to the fact that the old sheep ranges of the valleys have been found more profitable for other uses, and that now orchards, vineyards, and even thriving towns and cities stand where the sheep tramped ten years ago, but this great decrease of the product would not have been experienced had not the tariff-reform fever started in about that time, and has raged ever since, until the whole business has been discouraged and unsettled. If the favoring conditions had been held out to the wool-growers which ministered to the uprising of the interest from 1867 to 1875, the taking of the richer lands for more profitable cultures would not have so reduced our wool product. The sheepmen would have sought places in the waste lands, which are still in immense area in this State, and would there have maintained their flocks and sent on their large clips. Besides this, a good price

for wool would have induced a large keeping of sheep on small farms, where, by the aid of alfalfa and other tame pasture, we should have increased and improved our wool and mutton product by better feeding and better breeding than sheep ever had on the wild ranges. This being true, it is clear that to the tariff reformers is due the decline of this important interest, and all that is needed to carry on the unfortunate decrease is to complete the program of the free-traders and put wool on the free list. Then California will well-nigh expire as a wool State, and our flock-masters can sit on their fences and count the cars of Australian wool which will keep up the wool traffic of the overland lines.

This will not be a good state of things. It is true that we have other sources of wealth and are progressing rapidly in developing them, but we are not rich enough, nor shall we ever be rich enough, to dispense with the golden tread of the sheep. Our prosperity calls for the utilization of all resources, and the pickings of the sheep upon our mountain-sides should always afford livelihood to thousands of well-to-do people.



ENGLISH SHIRE STALLION SCAMPSTON TOM—IMPORTED BY GEO. E. BROWN & CO., AURORA, ILL.

tries. Some idea of the use it is already put to may be gathered from the fact that over 8,000,000 pounds of the substance are used annually to check the ravages of phylloxera. Carbon bisulphide, as first produced, is about as foul-smelling a compound as it is possible to find; but it is capable of purification till all offensive odor is removed and it is sufficiently pure in smell almost to mix with a perfume.

THE MIRAGE OF SOUND.—M. Fizeau, of the French Academy of Sciences, calls attention to a curious acoustic phenomenon, which is sometimes observed at sea, and to which, from its analogy to the well known phenomena of light, he terms the "mirage of sound." Under the influence of strata of air of various temperatures, he finds that the sound waves may be deflected upward to a very marked extent. He considers this phenomenon responsible for the numerous recent collisions between ships provided with powerful fog-signals.

MRS. WATSON, who some time ago established a home for girls in Los Angeles, has at length succeeded in her later project of starting a similar home for boys in that city.

forth as a parallel way to that of Suez, and the project contemplates, in fact, a canal with a double aim, viz., a canal of irrigation and navigation—and by which means it is expected that fertility will be restored to those wastes. The plan is to create a river from Souseidieh to the Persian Gulf, by making the Euphrates flow to the Mediterranean by Aleppo and Antioch; from Beles, in deepening the river from Beles to Felondjah, near ancient Babylon; in passing from the Euphrates to the Tigris by the canal of Saklavijah; and lastly, in descending the Tigris from Bagdad to Kornab, Bassora, and Fao on the Gulf. Such a canal would shorten the going and coming voyage to Bombay by six days; and, notwithstanding the vastness of the work, the engineering difficulties are not considered extraordinary, except the stony banks of Abou-Said and Kerbeleh, which, however, would not resist modern appliances.

An iron pier is to be built at San Pedro, just beyond Deadman's island, to be a double-decker and to extend far enough into the water to allow the largest steamers to discharge passengers and freight upon it.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Green Valley, Sonoma County.

EDITORS PRESS:—This is the time of the year when we usually read in the papers that the early rains have spoiled the dry feed, and as the young grass is not yet grown enough, cattle are suffering, and consequently farmers are complaining, but this year it is all different for a change.

We did not have rain to hurt dry feed till after Thanksgiving; even now in sheltered places there are good sound grapes hanging on the vines, and when the rain did come it was accompanied by mild, growing weather, so that the hills are already showing the effect in the fresh green color, and even Green Valley greets us with a greener grin; but the farmer is again reported as complaining; this time they say that during all this glorious weather, stock ate up all the dry feed and now there is no feed of any kind, dry, spoiled or unspoiled, or green feed either.

Improved Farming Methods

Each year add some farmers to the list of those who realize that a few animals well kept are more profitable than a large herd of poor, starving brutes. That we have an unrivaled climate for raising domestic animals is true enough, but when they have eaten everything green and dry within reach, it is time to concede that they cannot live on climate only, but need some of the productions of our soil and climate combined. It is not so many years ago that the pastures of some of our sheep-raisers would contain almost as many dead lambs and sheep as living ones, and that owners of six or seven cows bought milk from neighbors who only kept one or two. It may be that the improvement in that line is due more to financial than humanitarian causes, but the effect is the same.

General farming is also done in a much more systematic way than formerly. It was a common practice to sow the same fields every year successively to grain and afterward to wonder why the grain should contain so much more mustard and radish than it did in former years, and why hay should be so much of the sheep-sorrel variety. But the fruit tree and the grapevine are crowding hay, corn and potatoes so much that we have to get even by raising more to the acre.

Orchard Notes.

It is easy to see what is a farmer's favorite piece of land. In former years what manure our farmers did not put on their vegetable plot would go to the hayfield, but lately the peach trees receive the friendly dose. Something curious about this is that without almost a single exception the manure is piled three or four inches high right around the trunks of the tree, and no one seems to bear in mind that a good healthy tree should have its fibrous roots scattered all through the ground between the rows and surely not at the stump.

Nurserymen expect a large demand for peach trees this year, and have prepared to meet it by fixing the price of trees at 25 cents. Different persons here complain that they had engaged olive trees at a certain price during the summer, but have been notified that trees could not be delivered. The nurseries are out of that kind of trees, not because they did not raise them, but that kind of trees are now transferred to a higher priced department, where we will be pleased to receive orders from our many friends and former patrons, who will find all our trees free from insect pests and true to name.

Pruning has begun in earnest and will be our principal occupation for some time. Most of the grain is sown and up. There has been just about enough rain for plowing, and not so much as to make the ground too wet.

Weather Prophecies.

The oldest inhabitants are again predicting all kinds of winter. A sportsman once told me that he had noticed rabbits, or rather hares, would be very fat before a heavy winter, and without a sign of fat in case of a mild winter.

It was a few days before Thanksgiving; there had been a light rain which cleared the air of smoke, and nature looked so fresh, the sun shone out so bright, and the air felt so balmy, that I concluded to give myself a holiday to see how my neighbors were getting along, and took my gun to be prepared for the festive jack, whom I wanted to dissect, so as to know what sort of winter was in store for us.

Notes of a Ramble.

Green valley is divided from the Santa Rosa plains by a strip of rolling land or very low hills, of which every foot is cultivable.

Beginning at Sebastopol, a place of 400 or 500 inhabitants, this strip of land is almost level with the lowland of Green valley and the Santa Rosa plains, but rises almost imperceptibly toward the north. At the edge of town, so close that some of the houses built on it constitute part of Sebastopol, is the tract of land known as the Hunter place. Fifteen years ago this place of several hundred acres was offered for sale at \$5 an acre; it was covered with fir and manzanita, and now what a change! As I strolled along through young orchards and vineyards, I noticed the improvement in the modern way of building the houses found on every 20 or 30 or 40-acre place. Why is it that people never found out before that by building

a house three or four feet above the ground, and putting in one or two bay-windows, the same material will make a cottage that looks twice as neat as the old-style house?

As I walked along I saw places enough where the rabbit had tasted from the growing plants and the apples under the trees; but when you have a gun you never see any game.

After leaving the Hunter tract, we, that is, my gun, my dog and I, found the places a repetition of the former ones, though not quite so far advanced, little orchards and vineyards, intermingled with patches of brush and fields, just cleared, with the wood piled up ready to be hauled off.

Respect for the Picturesque.

A new settler's aim is always to clear a piece of land, and he generally begins near his dwelling and fences each piece as it is cleared, making his place a labyrinth of fences and gates and without a single shade tree. But most of our new-comers are people from towns, whose object is to have a nice home, and as I passed along I did not find it hard to see the difference. They build their house on the prettiest spot they can find; if the land is not all cleared they keep a grove of natural trees and shrubs, to hide the barn and outhouses, and surround their dwelling with fruit and ornamental trees and vines, with a driveway to the front door and no more fences than possible. A place like this, without a solitary pig or cow or chicken in sight, may be lonesome, but it is surely pretty. When I had passed through three or four miles of these little farms I came upon a young vineyard of about a hundred acres in one piece and surrounded on four sides by brush. This is to be the future home of a San Francisco furniture manufacturer. A little further on I saw about a mile ahead on the highest place in sight what looked like a one-story Chinese pagoda, and thither I went through a piece of forest, a good sized orchard, a vineyard, a stubble field, another orchard, another vineyard, then some brush land, and there I was. The pagoda contained a 25,000-gallon water tank and was to be filled from a well nine feet in diameter which was just in course of construction. The property belonged to Mr. Tucker. Last year Mr. Tucker bought 40 acres of brush land and cleared and planted it all to vines before spring. This year Mr. Tucker bought again 40 acres which will also be planted without delay. Mr. T. told me it was his intention to purchase more land until he had as grand a home as any man in the county. We climbed the stairway which leads to the top of the building, and a beautiful view we had within a distance of a mile and seeming all below us. Mr. Tucker pointed out the 160-acre vineyard of W. Hill, the Petaluma banker, the 100-acre farm of Mr. Frye, four 50-acre vineyards belonging to Messrs. Copius, Clark, Cessary and Surryhne, and nearly a dozen smaller ones, among which was Mr. Tucker's. In a few years this will be the center of a solid block of 3000 or 4000 acres of grapevines.

Just as I was preparing to take some notes of the surrounding landscape the gong told us that dinner was ready, and as I was only clothed with a pair of overalls and a cotton shirt, I thankfully declined an invitation to dine, and pursued my way toward the Hill vineyard, which was in sight.

A Fine Outlook.

Without knowing that the ground was constantly rising and busy to make up with second crop grapes what I had lost by going without a dinner, I suddenly became aware that the tank which I thought the highest point in the neighborhood was quite below me, and far beyond to the south over the top of that tank I saw the gum tree covered hills of the Petaluma sheep ranges and beyond them Mt. Tamalpais and the hills skirting San Francisco and San Pablo bay. Toward the east came first the central valley of Sonoma county, about eight miles wide, with Santa Rosa in the distance, guarded by Taylor mountain, a spur of the Mayacema mountains. There was Bennett peak holding guard over Bennett valley, and Hood's mountain of the Guilocoos valley.

A little more to the north was Fulton and St. Helena mountain in the distance and the hills toward Cloverdale. On the west the redwood-covered hills, the freshest, pleasantest looking border of them all, and right before me was

Green Valley.

There's not another valley in all Sonoma county half as pretty, nor as fit for a country home. And as I saw the houses and orchards and vineyards all around where five or six years ago was only brush and timber, I sat me down there on the ground among the vines, in the middle of November, coatless in the sunshine, chuck full of grapes and admiration for the country around me, and wondered how any one who had the money to pay his fare could want to live in any other land.

How to Hit a Jackrabbit.

Suddenly there was a yelp—my dog had started a jack. I jumped up, saw where the jack was going, marked the place where he would next jump, sent a load of shot there, and the jack jumped into it and died. This is quite easy. I can send the load of shot every time the gun goes off, and the jack jumps into it at least nine times out of a hundred for me.

But whether it was the sight of blood or what, I do not know, but nature had lost its charm for me, and I dragged myself and that jackrabbit along the seven miles of road toward

home, and I got there tired, hungry and disgusted.

The rabbit was the fattest I have ever killed, and the winter so far has been so mild that any one but a Californian would be glad to have it for a spring. A GRANGER.

Green Valley, Sonoma Co., Cal.

HORTICULTURE.

The Apricot.

[An essay by Dr. Edwin Kimball of Haywards, read at the Santa Rosa Fruit-Growers' Convention and furnished for publication in the PACIFIC RURAL PRESS.]

It was a happy thought of the old mythologist in giving a distinct personality to all things. There was a real life in all; the material as well as the invisible became living spiritual personalities. The sea spoke of peace, joy, remorse and eternity. The rolling thunder was the voice of the mountain and the lightning was the flash of Jove's resplendent armor and his invincible power. The wind spoke with a hundred tongues. Each leaflet of the forest, each blade of grass, murmured the song of hope, love and exaltation. Nature far and wide, above and below, was a revelation. And so to the devoted orchardist, as he walks alone and in silence among his trees, come the quiet whisperings of their wants, their hopes and fruition. They trust him like children. His will is their law, for he is their creator. So in thinking of a fruit tree we may elevate it to the dignity of a living, breathing personality that may live after us and bestow its blessings in annual gifts upon our children.

Among all our fruit trees, the apricot is one of the most beautiful. Away back in the dimness of years, it was first known in Western Asia, the cradle of the human race. It has survived the rise and fall of dynasties and all the mutations of empires and kingdoms. The Assyrian, the Babylonian, the Persian, have in turn planted the imperial tree, rejoiced in its fruitfulness and bestowed its delicious conserves and delicate wines in offerings and oblations on the altars of their divinities. It still abides in its old home and may be found in all the orient. The traveler may now sit under its broad-spreading branches from the Euphrates to the Mediterranean, and from the Black sea to the Persian gulf. It has followed the march of man and civilization west through Southern Europe and Northern Africa to the pillars of Hercules. It has crossed the sea, traversed a continent, and found at last in our generous soil and genial climate the land of promise and hope.

There is no exhibit that demonstrates more thoroughly the richness and glory of our fruit wealth than a well-kept apricot orchard. The fruit is beautiful and luscious; the tree is grand and imposing; its branches reach out in their strength and greet the strongest breeze with joy and delight. The almond is only in advance in its bursting blossoms in the spring-time, but soon is overshadowed by the richer, warmer beauty of its expanding petals and golden crown. Its first leaves tell us of its Eastern home, tender, delicate and variegated as the song of the Persian poets. They broaden out in richest green, luxuriant and triumphant in orchard beauty. The orange is solemn, rich, magnificent; it is for all the year and lives a century. But the apricot comes like a surprise. It runs riot with joy and promise and culminates like a golden dream of riches.

The apricot is at present the tree of hope for many parts of California. It belongs to us alone, for no other State of this broad land can raise the apricot with success and profit. No fruit tree is more vigorous in its growth, more rapid in its development, and swifter in repaying a hundred-fold the generous care bestowed by the intelligent orchardist. The way is clear for the future of a great industry, and the question arises, where in this great State, of almost boundless extent and possibilities, the apricot should be planted to attain the most productive results. It can be grown on all our hills and in all our valleys, for it is tenacious of life under the most adverse conditions; but it is in deep, rich, alluvial soils, thoroughly drained, where the temperature is even, and where the atmosphere is softened by the breath of the sea, that it attains its greatest size, its most beautiful coloring, and its most exquisite flavor. It is in bloom earlier in the bay and Southern coast counties than in the interior valleys; but the intense, dry heat of the interior brings the apricot to maturity a month earlier than in the more temperate region of the bay and coast. Thus it will be perceived that the intelligent orchardist will select a suitable location if he desires in this branch of orchard industry sure and substantial results. Many extensive apricot orchards have been planted in this State that have been positive failures, and many that produced indifferent and uncertain crops of fruit.

The apricot will grow almost anywhere in California. Down on the banks of the Colorado river, stimulated by the intense heat and abundant irrigation, its growth is rapid, and in fruiting it is precocious. Even under the burning sun and desiccating atmosphere of the Colorado desert it triumphs and yields its tribute of the earliest fruit in the State to the salamander-like cultivator. It flourishes in the many oases that the hands of diligence and labor have developed in many of the southern portions of the State. From the Tehachipi through the great

inland empire of the San Joaquin, along the foothills of the Sierras to the Shasta mountains; through the broad, rich valley of the Sacramento, in all the valleys around the Bay of San Francisco, in all the sheltered nooks of the Coast Range down to San Luis Obispo, where it reaches down almost to the ocean shore and continues to the Mexican line. Here is a wide scope of country where its cultivation is possible. But its success is certain and its cultivation the most profitable where it breathes the salt air of our magnificent bay and looks out from the tranquil shores of the Pacific.

The Asiatic coast of the Black and Mediterranean seas has been noted in all time for this beautiful fruit. Greece, Italy, Southern France, Spain and Portugal now cultivate the apricot, and with them we must contend for the possession of the world's market. We may safely claim the whole North American continent as our exclusive heritage for marketing this fruit. Our superior product and import duties preclude the possibility of any interference with this great empire and its teeming millions.

Varieties.

The varieties of this fruit are marked and distinct. The Moorpark is doubtless the largest and finest flavored of all apricots, but there are many places where its fruit is uncertain, and when it does produce it ripens unevenly. It is the tenderest tree of the whole apricot family. If the months of January and February are too warm its buds swell too rapidly, and a cold rain or lower temperature will chill the sap and arrest the future development of the blossom buds. I have seen this phenomenon in three consecutive seasons.

The Blenheim or Shipley, generally sold by nurserymen, has also its disadvantages; while its quality is good, it ripens too swiftly, and in large orchards of this variety there is almost a certainty of great waste in picking, shipping and properly manipulating the crop.

The Royal all in all is unmistakably the apricot for the best results. Always productive by judicious pruning and thinning, it is almost as sure as the seasons. And when properly grown it is of good size, excellent quality, ripens gradually, hangs long on the tree, is eagerly sought by the canning fraternity and makes a splendid dried fruit.

The Planting and Cultivation

Of the apricot embraces a broad and fertile field of investigation and experience. It has been tried on all varieties of stocks and under all imaginable conditions of soil and temperature. Some orchardists have endeavored to compel the tree to grow and produce under the most formidable conditions. If the soil is heavy adobe or a light loam over an impenetrable clay subsoil, then grafted or budded on the Myrobalan plum stock, it can be made to grow and produce some fruit, but the success of the experiment will be as problematical as the conversion of the Mongolian to modern ideas or the Christian faith. The peach stock is widely used and with generally good results, for it grows well wherever the apricot can be profitably raised. But in deep dry loams there is no stock that will make such magnificent trees or produce such perfect fruit as on stocks grown from pits of the Royal, Blenheim or Early Golden apricots.

The cultivation of this naturally thrifty tree is simple and well understood. The winter months are the best time to plant; broad, deep holes and thoroughly pulverized soil should be the sure foundation for the future tree. They should never be planted less than 25 feet apart, for it is a tree for a generation of men. When planted the ground should be kept thoroughly cultivated. It is possible and even better with ordinary winter rains and deep, generous soils to produce the most perfect fruit without irrigation, even in our hottest, driest central valleys, while in our more favorable locations of the bay counties irrigation would ruin the quality of the fruit.

The pruning of the apricot is the rock on which many young and inexperienced fruit-growers in their anxiety for immediate results run and are wrecked. It is a tree that, like our youth, needs early and effectual discipline until its habits are formed and it enters upon its golden age of maturity and productiveness. The most prolific of all our fruit trees, its very abundance is a source of embarrassment. The trusting fruit-grower looks with delight upon his acres of thrifty trees bending under their weight of green fruit and anticipates the golden harvest, forgetting that nature is always prolific and provides security for a never failing posterity. The law governing the profitable growth of all our fruits, ignores nature's great motive of reproduction, and by judicious pruning of the tree and thinning of its fruit preserves for a generation the vitality that would otherwise be wasted in a decade of years. No tree demonstrates this more thoroughly than the apricot. A tree will cease to be profitable when its vigor is gone and its vitality destroyed by overbearing of inferior crops of almost worthless fruit. The fruit pulp protects only the precious pit or seed and nature is indifferent to its desirability for the taste or nourishment of man. And here is where the skill and experience of man for centuries has evolved through endless experiment and selection all our richest and choicest fruit.

Our illustrious progenitors in the primeval Garden of Eden fresh from the Great Master's hand possibly may have revealed in the most delicious and nectar-like fruits, but the presumption is strong that their pristine simplicity and trust in the wiles of the tempter was paralleled

also by severe poverty in their primitive pomological wealth. The prudent, careful orchardist must use the knife unsparingly for the first four years, unmindful of fruit, and the tree will grow in strength, symmetry and beauty. Every branch will have its allotted place, and the sunshine will look in on all the limbs and twigs and give color and sweetness to the ripening fruit. No general rule may be given for the pruning of the apricot, only that its growth be directed, its exuberance restrained and its annual growth kept, if possible, in equilibrium.

The apricot kept always in vigorous growth, and fruit well thinned, will yield almost sure annual return. With a full setting of fruit, three-quarters at least should be removed, and then there will be twice the amount of available fruit pulp at the time of harvest. The apricot tree is subject to but few diseases. Nature has endowed it with such wonderful recuperative power that, although riven and broken by the tempest to apparent destruction, it sends forth new branches and is soon stronger than ever. Trees of 20 years' growth may be cut back in the winter months to half a dozen forks with sloping cuts well covered with a solution of shellac and linseed oil, and they will be renewed in productiveness, quality of fruit and apparent longevity.

Occasionally a tree perishes in May with the blight. From full vigor of leaf and growing fruit it withers in a day. There is seemingly no known remedy for this acute disease that some seasons affects other varieties of trees.

The shot-hole fungus has often trenched on the profits of apricot orchards in some parts of the State. This pest illustrates the necessity of vigilant action in blotting out this trespasser on the most beautiful of fruits. It appears in the incipient stage immediately on the setting of the fruit and the expanding of the leaf, with rough, wart-like specks and patches on the skin, destroying its beauty and seriously impairing its flavor and rendering it unfit for canning or the market. When the fungus affects the leaf it destroys its substance, and the leaves have the appearance of having been riddled with shot. Air-slaked lime thoroughly and plentifully sprinkled over the tree immediately after the setting of the fruit and bursting of the leaf has proved an effectual remedy.

The Apricot in Commerce.

The present large and increasing acreage in apricots is unprecedented in the history of its cultivation. Millions of people in the United States are totally ignorant of its great value as an attractive, wholesome, commercial product. As a table-fruit, when well-grown and thoroughly ripe, it rivals all other. When properly canned, it is the most delicious of all California fruits, and when properly dried it has only to become known, and it will be the favorite dried fruit of the world.

The time has now come that only the best and most desirable varieties should be grown. Extra care should be taken in pruning, thinning and cultivation, so that only the best, largest and most attractive fruit should be produced. The canners and shippers will soon accept no other, and the thousands of busy hands now needed will soon have to be increased tenfold, and no time should be wasted on small, inferior and imperfect fruit, that destroys the reputation and checks the domestic and foreign demand. The prospective annual increase of thousands of tons demands the most careful preparation and organization to successfully handle the vast amount. It should be arranged with the care and precision of a military campaign. Canners must double their forces, and those that ship should have large numbers of boxes in reserve.

Drying Apricots.

The time is at hand that the grower must depend on drying as the only method of disposing of the vast surplus. Evaporating or machine-drying for this large amount is an impossibility. Every grower should provide the means to dry his entire product, regardless of canners or the market. It will sustain the price and enable him to act independently of the canners and the vicissitudes of the daily market. All possible arrangements should be made for the needed labor. Schools should be vacated in the drying season, and the rising generation have a practical lesson in industry and economy. Trays and all necessary conveniences should be prepared weeks in advance. Sun-drying must be the main dependence. It is cheap and effective. To make a perfect dried fruit it must be thoroughly ripe and the product will never be a disappointment. The market demands an attractive, even product in dried fruit. To accomplish this, the fruit, immediately after cutting and placing on the trays, should be subjected to sulphur vapor for 20 minutes in a close cabinet or box, with slides prepared for the purpose, or placed on low trucks and rolled on tramways into small, close, suitable rooms, prepared for fumigating the fruit. It will then rival the most carefully evaporated product. Sulphuric acid, if existing at all, will be found only in infinitesimal quantities. The sanitary question is one for the chemist and public to settle; but the generation that wears tight shoes, stays, eats arsenic and is saturated with nicotine and tobacco juice, with the necessary adjuncts of drugged liquors, beer and wine, will hardly call in question the premature and moderate use of brimstone.

Upon the proper management of the dried fruit business depends the prosperity of the orchards of this great State. All of our fruit interests are to-day in

the ascendant. Orchards and vineyards will soon cover the land. The olive and almond will soon displace the chaparral on a thousand hills and embellish them with homes of plenty and peace. Surely this highest of all husbandry should elevate and ennoble the race. The world of fruits, like the world of men, rises on every swelling tide of cultivation, material prosperity and peace, and ebbs away in their decline and poverty almost to the verge of extinction. The Aegean shore saw the birth, culmination, and death of a race favored of the gods in form, strength, grace, inventive genius, and mental power. The artist's brush lost its skill, the sculptor's hand its power, to make the spotless marble radiant with life, beauty, and strength. The flowing numbers of her poets and the melody of her minstrels faded away like a dream. The inspiration of matchless oratory was a thing of the past. And with crumbling temples and desolate shrines, art, knowledge and law passed away. The decline and destruction of a great people means not only moral, mental and material desolation, but the fading away of nature's richest ornamentation—the flowers and fruits that have adorned, refined, and made glad the race. Every great advance in the world is preceded by some wonderful evolution in nature's great laboratory of plant life. Thus, from the springing blade and bursting ear ushering in the harvest-time, the unfolding blossom full of hope and promise, comes all that is good, elevating, and progressive among mankind; and in the labor and experiences of man in the garden, the field, and among the trees, we may learn the story of his religion, his civilization and all his life.

THE FIELD.

How to Destroy Rabbits.

The Parisian journal, *Le Temps*, published the following letter addressed to it by M. Pasteur, in which the illustrious savant indicates a method for destroying rabbits. We are indebted for a copy to M. Ch. Joly of Paris, of which the following translation has been made for the columns of the *RURAL*:

PARIS, 27 November.

Your journal announced a few days since that the Government of New South Wales was, in a manner, powerless, in struggling against a plague of a peculiar kind—the abundant multiplication of rabbits, and that it offered a prize of 625,000 francs for the discovery of a process that would exterminate them. Some considerable portions of New Zealand, not less ravaged than Australia, are abandoned by the farmers, who have given up the breeding of sheep on account of the impossibility of feeding them. Every winter they kill the rabbits by millions without the slaughter appearing to diminish the number. Will you permit me to convey to those distant countries, through the medium of the *Temps*, certain ideas the application of which, perhaps, might be found successful.

Mineral Substances

And notably some phosphureted combinations have been employed up to the present time for the destruction of the evil. In selecting such means have they not taken a wrong course? To destroy creatures which propagate themselves according to the laws of a progression of life so appalling, of what consequence are such mineral poisons? Those kill upon the spot in which they may be deposited, but in truth, in order to reach living beings, is not necessary rather, if I dare say so, a poison like them endowed with life, and like them having power to multiply themselves with surprising fecundity? I wish, then, that they would endeavor to carry death into the burrows of New South Wales and of New Zealand by trying to communicate to the rabbits a disease having power to become epidemic. There exists one

Known as Cholera des Poules

(Chicken cholera), which has been made the subject of studies closely attended to in my laboratory. This disease is equally adapted to the rabbits. Now among the experiments which I have instituted this is found: I brought together in a limited space a certain number of chickens, and gave them food tainted by microbe, which is the cause of chicken cholera, and they soon died. The poultry-yards are sometimes ravaged by veritable epidemics of this disease, of which the propagation is due without any doubt to the dejections of the first diseased chickens, which taint the soil and the food. I imagine that the same thing would occur to the rabbits, and that, returning to their burrows to die, they would communicate the disease to others who could propagate it in like manner. But how arrange in order that the first rabbits may take into their bodies the disease destroyer?

Nothing is Easier.

Around a burrow I would place a detachable barrier, surrounding a certain space, in which the rabbits would come to seek their food. From experiments, we have learned that it is easy to cultivate in a state of perfect purity, and upon a scale as great as may be desired, the microbe of chicken cholera in the *bouillons* (broth) of any kind of meat. With these liquids, full of microbes, the food of the rabbits should be sprinkled, and very soon they would go to die here and there, and spread the disease everywhere. I add, that the parasite of the disease of which I speak is inoffensive to animals of

the farm, except, of course, to chickens, but these need not live in the open country. I doubt not that there may be in the infested countries some persons quite ready to apply the means that I propose, means very simple, and which, at all events, is worth the trouble of trying.

Please accept, Monsieur le Directeur, the assurance of my most distinguished consideration.

PASTEUR.

Claus Spreckels on Beet Sugar.

Claus Spreckels, organizer of the Western Beet Sugar Company, has prepared the following for the information of those interested in the beet-sugar enterprise:

My belief is, that the cultivation of sugar beets will soon be one of the largest agricultural pursuits, not only in California, but in all the Western States and Territories, both soil and climate being more favorable to the purpose than even in Germany. The failure in the past to manufacture sugar from beets, on a paying basis, has been mainly due to the absence of the best available machinery. The beets that were grown have been suitable for the purpose, but the machinery has been deficient. This, however, will be obviated in the future, as I have secured the right for the whole of the United States of all the latest mechanical appliances and manufacturing methods that are now in use in Germany, which is the largest and most successful beet sugar-producing country in the world.

The soil best adapted for growing sugar beets is a rich, sandy loam. Beets must not be grown successively in the same soil, and they must never be manured. Land that has produced a crop of beets should be planted in grain the next year, then manured and planted again in grain, and in the third year it may be replanted with beets, but it must not be manured that year. Thus, a farm of 150 acres would enable a farmer to grow 50 acres of sugar beets in each year, and I think I may safely say that the 50 acres planted in beets will prove more profitable each year than the whole of the other 100 acres that are producing grain at present prices. The price of beets will be determined by the percentage of saccharine matter that they contain, a few beets being taken from each load, as delivered at the factory, for analysis, the result of that analysis forming the basis upon which each load shall be paid for. By this means the best beets will obtain the best price, and the farmer will be encouraged to careful cultivation.

I propose to erect one factory at Watsonville at a cost of about \$400,000, which will be in full operation by September 1, 1888. This factory will consume 350 tons of beets in every 24 hours, but the consumption will be doubled by the following year. At present it will require 100 cords of wood and seven tons of lime daily during the four or five months that it is in operation. This will show the necessity of having good supplies of wood and lime close to the factory, which should also be near to a line of railroad or to suitable water facilities for shipment of raw sugar to San Francisco. The lime is a good fertilizer, and can be returned to the soil again. The pulp from the beets can be fed to cattle, and will keep them in fine condition.

Before erecting a factory anywhere I must be guaranteed that at least 2500 acres will be planted in beets every year for a definite number of years. I must also be assured of sufficient supplies of wood, water and lime in the neighborhood and good transportation facilities. It requires from 15 to 20 pounds of beet seed to plant an acre of ground. The seed costs 10 cents per pound in Germany, and would probably cost 12 cents per pound here. I am importing 25 tons which are now on the way, and some of this will be distributed gratuitously, in small packages, to those who desire to experiment on their farms. But I shall expect in return that those who do make such experiments from seed that I give them, will send me samples of the beets that they grow and the soil in which they are grown, for the purpose of analysis. It must be remembered that the large beets are not the best for making sugar. If the soil be very rich the beets should not be planted more than four inches apart in the rows. If the soil be of good quality the beets should be six inches apart in the rows, and eight inches apart if the soil be not so good. The rows should always be 14 inches apart from one another.

A factory will cost about \$325,000, but, for the first one, some of the machinery must be imported from Germany. Subsequently I anticipate no trouble in its being manufactured in this country. A site of from 30 to 40 acres is necessary wherever each factory is erected, so as to give ample room for the large quantity of machinery and buildings; also for the prompt handling of the great number of wagons that will be delivering beets at the same time so that the wagons may not be delayed and the work of the farmers impeded.

It is impossible yet to determine where factories should be located. I have received invitations from all sections of California, Oregon and Washington Territory to visit different localities, and I will endeavor to do so as quickly as possible. From the foregoing remarks, however, you will be able to form an idea of what is essential to the erection of a factory. Such information as I have indicated, if forwarded to me in conjunction with samples of soils and beets, will materially assist me in locating the sites for future factories.

THE STOCK YARD.

Spaying in Arizona.

For the first time in the history of stock raising in Arizona, says *Hoof and Horn*, the spaying of cows has been resorted to. The parties to first call the knife to their assistance in this direction is the Erie Cattle Company of Cochise county, one of the largest stock-growing concerns in the Territory, and one which, until a very short time ago, was credited with possessing all the range facilities it might want for its stock for years to come. The announcement, therefore, that it has let a contract for the spaying of 1000 cows, marks the entrance of a new feature into the economy of beef-producing in the Territory. It means in effect that overstocking has ceased to be a mere subject for discussion, and has instead become a tangible and well-defined evil that must be met and overcome, even to the extent of limiting the productive capacity of the stock, a class which until recently were valued more highly on account of this very power of reproduction that is now sought to destroy. While the operation of spaying is almost unknown in Arizona, but a very faint conception of the vast number of animals that have been subjected to it is entertained by even the best-informed of stockmen. An eminent authority in recently speaking on this subject made the statement that not less than 50,000 heifers were spayed so far during the present year, a number which seems incredibly large when it is remembered that spaying as applied to range cattle has hardly a record beyond 1885, although in European countries, and France especially, it has been practiced extensively for years, being used on all cows to prepare them for the butcher, and on dairy cattle which thereafter milk well for a few years and then become very fat and make beef of excellent quality. The popularity which spaying is destined to achieve will be great. Through it the strain on ranges can be reduced to a minimum, while the production of beef can be raised to the highest possible point. The risk attending it is almost nominal. Sparks & Tinnin, the cattle kings of Idaho and Nevada, report having spayed 4000 heifers during the last summer, and claim to have lost out of that number but two or three animals, a percentage of loss almost as small as that attending the universal custom of branding.

THE VINEYARD.

Grape Pruning.

EDITORS PRESS:—I see in your issue of Nov. 12, 1887, "Vine-Grower's" request for information on pruning. I have not written a book, but I can give the information he needs.

Early fall pruning is equivalent to root pruning and will not be followed by bleeding, but will stimulate new growths the next season with a heavy set of fruit buds. Late spring pruning after the leaves are well expanded will not be followed by bleeding, but will stimulate the growth of fruit buds for the next year.

Bad pruning is in order at any time after the fruit buds have so far advanced as to show where and how many clusters are to grow from a bud. Some vines bear close pruning, leaving a cluster to terminate the branch without leaves. The internode between two clusters so treated will make no wood and but little growth.

Other vines require a few leaves beyond the fruit to keep them alive. If properly pruned during the growing season, you have in the fall only to strip off the branches made—"little foxes" where they are not wanted. When your cane has reached a desirable length, bud-prune the end and all branches that are not desired, for canes should not be allowed to grow beyond three leaves or internodes, except when the strength of the vine is found to force the next season's fruit bud into premature action. Varieties differ in this tendency, and it can only be determined by experiment just how close to prune. The Clinton here bears the closest pruning. But in pruning, as in everything else, *experience teaches*. No varnish or paint is needed on the cut surfaces, and the cut is best made at a joint, as you thus avoid the dead, unsightly internode stubs.

GEO. F. WATERS.

8 Beacon St., Boston, Mass.

[This is written from an Eastern point of view and deals with a different system of pruning and different grape varieties than those we grow, but it has points of interest which may be suggestive to our growers.—EDS. PRESS.]

UTAH'S CATTLE.—The time for owning large herds of cattle to roam at will is rapidly waning, says the Salt Lake *Enterprise*. The encroachment of the locator of valley-land has changed the winter feeding ground to such an extent that the question of getting the herds through the winter, even in the southern portion of the Territory, is a serious one. Many, seeing the certain outcome, began last year to sow alfalfa, which, as a winter feed, has no superior, and also gives the cattle-owner fat cattle for the early spring market instead of a herd of moving skeletons. Fifty acres of alfalfa will return at least 200 tons of winter feed, which will keep in good condition 300 cattle.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

San Jose Grange Discussions.

The Grange at San Jose has been discussing very practical questions of late. At the meeting of Dec. 24th, the subject of planting trees in orchards was taken up. The *Mercury* says that the only question on which the opinion of the members divided was in the preparation of the holes for the reception of the trees.

Hiram Pomeroy, in opening, advocated the subsoil plowing of the land before the trees were put out. He did not believe in merely digging a hole in the ground, no matter how big, but termed such excavations mere "pot-holes," which confined the roots to that portion which had been spaded up. When the tender rootlets reached the outer wall they would naturally turn in, and the final result would be a matted growth that would defeat the real object of the root growth, which is to extract as much nourishment from the ground as possible, the greater the surface the better.

G. W. Tarleton agreed with Mr. Pomeroy, believing it better to plow the whole ground. This would have the nature of converting the entire field into a receptacle for the tree. His method was to use a subsoil plow, which would result in turning or breaking up only the under soil. He did not think it was a good idea to turn the surface soil under, as a waste of moisture and fertility would occur. Mention was made of tall trees which had been set out in ground only a small portion of which had been broken up, the roots of which became so entangled and matted that insufficient support was given to the trees and they would topple over very easily.

The discussion was quite prolonged, several others taking part.

At last Saturday's open meeting insect pests were considered, and Messrs. Block, Britton and Wilcox urged vigorous war measures against the fluted scale.

Grange Elections.

FLORIN.—John Reese, M.; Wm. Johnston, O.; Effie Dresser, L.; Minnie Smith, S.; Frank Robinson, A. S.; Sister I. H. Casey, C.; D. H. Buell, T.; L. H. Fassett, Sec.; M. A. Casey, G. K.; Carrie Neuhie, P.; Lily Casey, F.; Mamie Brown, Ceres; Nettie Jackson, L. A. S.; Ella Dresser, Org.

SEBASTOPOL.—Martin Litchfield, M.; Alex. Ragle, O.; Mrs. L. O. Coon, L.; James Sinclair, S.; Stephen Morse, A. S.; Mrs. Geo. Harris, C.; Geo. Harris, Sec.; D. Litchfield, T.; Elias Shaw, G. K.; Miss Sophia Litchfield, P.; Miss Anna Dows, F.; Miss Laura Litchfield, Ceres; Miss Vina Litchfield, L. A. S.

SOUTH SUTTER.—Roger Mahone, Sr., M.; W. W. Monroe, O.; A. L. Chandler, L.; Roger Mahone, Jr., S.; Ann M. Roberts, A. S.; John M. Jones, C.; Alex. Donaldson, T.; Parthena Hall, Sec.; Wm. E. Roberts, G. K.; Annie Chandler, Ceres; Lucy Purinton, P.; Ella Hall, F.; Almeda Monroe, L. A. S.; R. S. Algeo, Trustee.

TEMESCAL.—Saturday, Dec. 17. [Corrected list.] S. Goodenough, M.; W. Renwick, O.; Mrs. S. H. Dewey, L.; N. Sewall, S.; A. T. Dewey, A. S.; Mrs. E. Kelsey, C.; L. Frink, T.; Mrs. N. G. Babcock, Sec.; John Paine, G. K.; Mrs. Whiddon, P.; Mrs. John Paine, F.; Mrs. Eliza Brooks, Ceres; Mrs. Jones, L. A. S.; Miss Anita M. Dewey, Organist; Mrs. W. Renwick, Trustee.

WOODBRIDGE.—Victor Jahant, M.; J. Thompson, O.; E. J. McIntosh, L.; E. G. Williams, S.; N. B. White, A. S.; E. Fiske, C.; G. H. Ashley, T.; R. G. Williams, Sec.; R. J. Parsons, G. K.; Mrs. E. J. Thompson, P.; Mrs. Lizzie Boice, F.; Mrs. Mary Williams, Ceres; Mrs. W. B. White, L. A. S.

NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

Grange Installations.

Alhambra—January 7.
Danville—January 7.
Grass Valley—January 7.
Sebastopol—January 7.
Yuba City—January 7.
Eden—January 14.
Florin—January 14.
North Butte—January 14.
Santa Rosa—January 14.
South Sutter—January 28.
Valley—January 28.

THE *American Citizen* well says: We believe that in America there should be no nation but Americans. The Irishman who thinks more of Ireland than of America, the Englishman who remains a subject of the Queen, the German who loves "Das Vaterland" more than this, the Italian who sighs for sunny Italy, are not Americans; and instead of being of any benefit to our country, are a direct and permanent injury.

JOINT INSTALLATION AT HAYWARDS.—Brothers Flint, Coulter, and other leading and gifted Patrons have been invited to participate in the exercises at Haywards on the 14th inst., when Eden and Temescal Granges are to hold their joint installations. Any members of the Order who can be present will be welcomed and a pleasant time is confidently looked for.

A Representative Granger.

Hon. A. L. Chandler, of Sutter county, whose "counterfeit presentment" accompanies this sketch, was born in Vermont, July 26, 1831. He received his education in the public schools of his native State, and lived there until 1852, when he started for California by way of the Isthmus of Panama.

Landing in San Francisco May 22, 1852, he went immediately to Nicolaus, Sutter county, where he has since resided. He teamed and taught alternately until 1855, when he began to till the place which is now his home, and has since followed farming and stock-raising, although engaged to some extent in teaming, and interested for several years in lumber and milling enterprises in Santa Cruz county.

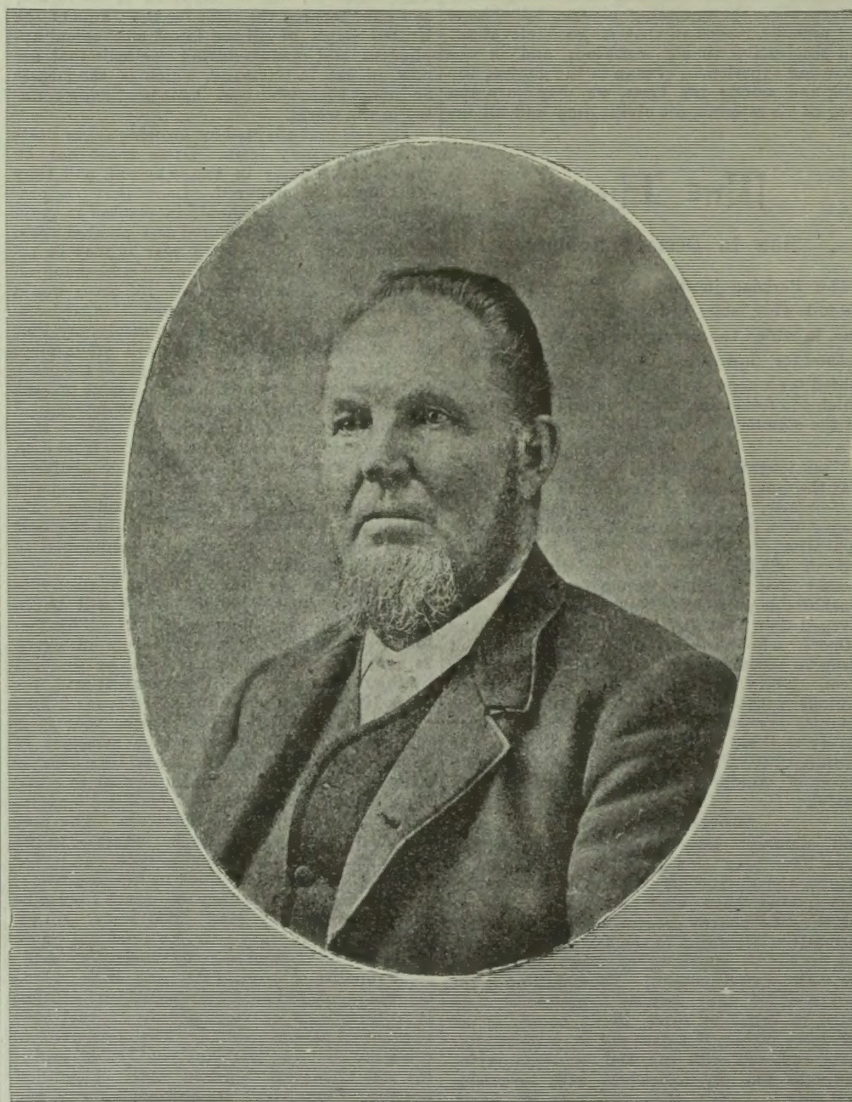
Since the organization of the Farmers' Co-operative Union of Sutter County in 1873, he has been a Director in that body. He was a charter member of Yuba City

successful co-operation at that early day has been worth millions to other farmers since.

As a legislator, he has from the first steadily grown in influence. His reputation as an unswerving, incorruptible Senator has its weight, in a quiet, silent way, far greater than he is ever likely to receive credit for. His is a growing influence on the right side of general legislation for the public welfare. It is by the increase of such responsible, candid and reliable members, of all parties, that we may look for greater economy in the administration of government and for the improvement of our laws.

Bro. Chandler was elected a member of the Executive Committee of the State Grange to fill the vacancy caused by the resignation of Bro. Daniel Flint, soon after the latter's election as State Lecturer at San Jose. He was unanimously re-elected at Marysville in 1886. He has shown an ability and fealty in the work of the Order of which any Patron may well feel proud.

A FINE SENSE OF HONOR.—As a friendly token of the high appreciation in which the



HON. A. L. CHANDLER.

Grange, but withdrew to join South Sutter Grange and helped to build the Grangers' Hall at Pleasant Grove.

He is a Republican, having been identified with the party for 30 years. In 1873 he was chosen to represent Sutter county in the Assembly; was re-elected in 1879, and again in 1880. He has served as an Assemblyman in three regular sessions, and one called session during Gov. Perkins' administration. In 1882, he was elected Senator from Yuba and Sutter counties; was re-elected in 1884, and again in 1886 for the term of four years. He has served as Senator in three regular sessions, and two extra sessions called by Governor Stoneman, making nine sessions' service in the Legislature; but he has never been an office-seeker nor courted a nomination.

Senator Chandler was married in 1860 to Caroline J. Noyes of Vermont, by whom he has six children living, five daughters and one son.

Bro. Chandler was one of the foremost men in the early farmers' movement, at the time of the organization of farmers' clubs in Sutter and other counties, and finally of the State Farmers' Union, which were really forerunners of the Grange in this State.

Bro. Chandler and his associates were the first farmers, so far as we remember, who co-operated in buying grain sacks in large quantities and to great advantage in this State. The example of their solid and

members of Temescal Grange hold Bro. Coulter, and of their hearty enjoyment of the address with which he favored them on the anniversary of the Order's birth, that Grange—as we mentioned two weeks since—voted a small sum toward defraying the expenses of his trip. But Bro. Coulter, while much gratified by this expression of kind feeling and esteem, writes: "We had contemplated visiting your Grange on that occasion, before the receipt of your invitation, and would have been there without it. I incurred no expense by reason of the action of your Grange, and do not feel that I ought to be a burden on its treasury. If I had left my business, and gone to serve you at your bidding, it would be otherwise." The delicacy and nobleness of such a spirit are above praise. May it spread and prevail among the young men and women of our commonwealth!

BRO. FLINT and wife have extended their trip southward to San Diego and National City. At the latter place they were delightfully entertained by Warren and Flora Kimball. His letter in this week's *Patron* is full of admiration of the climate, the enterprise of the people and the improvements going forward.

BRO. T. T. HOOPER, W. M. of Montezuma Grange, writes from Manchester, Mass., that he had just been down in the State of Maine, where he found the Order flourishing, and had fine times visiting the State, Pomona and Subordinate Granges.

ANNUAL MEETING.—The regular annual meeting of the stockholders of the Grangers'

Bank of California for the election of directors for the ensuing year, will take place at the office of the bank, San Francisco, on Tuesday, Jan. 10, 1888, at 1 o'clock P. M.

WORTHY MASTER OVERHISER went to Springfield, Mass., and attended the State Grange. He and Sister Overhiser expected to start from the East on the 4th, hoping to visit Sister Jeanne C. Carr at Pasadena, and perhaps to meet Bro. and Sister Flint on their way homeward.

MERCED GRANGE will elect officers on the 10th inst., having been prevented by stormy weather from getting a quorum together on the 28th ult.

State Horticultural Society.

The regular December meeting was held on the 28th at the rooms of the State Board of Horticulture, 220 Sutter street. Senator Buck occupied the chair until the arrival of the president, Prof. Hilgard.

I. A. Wilcox spoke at length on the coming sessions of the American Horticultural Society, to be held at San Jose and Riverside, and closed by stating that he was authorized by the joint committee of citizens of San Jose to extend an invitation to the State Society to assist in welcoming Eastern horticulturists upon their arrival.

Prof. Husmann read a letter from Parker Earl, president of the American Horticultural Society, under date of December 16th, stating:

"Our railroad complications are now settled. The society starts from St. Louis January 11th, going by El Paso and Los Angeles, and will hold its first meeting at San Jose, January 24th to 26th, and its second at Riverside, on February 7th to 9th. I hope that this will harmonize all interests, and will secure two great meetings in every sense of the word. Now you people of the North must take hold earnestly to make both meetings a success."

The letter concluded by requesting Professor Husmann to prepare a paper on "The Outlook for American Grape Culture."

Mr. Block moved the acceptance of the invitation from the San Jose committee and urged upon the society the necessity and importance of making a grand display of the horticultural productions of the State at the coming meetings. Mr. Block's motion was carried.

Prof. Husmann remarked that there will be present at San Jose and Riverside from 400 to 1000 of the prominent fruit growers of the country. This will be the best opportunity ever offered to advertise California, for this large number of representative men will scatter abroad the impressions they receive by their visit.

On motion of Dr. Kimball of Haywards it was resolved to appoint the president and secretary as a committee to issue a circular urging all members to attend the San Jose and Riverside meetings and to do all in their power to make the displays complete and representative.

Upon motion the State Board of Horticulture was invited to co-operate in securing this result.

The following telegram was received from San Jose during the course of the meeting, and was read and the invitation accepted:

E. J. Wickson, Secretary State Horticultural Society: The Program Committee, by request of General Committee, extend to your society a cordial invitation to join with us and participate in the reception of the American Horticultural Society, Jan. 24, 1888.

DR. W. S. THORNE, Chairman.

Seedling Fruits, Etc.

Secretary Wickson continued the reading of notes on various new varieties of fruits, the paper having been begun at the preceding meeting.

Mr. H. L. Mosher exhibited branches of the strawberry tree (*arbutus unedo*) in fruit from his ranch near San Jose.

Mr. Allegretti showed pears of different kinds kept by his process, the fruit being firm and in good condition. Some had been in store 2½ months and then taken out and left three weeks. They had ripened up well, while those just from the storage remained in the state in which they were put in.

The Tariff.

Dr. Edwin Kimball addressed the society on the subject of the tariff. He said: "I think it would be appropriate for this meeting to take some action in respect to the action of the present Congress and the recommendations of the President in regard to a lower tariff on fruit. This society is directly interested in any action Congress may take in this matter, and it affects the pocket of every fruit-grower, not only in this State but throughout the country, and we should make an earnest protest. There are numbers of men throughout this State who have spent years in developing their orchards, and now, just as the fruit is almost ready to be placed upon the market, all our hard work, all the toil of years, is to be destroyed by Congress at one blow. Before he went to Washington, Senator Hearst promised to do what this society would ask him to do, and now I propose that we communicate with him. The question is one of vital importance to us. It is one which far exceeds all others in the matter of importance. Our very existence depends upon the action that Congress takes in this matter, and we must act to protect ourselves. I move, therefore, Mr. President, that a committee of

three be appointed to draft resolutions to be forwarded to the Legislature and to our representatives and senators in Congress urging upon them the necessity of protesting and acting against a reduction of the tariff on fruit."

Several others favored the motion and it was carried without opposition. On motion of Mr. Block, Dr. Kimball, President Hilgard and Secretary Wickson were appointed to draft and forward a memorial expressing the wishes of the society, and to report the same at the meeting in San Jose in January.

The annual report of the treasurer was read, and showed that during the year \$364 had been received, and that there was a balance on hand of \$154.46. The report was referred to the Board of Directors for audit.

It was decided to postpone the question of shipping fruit until the February meeting.

The society then adjourned to meet in San Jose during the American Horticultural Society meeting which will begin January 24th.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

PROFITABLE CROPS.—Gridley *Herald*: The one-acre orchard owned by Morgan Bros. yielded over \$150 worth of almonds this season. It is situated within the town limits and has received no attention, aside from plowing every spring, for several years past. Henry Robbins realized \$325 profit from 20 acres of castor beans between June 1st and Nov. 1st. The land is now sown in grain for next season. From 20 acres of river-bottom land on A. W. Campbell's ranch, four miles southeast of town, Chinamen have made a comfortable living, paid big rent and laid by \$1800 since Jan. 1, 1887, raising fruit. Three acres of blackberries alone netted them \$700 clear of all expense. A company of Chinamen have about 240 acres rented on the Morrison ranch, three miles from town. They pay \$1500 per annum, raise vegetables principally, and cleared \$2800 this year.

Contra Costa.

RAISINS.—Martinez *Gazette*, Dec. 24: Wherever raisin-drying has been attempted in this county the result of the effort has left no room to doubt that this branch of the business could be profitably pursued, in some portions of the county at least. On the east side Mr. Plumley and others have demonstrated that a strictly first-class article can be produced. There is no difficulty in growing the grapes to perfection almost anywhere, but near the bay the dampness of the air is unfavorable to sun-drying. In Green Valley, however, Mr. B. W. Stone has shown that raisin-making can be made as successful and profitable as any reasonable person could desire. The samples left at the *Gazette* office on Monday, to which we invite the attention of those interested in knowing what can be done in this line, are as perfectly cured, as finely flavored, and as handsome in appearance, as any in the market. Of these raisins, raised and dried at his ranch, Mr. Stone has already sold for cash at the rate of \$125 per acre profit over the expense of cultivation. He has still enough left to pay all his expenses besides, has had all the grapes he wanted for family use, has made 20 gallons of grape syrup, and grown Egyptian corn enough between the rows of vines to pay for cultivation of the whole tract. Of course, in achieving this result, Mr. Stone has not spared his labor in cultivation, but what he has done others can do.

Fresno.

RETURN FROM 20 ACRES.—Fresno *Republican*: Below we present the results obtained from a 20-acre farm in the Nevada Colony, about five miles from this city, during the present year. We give this statement not because the showing is an extraordinary one, for it is hardly up to the average, but because Mr. H. A. Wemple, the owner, kept a record of his products and what they sold for. No account is taken of what was used by the family. The actual net sales of produce from the 20 acres were as follows:

Strawberries	\$ 74 40
Blackberries	25 00
Apples	209 00
Pears	57 35
Peaches	268 40
Raisins	665 25
Watermelons	85 50
Hogs	72 00
Eggs	103 00
Pumpkins	60 00
Sweet potatoes	26 00
Chickens	40 00
Figs	8 00

Total.....\$1,693 80

No account is given of the value of forage grown for cows or horses, nor of the family garden, and when it is taken into consideration that the yield per acre throughout the entire county was short of average crops this year, it must be admitted that the above showing is below what may reasonably be expected from an average 20-acre colony farm in Fresno county, one season with another.

Humboldt.

THE BUTTER OUTPUT.—Eureka *Standard*, Dec. 22: During the present year the 16 dairies on the Russ estate turned out 197,340 pounds, or nearly 100 tons of butter. There are many productive dairies scattered through Eel River valley, between Centerville and the

mouth of the Van Dusen river, and along the last-named stream. There are many on Eel River island, prominent among which is the Riverside, owned by A. Putnam of Ferndale. A large quantity of butter is made in the Arcata and Mad river sections, and along the coast as far as Redwood creek. Mattole valley is also prominent in the butter-making industry. The butter yield of Humboldt county during the year cannot fall far short of 200 tons.

FROM THE SHEEP RANGES.—What little information has been received from the ranges on which sheep are quartered during the winter is very gratifying. As was the case last year, the coming of winter found the flocks in good flesh and strength, and well prepared to enter upon the inclement season. Thus far there have been no severe storms and no cold weather worthy of mention. Even with a good coating of snow on the ground, sheep which are in fair condition will manage to subsist and thrive, particularly on ranges which are partially covered with brush, and where good browsing is afforded. There is hope for a favorable outcome of the winter so far as the sheep ranges are concerned.

Inyo.

AGRICULTURAL DIRECTORS.—Independent, Dec. 31: Gov. Waterman has made the following appointments of directors for Agricultural District No. 18: W. S. Enos to succeed himself, term expired; James C. Crocker to succeed T. J. Goodale, term expired. At the organization of the Board last spring Mr. Goodale was one of two who by lot were chosen to serve for the first short term of one year. The year ended December 1st and Mr. Goodale refused to serve again. He made a zealous and capable director. The new appointments are for the full term of four years.

A MULE'S ENDURANCE.—Not long since Pat Downs brought his pack-train down from Mazourka canyon. Darkness set in while the train was yet in the mountains, and it was not until the valley was reached that one of the mules was missed. It was expected the animal would follow the train, but he failed to appear and was supposed to have been taken sick and died from thirst and starvation. Thirteen days afterward Mr. Downs was again passing over the road and saw where the animal had fallen. The beast was encumbered with an aparejo, and, having fallen on his back, was unable to get up. The aparejo was loosened, the mule was helped upon his feet and was able to get down to the valley. He is getting along all right and begins to laugh he haw, he haw, at his long fast.

Kern.

ARTESIAN WELLS.—Visalia *Delta*, Dec. 29: The following list of artesian wells in Kern county, with the depth, daily flow of water and name of owner of each, has been prepared very carefully and is furnished by Mr. Geo. A. Raymond. These statistics are interesting and valuable and show what may be accomplished in the way of irrigation from artesian wells in this valley:

Owner.	Sec.	Tp.	R.	Depth.	Gallons.
Spring.....	28	25	23	355	2,000,000
Raymond.....	33	"	"	340	1,500,000
Smith.....	12	"	"	585	3,000,000
Robinson.....	24	"	"	600	2,500,000
Brusie.....	24	"	"	480	2,000,000
Haley.....	1	"	"	640	2,000,000
Columbia Col.....	5	"	22	607	600,000
Hooker.....	2	"	24	636	300,000
Little.....	20	"	"	330	350,000
Chauvin.....	24	"	"	704	220,000
Mays.....	30	"	"	425	1,600,000
Robinson.....	32	"	"	452	1,500,000
Moore.....	4	26	23	360	2,200,000
Moebus.....	6	"	"	402	750,000
Miramonte Col.....	7	"	"	538	1,600,000
Miramonte Col.....	17	"	"	568	2,700,000
Sewall.....	28	"	"	310	250,000
Hutchins.....	32	"	"	512	2,200,000
Hogan.....	34	"	"	369	2,200,000
Henry.....	34	"	22	320	1,000,000
Morgan.....	34	"	"	457	1,100,000
Watrous.....	2	27	"	440	700,000
Phillips.....	12	"	"	420	500,000
Arnold.....	2	"	23	358	1,600,000
Davis.....	4	"	"	234	600,000
Martin.....	8	"	"	525	800,000
Blaisdell.....	10	"	"	253	500,000
Easton.....	12	"	"	600	500,000
Easton.....	14	"	"	550	700,000
Loutitt.....	18	"	"	443	500,000
Holden.....	22	"	"	625	250,000
Hoskins.....	24	"	"	374	500,000
Haggins.....	33	"	"	470	1,400,000
Fanning.....	34	"	"	420	1,500,000
Gilmer.....	3	26	24	304	1,500,000
Cox & Clark.....	9	"	"	604	900,000
Gilgoly.....	10	"	"	666	200,000
Haggins.....	17	"	"	512	1,400,000
Haggins.....	19	"	"	480	1,500,000
Haggins.....	3	27	"	703	200,000
Haggins.....	6	"	"	400	900,000

This makes a total of 41 wells, with a daily flow of 48,020,000 gallons, within a tract of country 18 miles by 14.

Placer.

VETERAN ORANGE AND FIG TREES.—Anuburn *Republican*, Dec. 28: Last week Captain Moger measured the famous big fig tree on the Rice place at Newcastle, and found that it measures one foot from the ground, eight feet four inches in circumference. It has three branches which measure at five feet from the ground—one 47 inches, one 41 inches and the other 34 inches in circumference. Its branches cover about 2500 feet of surface. The two large orange trees on the same place are 28 years old and measure at one foot from the ground 38 inches in circumference. Each orange tree is from 25 to 28 feet high and well loaded with oranges.

A FAMOUS FOOTHILL VINEYARD.—The vineyard of J. B. Whitcomb, near Colfax, has produced single bunches of Chasselas grapes weighing five pounds, and it has single vines which have yielded from 60 to 70 pounds of fruit each. The vineyard contains over 20 varieties, and it has carried off the first premiums for the quality of its fruit for several years. This year the crop was light, but Mr. Whitcomb reports that from 12 acres his receipts were \$1765; expenses, \$265; net profit, \$1500. An acre of land that will return \$125 a year is valuable property.

Nevada.

ORANGES FOR LOS ANGELES.—Nevada City *Herald*, Dec. 17: Several boxes of oranges, olives and Japanese persimmons raised in this county were shipped from this city to-day by the Land Association, to be placed on exhibition in Los Angeles. The oranges were from the orchards of John Kuhlman at French Corral and Messrs. Cole and Cooley of Bridgeport, in the lower part of the county. Among the collection were several fine clusters of large, healthy-looking oranges—indisputable proofs that certain parts of Nevada county are well adapted to the production of citrus fruits.

San Bernardino.

BEEVES FROM ARIZONA.—San Bernardino *Index*, Dec. 31: Mr. John Burcham has recently arrived from Williams, Arizona, bringing with him 1000 head of magnificent cattle for this market. We saw some of the dressed meat at the Mojave Stock Ranch market on D street yesterday, and we believe it to be the finest ever brought to this market. The cattle are all fat, of an extra-large size, and the meat very firm and fine looking. One thousand head of cattle may seem like a great number, but the gentleman informs us that, with his extensive business, they will be disposed of in a short time.

San Diego.

COTTON.—San Diego *Union*, Dec. 22: Five thousand pounds of cotton for shipment to S. F. was received at Stewart's warehouse yesterday. This was grown by John W. Moore, on Anderson's ranch in Bear valley, and a number of experts who have examined samples pronounce it to be of exceedingly fine texture. The present crop is an experiment, and has been so satisfactory that a considerable area will probably be planted to the staple next season.

San Joaquin.

EDITORS PRESS:—North winds have so far counteracted the benefit of our early rains, and vegetation is very backward, showing only a tint of green here and there; but the copious rains of the last 24 hours will doubtless cheer every heart. At present writing there is good prospect for more.—Mrs. J. M. K., Tracy, Dec. 29th.

BIG SALE OF NURSERY STOCK.—Independent, Dec. 31: Yesterday E. D. Middlekauff of Middlekauff & Co.'s nursery, sold to W. M. Williams of Fresno 20,000 peach and apricot trees, 25 pomegranates, 3000 orange trees and 10,000 Muscat grapevines, all to be delivered within 10 days.

San Mateo.

THE FLAX EXPERIMENT.—Redwood City *Times and Gazette*: The flax factory of Wm. Hatfield has closed for the winter. Other improvements we understand are necessary which could not be completed in time last year. Some of the flax was thrashed and the straw manufactured into tow. Difficulty was had last year in getting farmers to engage in flax-raising, and owing to foulness of soil in many places the flax was too weedy to be used for the purpose that Mr. Hatfield intended it. Flax grown on the mountains is superior to any grown in the valley. Mr. Hatfield has been offered inducements to go into a southern county, but we hope the offer will not be entertained.

San Luis Obispo.

BIG VEGETABLES.—Nipomo *News*: Our real estate agents are on the alert. W. H. Strowbridge has been scouring the country the past week, hunting up specimens of the products of our wonderful Nipomo valley. From Mr. Miles, who lives about three miles from town, he obtained a silver-leaf onion that weighed 4½ pounds and measured 25 inches in circumference; another onion, common variety, that weighed 5½ pounds; a sack of potatoes, none of which weighed less than 2½ pounds. From a neighbor of Mr. Miles, he secured five sacks, none of the spuds contained therein weighing less than two pounds. These were of the Peerless variety. He also found some mangel wurtzel beets, the largest of which weighed 82 pounds; two others weighed 75 pounds apiece. A friend of Mr. Strowbridge will exhibit a portion of these vegetables at the coming New Orleans Exposition.

Yolo.

HUGE HOG.—Yolo *Mail*, Dec. 31: Probably the largest "porker" that has ever graced a meat-market was placed on exhibition at the Mossmayer city market yesterday morning. It was raised on the Kinchloe ranch near Woodland and weighs 1020 pounds, dressed. A large crowd of curious and amazed spectators were present during the removal of the huge swine from the meat-cart into the market.

FINE HORSES.—Wm. Hays of Madison shipped to Fresno Tuesday to Messrs. Stranbe, Butler & Co., a span of matched geldings, blood bays three and four years old, standing about 16 hands high and weighing about 1100 pounds each. The price paid was \$600. Mr. J. J. Stevens also shipped to the same firm a fine bay

gelding, for which he received \$300. A sired by Mr. Hays' stallion Duplicate.

Yuba.

PORK AND LARD.—Marysville *Appeal*, Dec. 23: The packing and lard-preparing establishment of P. C. Slattery is now operating to its fullest capacity. Fifteen men, with all the modern machinery, are engaged in handling about 40 hogs per day. The season will not close until next March, and by that time they expect to slaughter 4000 hogs, make 8000 hams of an average weight of 15 pounds, and cut 32,000 pieces of bacon and smoke them—the average weight of each to be six pounds. From that number of hogs 9000 pails and cans of lard are expected.

CITRUS SAMPLES SENT SOUTHWARD.—Specimens of fruit from orange and lemon trees in and around Marysville were yesterday shipped to Los Angeles, in care of J. J. Morrison, who has charge of the Placer county exhibit. The call for the fruit was made by the Placer county people, not to show a great quantity, but to demonstrate the great scope of country over which oranges and lemons are grown in Northern California, and also their superior quality. In the 500 pounds of citrus fruit forwarded from this city last night to Los Angeles were some specially selected oranges and lemons whose superior merits will undoubtedly attract attention. But two clusters of fruit were sent. One was a cluster of lemons, six in number, from a tree in W. G. Murphy's yard. Not one of these lemons measured less than 12 inches in its greatest circumference. They were entirely free from scale, and the skins were perfectly clear. The other cluster was of oranges, taken from one of the magnificent trees in J. B. McDonald's yard. The fruit in this compact bunch of 12 was ripe, well colored, and as free from the pestiferous scale as any oranges ever grown.

NEVADA.

NORTHEASTERN RANGES.—Elko Cor. *Reno Gazette*, Dec. 27: Stock of all kinds look exceedingly well and in some instances better than a year ago. Quite a number of our stockmen have commenced to feed the late-weaned calves and the old and feeble cows. Sparks & Tinnin, Hardesty and many other heavy holders feed but very little, for the reason that it would be almost impossible to gather and cure sufficient hay for such immense bands as these gentlemen control. Another reason is, that they have splendid winter quarters. The same is also true of Byrne & Bro., on the Bruneau, in Southern Idaho; also Hill, Horn & Fisher, who occupy what is known as the Big Field. Messrs. Bradley and Russell of Elko have the major portion of their large band upon the upper tributaries of Snake river, in Idaho. This locality furnishes an abundance of water and grass, and is a splendid summer range, and lower down upon the same stream a good winter range is also found. These gentlemen have suffered but little loss on account of hard weather or short grass. Jeff Bradley and H. Mason are the owners of nearly all of the available land for hay and pasture purposes on Mary river, a large portion of which is under a four-wire fence. They have cut and stacked a greater quantity of hay than any other firm in the county, and will feed during the coming winter the late and small calves with a few other head of cattle that seem to need some assistance to tide them over the present winter. The day is not far distant when cattlemen will have to feed and confine their stock upon their own ranges, and no one in this locality has foreseen this event sooner than Messrs. Bradley and Mason.

OREGON.

CARRIER PIGEONS.—Oregonian, Dec. 30: Mr. J. F. McMunn of Shedd, Lion county, has for some time been training carrier pigeons, with good success, on the O. & C. railroad trains. Last week one of his birds, "Champion," flew from Gervais to Shedd, a distance of 55 miles, in 57 minutes, and the same bird has flown home from Salem, a distance of 39 miles, in 35 minutes. "Volunteer," a young bird, flew from Eugene to Shedd, 32 miles, in 35 minutes. In two weeks more he will have one liberated at Portland, as it has already been liberated within 25 miles of this city, and the next stage will bring it here. Mr. McMunn's birds are of the best strains obtainable in New York, Cincinnati and San Francisco.

APPLES TO CALIFORNIA.—H. E. Battin, the well-known fruit-dealer, left Friday for Medford to look after the shipment of four carloads of apples overland to S. F., the first railroad shipment of fruit into the Golden State. Mr. Battin has bought a large share of the surplus apples of Southern Oregon, and much of the stock which was intended for the Montana and Dakota market will go southward during the next month.

A WYANDOTTE PULLET belonging to J. G. Warner was seven months and five days old Dec. 18th. She had laid at that time 26 eggs. Mr. Warner is anxious to know if this record can be beaten. The mother of this pullet is valued by her owner, Mr. Hawkins of Lancaster, Mass., at \$150.

SAN DIEGO'S assessed valuation increased during the past year from \$4,582,000 to \$11,000,000, and 2000 substantial buildings were erected.



Why?

The sky so dull and drear,
So steadily fell the rain,
It seemed as though the sunlight clear
Would never come again.

Drenched and somber and sad
Was hill and vale and tree—
No sound of a bird-note glad,
No cheerful thing to see.

And darker the storm-clouds grew,
The rain fell thick and fast,
When sudden gleamed a sun-ray through,
That heaviest fall was the last.

Then the birds sang sweet and clear,
And the trees sang soft and low;
Why did we not feel the sunshine near,
When the darkness brooded so?

—Elihu M. Hickok.

Unpleasant People.

[Written for the RURAL PRESS by ELISE ANGE.]

Two ladies were calling at the house of a friend, when the hostess, turning to one, inquired:

"You found it quite a distance to come, did you not?"

"No," was the answer. "I was in such pleasant company that it did not seem far to me."

The friend who had accompanied her laughed appreciatively and exclaimed: "Did you ever see such a woman as Gladys for paying compliments and saying pleasant things?"

Then Gladys answered, lightly: "Well, Mary, think how many people there are that never pay compliments."

Gladys was right. There are scores of such people, and it actually seems to be part of their religion to avoid praising others or speaking well of them. They pass through life with critical eyes and unsympathetic lips, and as often offend by their silence as their words. I have heard some say that they never flatter from principle, and thus excuse their churlishness by branding those who are more deservedly popular than themselves as flatterers.

Who in looking over the past does not recall with feelings of aversion some visitors to our childhood's home that embittered our existence by their presence in the house? A well-known hat and walking-stick in the hall, or a familiar, feminine voice in the sitting-room, has filled our souls with dread, and Heaven only knows how reluctantly we have gone in to shake hands with Mr. Grim, or Mrs. Blunt or Miss Sharp. We were not as cordial as we might have been, and our kind mother has excused us on the grounds of shyness.

"Shy!" came in satirical tones from the depths of an easy-chair. "She didn't seem very shy when I saw her tearing through the streets yesterday with her hat off and a big hole in one of her stockings. Really, Mrs. Blank, I couldn't believe that such a tomboy was your little girl."

These visitors always saw us when we were had in church. They knew when we climbed fences, or broke windows, or took jaunts on the sly. They were on hand when dirty faces and torn clothes were in the ascendency. They always remembered Captain Cattle's injunction to make a note of it, for it was all stored up for future reference, and never forgotten as long as they lived.

They were fond of asking: "What was going to become of that boy?" or "What would be done with that girl?" They would smile superciliously or shake their heads doubtfully when more lenient critics predicted an honorable future for us. Then, in after years, when we had not turned out so badly as they expected, they still looked upon us with wary eyes. I was dubbed "a crooked stick" by such a one in my childhood, and he only knows me as a crooked stick to this day. I heard a lady say that she had a good mother of this type, and whenever it happened to be her ill-fortune to meet her on the street the poor child always shut her eyes and ran as for dear life. "I thought if I could not see her she could not see me," she explained.

Is it any wonder that we shed no tears when the Grimms and Blunts and Sharps of our younger years died? But alas for humanity, their descendants are numerous and flourish like a green bay tree! These are not always known by their hate or walking-sticks, by their sinister gaze and surly speech, as we formerly knew and feared them. There are young people with charming faces and apparently winsome manners, yet those most intimate with them will tell you that they never lose an opportunity of being spiteful or disagreeable.

A teacher recently asked one of her pupils if she did not need her wrap, as it was a very cold day.

"Oh! her pride will keep her warm," answered the Miss Sharp of the class. Now, if

a girl of 16 or 18 years can be so unlovely, what will she be 10 or 20 years hence? We have only to look around among our acquaintances to find out. All their sweetness has departed with their youth. They may be, at times, plausible in their manners and gentle of speech, but we, who understand them, are prepared for the covert sneer or the unkind sting which follows close upon their insincere pleasantry.

There is the man or woman who prides himself or herself upon being frank and outspoken. It is sufficient to state that such persons are as cordially disliked as they deserve to be. Then the close-mouthed people that say little, but look volumes, are just as detestable. Changeable people are unpleasant acquaintances, because we never know where to find them—they are our friends one day and strangers the next. Quizzical people are amusing until we begin to suspect that we ourselves are not exempt from the shafts of their ridicule. Then there are satirical and cynical people. We all know what cruel wounds they can inflict, the former by words, which strike like well-aimed arrows at the heart of the victim, while the latter looks upon the world with jaundiced eyes, and strives to shake the faith of others even in those most worthy of their regard.

"But people cannot help their dispositions" is a very familiar expression. I was acquainted with a young man whose satire was as cutting as a two-edged sword. I met him afterward as a genial, kindly man, and knew that he allowed opportunities to pass when he could have been brilliant at the expense of others.

I know women that will not permit themselves to be jealous of the beauty or prosperity of their friends. A lady called on an old schoolmate, to find that the latter had exchanged a very simple cottage for an elegant home. I heard her give her experience as follows:

"I could hardly believe Nellie lived there, even when I saw the name upon the door, and while I waited in the parlors for her to make her appearance I felt myself growing bitter as I looked around upon such luxury, for I had always lived in better style than she had. All at once it struck me that I must conquer my jealous feelings, and as my friend entered I greeted her warmly and said: 'Oh, Nellie, what a beautiful home you have!' All my bitterness vanished and I had a most enjoyable visit."

It is natural to be outspoken, hence the terrible small boy or girl so well recognized in literature; yet many of these little people learn before they are grown that they must watch their lips and be careful of offending others. Rude and cranky children often develop into well-mannered men and women. The "black sheep" of the family has sometimes become the mainstay of the parent's declining years. So we can, in a measure, overcome our feelings by cultivating these graces of character which we find so attractive in those we most esteem and admire.

One of the sweetest, most lovable persons I ever met was a young woman of plain features and insignificant appearance; yet she gathered about her a large circle of warm friends. It was with pleasure that she produced her album and displayed the many beautiful faces that adorned its pages. She was proud of her friends, and dwelt enthusiastically upon their charms. She said more than once: "Why should I grudge others the beauty which has been denied to me?" While she was gay and humorous, she was also tender and sympathetic, with smiles for the happy and tears for the sorrowful. Is it any wonder that she was considered lovely by those who knew her, and that she was always greeted with pleasure wherever she went? Is it any wonder that her place is still vacant in the hearts of her friends although it is nine years since she entered into rest? Hers is a precious memory, fragrant as with the perfume of violets, and I am glad that there are many such as she in the world, that dispense the balm which heals the wounds inflicted by our less amiable associates, the Grimms, the Blunts and the Sharps.

A TRUE GENTLEMAN.—This instance of genuine unselfishness is told in the Boston Post: Last September we took a canoe trip together, and in going down some rapids were upset and found ourselves floating about in a sort of bay where the river widened. As the weather was cold we were pretty thickly dressed, and our boots were heavy, so that the situation was rather precarious. We were struggling toward shore, and he had his paddle, but I had lost mine. Seeing that I was in difficulties, although he was just as badly off himself, he said: "Take my paddle, old fellow, I don't want it; do oblige me." I believe I should have laughed if I had not been afraid of drowning, at the contrast between his statement that he was all right and the grasping voice in which it was spoken. However, we got ashore safely.

A NEW GAME.—An exchange says a new game called "Editor's Delight" is played in this wise: Take a sheet of ordinary writing paper and fold it up carefully, inclosing a bank note sufficient to pay all arrears and a year in advance, and mail to the editor. What adds immensely to the pleasure of the game is to send along the name of a new subscriber or two, accompanied by cash. Keep your eye on the editor, and if a smile adorns his face the trick works like a charm. Being near the first of the year, now is an appropriate time to play the joke. Just try it.

Sunset, Sunrise.

[Written for the RURAL PRESS by N. P. C.]

I.
Crimson-tinted, golden-streaked clouds are hiding
Earth's sparkling, blushing, low-set sun;
Darkened chambers chill my heart, and death abiding,
Shade my soul's sweet star of love-light.

II.
Slowly dawns the light of heaven, bright and more
Bright,
Full on waiting hill and lowland;
God is gracious; when is passed life's cold, dark
Night,
Dawn will bring unending rapture.

The Lazy Board.

[Written for the RURAL PRESS by DR. J. W. GALLY.]

It is not needful at present that I should tell my exact age nor the precise place where I first saw daylight, but I may truthfully say that more than a half a century of years ago I was playing marbles up against that great American topographical and political fence known as "Mason and Dixon's Line." That was when I was a boy. Then there was no railroad there because George Stephenson, in England, had invented the locomotive railway about the year I was born, and it had not, in my earlier boyhood, crossed the mountains which divide the waters of the Potomac and Ohio rivers. In place of the railroad there was the National road, a fine solid wagon-road built by the Acts of Congress from tide-water at Baltimore to steamboat-water at Wheeling, on the Ohio. One of my earliest attractions was the jingle of the house bells upon the six big Pennsylvania horses drawing each wain, or road-wagon, along this National road. Sometimes in the afternoon of a summer day there would be 10, 20 or 30 of these wains in procession, all with arches of different-sized and toned bells over the tops of the hames above the housen, and such a jingling and jangling as they kept up is not often heard nowadays. Each six-horsed bell team was managed by one man, and he rode upon the high horse at the wheel and drove with only one line. Upon this, "the saddle-horse," there either were no bells or else the bells were upon his breast so as to permit the driver—he called himself a "teamster"—room to handle his line and black-snake whip. Over the top of each arch of bells was a roof of black bear-skin, which came down at each end of the bell-arch some six or eight inches, and these hanging ends were often decorated with tassels of silk or with gold-cord fringes. The harness, upon the wheel-horses particularly, was a marvel of strength, breadth and weight, the breeching being of heavy solid sole-leather, six to ten inches wide, and all other leathers in proportion; but no leather went behind any horse's tail, for a back of that came iron chains. The harness was "gears" in those olden days. The first time I ever heard the word, harness, was from a newly arrived gentleman from Northern New England, and he called it "harness." When these wains arrived at what, in the older times was called the "tavern stand," they drove into the yard, which was usually paved with small broken stone—that is to say, macadamized—and supplied with gear poles scattered about. In this yard the teams were unhitched—not unharnessed—and the gears hung upon gear poles thrust through the wheel-spokes so as to catch under the wagon-bed or coupling pole; and the heavy leather housen acted as roof over the gears. Then when the horses were stripped, two of them were fed from an iron-bound trough suspended behind the wagon, and four of them from another larger iron-bound trough, temporarily fastened by iron latches to the top of the tongue or pole. A sack of oats was emptied into this four-horse trough and each animal ate all he could eat—proportionally the two-horse trough was similarly filled. The old National road wagoner did not feed much hay, and what he did feed was fed from the ground or from canvas racks suspended below the troughs. The horses were blanketed, but not stabled, and were bedded with straw or sawdust. What the wagoner most thoroughly despised and profanely cursed was a wet winter, and, next to that, a rainy, late springtime; for in those seasons the pulverized limestone, ground to a surface of white dust on the road by the heavy wheels, became a coating of thin, gray slush that splashed over the four forward horses until they were half covered with it, and their tails hung down like icicles of mud. The wagon drawn by one of these teams was weighty; the wheels and "run gear" generally were of wood and iron, and very strong and heavy, the tires being six to eight inches wide and 1½ inches thick, but the box, or wagon-bed, was the pride of the wainwright, or wagon-maker. It was framed up of the toughest wood, and ironed and bolted at all joints, then faced inside the framing with poplar boards; it scooped up in front and behind, and sagged in the middle, so that when the bows and canvas were put on it looked like nothing else that I can now think of. This box was from six to eight feet deep, and as long as you'd a mind to make it, and had an iron-bound, iron-fastened gate at each end, also two or three chains with "finger-hooks" to keep the box from spreading under heavy pressure from inside. From this old "National Road" the ancestors of the drivers of the prairie schooners of the Pacific Slope learned the art of heavy teaming, and improved on it; but it could

not have been much improved on had it not been for the invention of the brake, or rub-lock. When I was a boy there was no such thing as a wagon brake. I never saw one until I was ten years old, though I saw all sorts of wagons and stage-coaches every day. The old-time wagoner had a curious collection of lock-chains, but everything was for locking the wheel, or wheels, solid. He had a simple lock-chain, then a slide-lock, a drag-lock and a scratch-lock. The first rub-lock I ever saw upon a wagon was a curiosity as compared with the wagon-brakes of to-day. It had a wooden block-beam and iron brake-rods and beams somewhat as they now are, but the hand-lever was between the hind wheel (above the hub) and the wagon-box, and upon the lever was a little chain that could be hooked, link by link, as the lever was pulled down, upon an iron pin in the block beam. At first the driver stopped his team and got down off his horse, to work this lever several times in going down a long slope; because at intervals there were slight embankments in the road to carry off the snow-water and frequent rains of that country. But there was soon invented what was called a "lazy-board," that is, a board which could be pulled out in front of the brake-beam, from under the wagon-box, far enough to give a man a place to sit. In this position the driver would let his team keep the road while he worked the brake. That style of brake lever held its place for many years before we got to—or tumbled to—the long brake-rod and lever that enables the driver to keep his driving-seat and work the brake with hand or foot. I have cause to remember the lazy-board. One Saturday, in that season of the year which is called Indian summer, though wherefore "Indian" no man knoweth, I was taking a boy's holiday ride on horseback along the National road about four miles eastward of the city of Wheeling, and riding up a long grade I saw a big team coming toward me down grade, but seemingly going out of the road without a driver. Presently, before I reached it, the big wagon went over on its side in the ditch—on its right side, too. I had seen no driver and supposed there was none, but I notified the neighbors of the catastrophe and went on my way, and afterward found out that the neighbors discovered a dead man under that wagon. It was the driver. He was riding on the lazy board, when he fell asleep and the wagon tipped over on its side.

[When I began this writing some years ago, I seem to have intended it as the beginning chapter of a short romance, but I suppose I may think that man is safe under the wagon in the hands of the neighbors, and so let the writing go as a pretty good description of how wagon-brakes, as we now see them and use them, came to happen, and leave to some abler pen the other chapters of the romance of "The Lazy Board."]

For Young Men Who Are Thinking of Marriage.

Select the girl.
Agree with the girl's father in politics and the mother in religion.

If you have a rival, keep an eye on him; if he is a widower, keep two eyes on him.

Don't wear to the girl that you have no bad habits. It will be enough to say that you never heard yourself snore in your sleep.

Don't put much sweet stuff on paper. If you do, you will hear it read in after years, when your wife has some esopical purpose, inflicting upon you the severest punishment known to married men.

Go home at a reasonable hour in the evening. Don't wait till the girl has to throw her whole soul into a yawn that she can't cover with both hands. A little thing like that may cause a coolness at the very beginning of the game.

If, while wearing your new summer trousers for the first time, you sit down on some molasses candy that little Willy has left on the chair, smile sweetly and remark that you don't mind sitting on molasses candy at all, and that "boys will be boys." Reserve your true feelings for future reference.

If, on the occasion of your first call, the girl upon whom you have placed your young affections looks like an iceberg and acts like a cold wave, take your leave early and stay away. Woman in her hours of freeze is uncertain, coy and hard to please.

In cold weather finish saying good-night in the house. Don't stretch it all the way to the front gate, and thus lay the foundation for future asthma, bronchitis, neuralgia and chronic catarrh, to help you to worry the girl to death after she has married you.

Don't lie about your financial condition. It is very annoying to a bride who has pictured for herself a life of luxury in her ancestral halls to learn too late that you expect her to ask a baldheaded parent who has been uniformly kind to her to take you in out of the cold.

Don't be too soft. Don't say: "These little hands shall never do a stroke of work when they are mine," and "you shall have nothing to do in our home but to sit all day long and chirp to the canaries," as if any sensible woman could be happy fooling away time in that style; and a girl has a fine retentive memory for the soft things and silly promises of courtship, and occasionally, in after years, when she is washing the dinner dishes or patching the west end of your trousers, she will remind you of them in a cold, sarcastic tone of voice.—Ex.

After Christmas.

[Written for the RURAL PRESS by MRS. J. M. K.]

It is Christmas eve. The young folks are all in bed, and the stockings, well filled, all hang by the chimney. What great long stockings! Not a real baby sock among them any more. Even the baby has been playing Santa Claus this year, testing the truth of the words, "More blessed to give than to receive."

Well! the mother can draw a sigh of relief from the constant care of babyhood; but will it be the only feeling expressed by that sigh? How we miss the merry prattle, the wise sayings of which every mother, no doubt, could fill a volume.

Now, as I sit by the firelight alone, tired with the day's work, but thinking of the good cheer of to-morrow—of Christmas bells and Christmas carols—I seem to hear the merry chimes of many bygone years, yes, almost hear down the long ages the voice of the heavenly messenger saying "Behold, I bring you good tidings of great joy, which shall be to all people. For unto you is born this day in the city of David, a Savior which is Christ the Lord." Almost hear the triumphant music of the celestial choir singing "Peace on earth, good-will to men." Is it not a pretty story? A beautiful oriental fable?

To how many of us is it anything more? Surely not to those who turn their eyes toward the light of Asia, or grope for wisdom among the writings of Hindoo sages; who turn from the sweet, strong simplicity of this Gospel of great joy to study the esoteric doctrines of Buddhism. For me, I want no man's wisdom. What are sages of any age or nation but poor mortals like myself, groping in darkness, vainly striving to solve the problems of life and death? My soul cries out for a "thus saith the Lord." Prove to me the sweet, old story is but a myth, and I close the book. Prove to me the promised Savior did not come, did no mighty works, did not seal His testimony by a well-attested resurrection and ascension, and I lay the book upon a shelf; I read it no more. Until you can do this, although I cannot thrust my hand into His wounded side, or put my fingers into the print of the nails, I will cry out with Thomas, "My Lord and my God."

Failing to finish my musings Christmas eve, interruptions occurred, until now, when I again take up my pen, the sound of the Christmas bells is growing faint. Merry greetings from east and west have all been received, and precious love tokens laid away.

Ere these lines can reach the reader's eye the death of the Old Year will have been tolled, and the New Year rung in with glad acclaim. I have this season more than usual realized the gladness of the Christmas-time; the solemnity of the closing year and the opportunities and responsibilities of the New Year; but in trying to express them am tempted to lay down my pen in despair, for what can I say that has not often been better said or sung, of good resolutions for the future, turning fresh, unsoiled pages in life's book, and the certainty that some who welcome the New Year will not live to see its close. Oh, that the spirit of loving self-sacrifice, the peace and gladness of the Christmas-time, may linger as a sweet benediction in every heart, and the New Year mark a grand intellectual and spiritual advancement for all.

Tracy.

Colluding With Swindlers.

The *Salinas Index* puts things plainly and tersely in the following article:

Every now and then there appears simultaneously in many country papers (and in some daily city papers, also,) an article from four to six inches in length, purporting to be a clipping from some S. F. paper, and telling how such and such a person has won a big prize in the Louisiana lottery. The seductive article often goes on to say that the lucky winner was a poor man; that with his prize-money he paid off all his debts, bought a comfortable home for himself and family, and placed a snug sum in the bank for a rainy day. There is nothing to indicate that these articles are advertisements and paid for as such; yet such is the case. The agent who sends them out is very particular to stipulate that there shall be no mark attached to the articles in question to distinguish them from the general reading-matter in the paper, or to indicate that they are advertisements. * * * Now then, publishers who insert these articles in their papers must know that they are aiding a barefaced swindling concern to fleece their readers, even if they are ignorant of the fact that they are guilty of a misdemeanor every time they do it. Section 322 of the Penal Code of California declares that every person who aids or assists, either by printing, writing, advertising, publishing, or otherwise, in setting up, managing or drawing any lottery, or in selling or disposing of any ticket, chance, or share therein, is guilty of a misdemeanor. Another section of the Code declares that any person who sells or gives another a lottery ticket, or share therein, is also guilty of a misdemeanor, and subject to punishment accordingly. John A. Morris, the owner of the Louisiana State lottery, is worth \$10,000,000, all of which he made out of the dupes who buy tickets in his swindle. He gave his daughter a million-dollar check for a wedding present a few days ago.

YOUNG FOLKS' COLUMN.

Fables.

[Written for the RURAL PRESS by C. P. NETTLETON.]

I.

The Sheep and the Lion.

Some Sheep coming suddenly on a Lion at the edge of a forest were about to flee, when one of their number noticed that the Lion was entangled in the bushes, and called to his companions that there was no danger, as the Lion could not move. Hearing that, they returned and gathering round him, commenced to make fun of him, saying that his mane was too long and his feet too short, and wanting to know of what use he found his tail.

The Lion got so enraged that, making a stronger effort than ever to get free, he succeeded, and quickly killed the whole flock and ate them all.

Moral: Every one can find fault in others, but only the truly wise know when to speak of them.

II.

The Bear and the Deer.

A certain Bear did not come out of his den one spring till later than usual, and being very hungry ate some dead Squirrels he found. Soon he began to feel sick, for the Squirrels were poisoned, and conscience smiting him for all the wanton mischief he had done in the many years of his life, he tried to think of some way to atone for it. Seeing a Deer passing some distance off, he called to him, told his trouble, and asked advice. The Deer replied that the only thing to be done was to prevent further distress and offered to assist the Bear, if he were really in earnest, to a place where he could drown himself. The Bear refused, however, and now waited anxiously for the effect of the poison to wear off, which it finally did.

But with returning strength came a renewal of the old nature and immediately he went in search of the unconscious Deer. Having found him, the Bear was about to kill him when the Deer asked for what reason he wished to slay an innocent Deer, especially in view of his recent regrets for just such deeds.

"Because of your unfeeling and unreasonable advice when I was sick," replied the Bear.

"But," said the Deer, "you asked me for my advice and honestly did I give it."

But the Bear would hear no excuse and instantly killed him, then composed himself to enjoy a rich feast.

Moral: Honesty may be the best policy, but there are times when silence is best of all.

III.

The Man and the Rattlesnake.

A Man who was taking a walk in some woods was suddenly startled by a Rattlesnake just ahead of him sounding his rattle. Instead of quickly getting out of his way, which he could easily have done, the Man did not move and was struck by the Snake. He started for home at once, and on reaching there told his family what had happened, and added that he was sorry he had been predestined to die by a snake bite.

"Fool!" said his wife, "why did you not avoid the Snake and save your life?"

"Why," the man replied, "if it were ordained that I should die by the bite of that Snake, I could not have helped myself; we have to submit ourselves to Providence!" And in three hours he was dead.

Moral: God looking in the future, sees man, able and obliged to choose for himself, decide between heaven and hell, and then, having allowed him to elect whether he will have life or death, predestines that as his choice is in time such shall it be through eternity: this is predestination.

Home-Made Scrap-Books.

[Written for the RURAL PRESS by F. M. PATSON.]

Any one who has never tried her hand at making them has no idea of the artistic possibilities of scrap-books.

To any one with a little patience and taste the work of making them is quite fascinating, and one well made is interesting not only to little ones but affords pleasant entertainment for older ones as well.

If one has plenty of time and a little money and wishes to make for some little friend a delightful gift for a birthday, let her take fine, heavy black linen, and cut from it leaves (large enough to fold double) say 15x17 inches for each page, and laying two thicknesses together, buttonhole them all around the edge with scarlet yarn or zephyr. If desired, a few leaves of white linen may be interspersed and make a pretty addition.

Now collect all the colored pictures you can of any and every description for filling it. All sorts of colored advertisements, picture cards, cheap "chromos," etc., work in nicely and add to its beauty.

Put no whole picture in, but cut out all the figures or groups and lay on the dark background. No matter how temptingly pretty a picture may look as a whole, remember it will spoil your book to insert it.

Where the entire picture is not useful, cut out the parts that are and use them, as you will need a great many.

Having collected your pictures, proceed to arrange them in all sorts of odd ways; the more

odd and irregular the better; diagonally, sideways, every way, using taste and care in their arrangement.

Select some especially fine, large, appropriate ones for the covers, and put the name of its future little owner and the birthday greeting either in painted or applique letters carelessly across the front cover; now tie the backs together with scarlet ribbon bows and it is finished.

I have seen books made in this way too handsome to be kept anywhere but on the parlor table, and so elegant and truly artistic and beautiful as to attract the attention of old and young.

Black bristol-board may be, if preferred, used in place of the cloth. If not quite as durable, it looks equally well, though the scarlet edges cannot be used.

Such a book as I have described is very beautiful, and well worth the work and time, but really costs quite as much as a handsome one bought outright; therefore, for one whose time and purse are limited, the black and white scrap-books are preferable.

These may be made very plain and common, or extremely beautiful, according to the work put upon them, and if well made, certainly repay the time put upon them, since the commonest pictures can be utilized to make a truly beautiful thing.

For a common book for little children, where large pictures are to be used, any old geography or book of that shape will do nicely, after it has had every other leaf carefully cut out to make room for the insertions.

To fill a book of this kind requires little time or taste, as it is merely a matter of trimming the edges of the pictures and pasting them neatly to fill page after page.

The covers of a book of this sort may be covered again with gay-colored paper and illustrated with pictures in the same manner as the inside, and no matter how cheaply finished, the gift will always please a child, since all children love to look at pictures.

However, if one can get a blank-book of any kind, and cut out the pictures the same as in the colored book, most beautiful and artistic effects may be had, almost equal to fine engravings, merely by using taste in selecting and arranging the pictures upon this white background.

Make each page of a separate character and work to produce a certain effect with your pictures. Parts of different ones may be so nicely pasted as to entirely deceive the eye, and in that way, bit by bit, designs may be built up out of fragments. A child's figure here, a spray of flowers there, a bit of tracery in another place, all dextrously cut out and applied with brush and paste, make a new picture grow under your hands, so that, if one desires it, an entire book of poems may be beautifully illustrated in this manner, as I have seen it done several times.

Children delight in such books, and if they have pages devoted to different subjects, a dog and a cat page, a boy and a girl page, the delight is enhanced.

I know of no more charming work for an invalid than to amuse herself by playing artist with pastepot and scissors for the benefit of her little friends, and my own experience goes to prove that these home-made books are valued far ahead of anything attainable in the stores, no matter how beautiful it may be.

KINDLY TACT.—It would be hard to afford a stronger evidence of being well bred than of a society leader who had among her dinner guests one evening a relative from a distant rural district, who, though refined and well educated, knew but little of society ways and manners. Soon after the dainty finger-bowls were placed on the table the rustic visitor took up the bowl and drank from it. The hostess observed it, and showed admirable tact a moment after by drinking from her own bowl, thus sparing her guest the mortification which might otherwise have resulted. Another case where generous consideration and tact was shown was where a well-known lady of Boston was traveling in Europe not long since. She went to London for only a day or two for the sole purpose of seeing a friend who, by the way, belonged to the nobility. When strongly urged to meet a few friends at dinner next evening she declined, and on being pressed for a good reason was frank enough to say that she had with her no suitable dress for such an occasion, but only a black silk. "Wear your black silk and I will wear one, too, so you may feel quite at ease," said the hostess, and a promise was given to be present. What was the surprise of the Boston lady, on entering the drawing-room, to find all the ladies in black silk gowns. Lady Dash had written her guests requesting them to "wear black silk."—*Boston Courier*.

ARCHDEACON FARRAR says that Cruikshank the artist, offered \$500 for proof of a violent, crime committed by a total abstainer from intoxicants, and that the money remains unclaimed to-day. The Archdeacon says that he will give the same amount for proof of any one case, either in the church or out of it, where drunkenness has been cured without total abstinence.—*Exchange*.

SENORITA MATILDE MONTOYA is the first Mexican girl to become a doctor. A committee of young men of the City of Mexico got up a bull-fight in her honor, and devoted the proceeds to the purchase of books and instruments for her. A country that is civilized enough to have women doctors ought to abandon bull-fights.

DOMESTIC ECONOMY.

Kate Has Made a Pie.

"I cannot ask you up, Ben Blend,
To dine with Kate and me."
Thus spoke a drummer to his friend,
And sighed right heavily.
"I know I promised to, but then—"
A tear stole from his eye—
"The cold, frost-bitten fact is, Ben,
My Kate has made a pie.
"The pie is not so deadly when
An expert wields the plate;
But that's a different pie, dear Ben,
From pies composed by Kate,
She's not an artiste with the flour,
The spice, the lard, so I
Cannot invite you to our bower,
For Kate has made a pie.
"You are an honest bachelor, Ben,
Let me some truths unload;
Some little facts to ponder when
You're out upon the road.
Our honeymoon was filled with joy,
No cloudlets swept the sky;
Things might have thus continued, boy,
But Kate, she made a pie.
"A parody upon the pies
My mother used to make!
A thing to breed a wild surprise
Mixed up with stomach ache.
A pie to conjure spirits up
From Sheol's sulphurous state,
On which might Macbeth's witches sup—
That pie first made by Kate.
"What strange fatality attends
The young wife's pie-us art?
Pre-matrimonial pastry blends
Not with the wisely heart.
Before the orange blossom fades
Wide opens many an eye;
E'en unsophisticated maids
Should make a better pie.
"And so I cannot ask you, Ben,
With us to come to dine;
Some other day—some Sunday, when
My wife has ceased to shine
As empress of the kitchen range—
Grown more discreet—and fly—
So, Ben, old boy, don't think it strange,
But—Kate has made a pie."

Broiled Chops.

The choice of chops for broiling is generally decided by the price the customer wishes to pay. As a matter of fact, those cut from the lower neck and shoulder are the sweetest in flavor; those from the loin the richest, because the fat is largely distributed throughout the lean, and the kidney-fat, which is attached to them, is preferred by epicures. Chops cut from the middle part of the leg show the most meat in proportion to fat and bone; the so-called French chops, cut from the rack, or ribs, are the most expensive, because all the fat and flesh is trimmed away from them, except that small portion at the thickest end.

After the outer skin has been stripped from the chops, and the superfluous fat cut off to be tried out for drippings, they are to be scraped lightly with the back of a knife, or wiped with a wet cloth, to remove bone-dust or any other foreign matter; place them between the bars of a double-wire gridiron, and expose them to the hottest fire available. The rapid browning of the surface of meat determines its juiciness and flavor, and, therefore, the fire should be hot and clear; brown both sides as quickly as possible, and then move the meat far enough away from the fire to prevent burning. During the cooking do not apply salt until the surface is brown, because if it comes in contact with raw meat it draws out the blood and deprives it of flavor. After the meat is cooked to the desired degree, season it palatably with salt and pepper, and moisten the surface with a little butter; but do not cut it until it is carved, and do not put any water upon the dish with it. Be sure that the dish is hot upon which it is served, and use hot plates; the dishes can be heated without injury by immersing them in a pan of hot water while the meat is being broiled.—*Juliet Corson, in Good Housekeeping*.

Scalding Brine for Meat.

EDITORS PRESS:—While there have been a number of excellent recipes and directions about salting pork and bacon, one very essential requisite has been omitted, and that is a thorough scalding and skimming of the brine before it is applied to the meat. After all impurities that may arise have been carefully removed, it should then be poured on to the meat while it is hot. Even if it is hot enough to start the grease, no harm will result. I have tested this plan for more than 40 years, and I never have lost a pound of pork yet. I have sweet nice side-pork now which was put down in this way last August. J. S. TIBBITS.

FRIED POTATOES.—Peel them and boil in salted water; do not let them boil until they are soft. Beat one egg and have ready some fine cracker crumbs; roll the potato in the egg, and then in the cracker and fry in butter until a light brown, turning frequently that the color may be uniform; or the potatoes may be dropped into hot lard. In this case a cloth should be laid over a plate and the potatoes should be drained for a moment in this before sending them to the table.



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W. B. EWER.

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Agricultural Implements—Hawley Bros. Hardware Co. New Music—Oliver Ditson & Co., Boston. Windmills and Pumps—Woodin & Little. Fertilizers—Cal. Bone Meal & Fertilizer Co. Wire Fence—Sedgwick Bros., Richmond, Ind. Harrows—D. N. Nash, Millington, N. J. Wine—H. Mills & Son, Lakeville, Cal. Mules—S. Scott, Cloverdale, Cal. Grapes—Clarence J. Wetmore. Real Estate—Tyler B. Bach, San Jose. Seeds—W. W. Rawson & Co., Boston. Harness—Chicago Harness Co. Seeds—W. A. Burpee & Co., Philadelphia. Fruit Trees—G. W. Watson, Sacramento. Grape Seeds—C. Mottier, Middletown, Cal. Cattle—Smiths, Powell & Lamo, Syracuse, N. Y. Poultry—H. J. Godfrey, San Leandro. Alfalfa Seed—Grangers' Business Association. Seeds—John Saul, Washington, D. C. Roofing—M. Ehret Jr., & Co., St. Louis. Butter Color—Wells, Richardson & Co.

See Advertising Columns.

The Week.

The storm which opened so well as we went to press last week has continued with intervals of sunshine, and now enters upon its second week with new indications of strength and duration. This Wednesday morning the higher hills around the bay were snow-capped, but the rain soon removed the unwonted covering. The rainfall is now reaching excellent figures and the State is drenched from end to end. We give the record of a few widely separated points, which show how much more generously we are being served this year than last:

Localities.	This Season.	Last Season.
San Francisco.....	7.75	4.65
Pleasanton.....	5.95	1.99
Suisun.....	5.67	2.51
Merced.....	2.80	1.30
Fresno.....	2.65	.34
Hanford.....	2.28	1.15
Tulare.....	2.30	1.10
Los Angeles.....	9.67	1.58
San Jose.....	5.95	1.96
Santa Cruz.....	8.17	4.09
Monterey.....	5.11	2.08
Salinas.....	5.31	2.24

Soledad.....3.17 1.19
Paso Robles.....5.01 1.06

As we go to press the storm is still on. Enough rain has fallen to answer for all immediate requirements and probably to insure a year of exceptional productiveness.

The Eastern Fruit-Men.

It seems likely that the coming this month of the excursion of members of the American Horticultural Society will be one of the most notable events in the horticultural history of California. The latest reports from the secretary, Prof. Kagan, indicate that much greater numbers are applying for privileges than had been anticipated, and estimates vary as to the probable size of the excursion all the way from 400 to 1000 persons. This will constitute a notable body, because they will be, for the most part, people who have given their lives to horticultural pursuits, and they come upon a special mission to inform themselves upon California's deeds and adaptation in their special line. It will be a discriminating body of visitors who have cultured eyes and know how to use them effectively. Such an inspection we should court, if we have faith in our own works and our conditions, and it is plain that we should do all in our power to afford opportunity for inspection. No better opportunity could be found for mass displays than at the two citrus fairs, at San Jose and at Riverside, and an effort should be made as never before to set forth our best products of fresh and preserved fruits, and plants and flowers as well, for the excursion will include horticulturists in the broadest sense of the term.

There seems to be so far most activity at San Jose, and a host of committees are at work upon all the features of the occasion, the reception, the entertainment and the display. The co-operation of all is invited, and the invitation should meet with a general acceptance. Fruit and fruit-products should be sent from all the upper half of the State and from as much wider area as the growers choose. We do not discover from the Riverside papers that preparations are proceeding very actively, but possibly it is early. Certainly, as we stated last week, the effort should be to show the whole State to advantage, and the two meetings seem to afford a good chance for that. If both parts of the State do their very best there is no danger of doing too well, for it is not likely that in a generation as good an opportunity will present itself to show California horticultural products and to dispense California hospitality.

The Tariff and Fruit Products.

There has naturally been considerable feeling among those engaged in our various fruit industries as to whether dried fruits would be caught in the free-trade shower which seems to be prevailing at the East. The State Horticultural Society, as reported in the account of its meeting given elsewhere, appointed a committee to draft a forcible memorial to Congress calling attention to the hardship which would be brought upon our growing fruit industries by such a course. Various efforts have also been made to ascertain, if possible, what were the intentions of the Eastern tariff reformers with reference to these special articles. Telegrams have been received from New Yorkers who are well informed as to public movements that the present scheme does not reach to fruit products. It is reported that Abram S. Hewitt, Mayor of New York City, whose acquaintance with public affairs is generally known, has said that the tariff reformers will follow the line marked out in the President's message and endeavor to remove, or at any rate lower, the duty on such raw material as enters into the manufacture of necessities with the aim of reducing the cost of living, and that raisins at least will be considered as a luxury, and not be included in the list. Such in brief is the report which comes by wire, and we give it for what it may be worth. It will be just as well, however, to continue efforts to impress upon Congressmen and the whole Eastern public the fact that our fruit-producing interests are in a promising condition, but cannot stand the throwing open of the gates to foreign competing products. It would be very easy to strike a blow at California's prosperity which might be fatal, and we do not believe any intelligent Congressman, with a full knowledge of the facts, would wish to do it.

Report on the Pacific Railways.

The Commission appointed by the last Congress to investigate into the affairs of the Pacific railways, which enjoyed the bounty of the Government and yet have failed to meet the obligations placed upon them in its bestowal, has made two reports. The majority report is by Commissioners Anderson and Littler and the minority report by Commissioner Pattison. It can hardly be claimed that either report adds much to the general knowledge of the policies and methods of these corporations, but there is a connected and emphatic restatement of old facts which are well to have on formal record, and in this form they may prove of lasting public benefit.

Of the majority report it may be said that it is conciliatory in tone, and though it finds that the roads have not lived up to their obligations to the public, it advises extension of time and such other favoring conditions that the companies may ere long make partial return at least for the value intrusted to them. The majority report gives an elaborate analysis of the aid given the different lines and the manner of construction and management of the lines; its scheme for allowing the companies to repay their debts to the Government is also elaborate. We have not space for them nor does the general reader care for the information. All who desire to make special study of the subject can, no doubt, obtain full copies in the form of Government documents which they will, doubtless, soon assume.

The minority report by Ex-Governor Pattison of Pennsylvania presents the affairs of the companies in a pointed way and reflects the opinions of many people as to the character of their misdeeds. Here is a paragraph which will be found to accord with a wide experience within the territory traversed by these roads.

"The original purpose of Congress," says the Commissioner, "was to promote the public interest, and the companies were made trustees for that purpose, but the public interest has been subordinated by these companies to the stockholding interest. Nearly every obligation these companies assumed has been violated. Their management has been a national disgrace. Since the date of their inception they have been conducted upon a purely speculative basis. Their permanent prosperity has been lost sight of, while their managers greedily strove for temporary advantage.

"They increased the cost of living. They laid proprietary claim to the traffic of large sections of the country. They constituted themselves the arbiters of trade. They attempted to dictate the channels that trade should follow and to fix rates of transportation that were extortionate. They discriminated between individuals, between localities and between companies. They favored particular individuals and companies. They destroyed possible competitors and they built up particular localities to the injury of other localities, until matters had reached such a pass that no man dared engage in any business in which transportation largely entered without first soliciting and obtaining the permission of a railroad manager. They departed from their legitimate sphere as common carriers, and engaged in mining articles for transportation over their own lines. They exerted a terrorism over merchants and over communities, particularly in election contests.

"In their relations to the Government they resorted to every device their ingenuity could invent in their efforts to evade the plain requirements of the law."

The Commissioner finds that the four men who controlled the Central Pacific, Messrs. Stanford, Huntington, Hopkins and Crocker, had diverted the earnings of that company through contracts made by themselves with themselves for construction, leases and repairs and divided over \$142,000,000 in cash and securities; that they built 17½ miles of adjunct lines, and, as directors of the Central Pacific Railroad Company, took leases of their own lines from themselves for the Central Pacific at the rate of nearly 13 per cent per annum.

Fifteen months ago three of these directors contracted with themselves to build an extension of the California & Oregon division of the Central Pacific a distance of 103 miles, the actual cost of which work was \$3,505,609, while they paid to themselves \$8,000,000 in stock, and \$4,500,000 in bonds; the market value of the stock and bonds at that time having been \$8,340,000, so that they personally profited by that single transaction to the extent of \$4,834,391. As directors of the Central Pacific, they also loaned the funds of that company to themselves to build the Southern Pacific, a competing line, across the continent.

The Central Pacific Co. also expended \$4,818,355.67, of which the manager declined to give any explanation or to permit others to explain. The balance sheet of the Central Pacific for 1886 should have shown a deficit of \$14,000,000, but by omitting the Government interest from the debt side and marking up the value of the unsold lands from \$12,500,000 to \$23,500,000, an apparent surplus of over \$28,000,000 was presented.

The foregoing is but a part of the sharp arraignment which Gov. Pattison makes of the methods and policies which have prevailed in the conduct of the overland lines, but these will serve to call attention to the subject. Of course, holding such views of the behavior of the three companies after receiving Government bounty, which the report places at the colossal sum of \$447,729,470 in the aggregate, the commissioner is forced to the conclusion that there is little

need for temporizing or giving favors, and he recommends that the charters be declared forfeited and that suits be carried forward to recover as much as possible of the property to which the Government can show title.

We understand that the managers of the companies stated before the commission that an attempt to force payment of sums due the Government would close the issue. If this should be done, and one continuous line across the continent should thus come into the hands of the Government, it would afford a good opportunity to test the Government conduct of railways in this country. If the Government should get possession of the Union and Central Pacific, and should run them, it would give us an overland line which could not be brought into pooling arrangements and the like, but would serve as a permanent check upon such arrangements by other roads. It may be objected that the Government cannot conduct a railway successfully. This is decidedly opposed to the experience of European countries where the tendency is certainly toward Government operation of all railways, and where the Government roads thus far have proved a public benefit. Again, it is not likely that the Government could run the roads itself and lose any more than it has lost during the last 20 years by aiding them to the benefit of private parties rather than the public. The times seem ripe for Government railways and Government telegraphs in this country, and the course of events may bring the Government into position to try the experiment on a considerable scale.

Placer at Los Angeles.

In our Placer County Notes a fortnight since it was briefly stated that a carload of oranges, persimmons, olives, etc., had been dispatched from Newcastle, to be put on exhibition at Los Angeles, and that E. W. Maslin, P. W. Butler, J. J. Morrison, J. F. Madden and other gentlemen accompanied the fruit. This step was taken by the Placer Board of Trade in order to present to the Eastern visitors, with whom Southern California is swarming, an object-lesson which should convince them past all doubting that foothill regions in the central part of the State enjoy a climate well adapted to the growth of citrus fruit, and in respect to freedom from insect pests superior to any other section.

Ample room for the display was secured in the most frequented portion of the City of the Angels, and the fruit was arranged against the wall to the height of a dozen feet, presenting nearly 100 square yards of bright, scaleless oranges. As we mentioned last week, the exhibit drew a deal of notice and aroused much admiration. The hall was thronged day after day and night after night with interested and inquiring visitors; a large map hung beside the fruit, showing the position of Yuba, Nevada, Placer, El Dorado and Sacramento counties, and the gentlemen in charge talked themselves hoarse in elaborate and repeated explanations, until the show was brought to a close last Tuesday evening.

The result of this stroke of enterprise and peaceful invasion has been to send scores and hundreds of home-seekers to Placer county prospecting already, and it will probably send many more settlers thither.

And it is pleasant to hear Mr. Maslin testify: "From the old citizens of Los Angeles we met nothing but kindness, and they were free to express their surprise and pride, as Californians, that Placer was able to make such an exhibit." Indeed there is no cause for any sectional jealousy in such matters; for, with the flood of immigration now turning toward the Pacific Slope, the fertile acres of our favored State will prove none too ample for the use of the coming millions.

BUTTE COUNTY FRUIT-GROWERS.—It is announced by telegraph that 300 citizens of Biggs neighborhood in Butte county have organized an association to develop the fruit interests of the section of Butte county along the Feather river. In half an hour pledges were made to set out fruit trees to the extent of 400 acres, and it is believed that there will be shares enough taken in the association to insure the setting out of at least 600 acres during the coming month.

ACCORDING to reports received from various parts of the State, crop prospects are very bright.

A Glimpse at Santa Cruz.

Our correspondent who recently visited Santa Cruz and vicinity has given interesting accounts of the country and its development. He paid especial compliment to the energy and zeal of the Santa Cruz Development Association and the excellent work which is being done under its auspices for the improvement of the town. Alluding to these letters which have appeared in previous issues of our journal, we give now a glimpse of the city of Santa Cruz as seen from an adjacent elevation, the view being westward out upon the bosom of the Pacific ocean. For this engraving we are indebted to a publication by the association already named and written by the secretary, Mr. I. H. Raymond. It is one of the best written of the descriptive pamphlets now being issued about California points, and should have a large circulation. The history of the region from the first period by Cabrillo in 1542 is sketched in a very interesting manner. The charms and resources are all faithfully put forth, and not least interesting is the appendix which contains a list of the fish of Monterey bay and the native trees and shrubs of the Santa Cruz district by Dr. C. L. Anderson. We have not space to reproduce these important matters. In connection with the engraving, however, we give a paragraph descriptive of Santa Cruz City as follows:

Situated on the northern side of the bay of Monterey, that magnificent horseshoe-shaped sheet of water, 22 miles from point to point, which indents Monterey and Santa Cruz counties, the city of Santa Cruz extends backward from the beach across a slightly elevated plateau, and then climbs two or three terraces, which encircle the lower part of the town like the seats of an amphitheater. The business portion of the town lies on this plateau and along the water front. The main street, Pacific avenue, is of good width, and extends from the foot of Beach Hill nearly a mile to the Lower Plaza. It is paved with the fine native bituminous rock, large deposits of which are found in several portions of the county. This forms, without combination with any other substance, an elastic and practically indestructible pavement for streets, sidewalks and crosswalks, and is being used to replace other kinds of walks and drives throughout the city. It is possible to go from the bath-houses at the beach to the Bay View school-house, a distance of nearly three miles, without once leaving an admirably kept sidewalk. Intersecting Pacific avenue are a number of rural-looking tree-lined streets, bordered with cozy, picturesque, and even elegant homes, almost every one envired by well-kept lawns and gardens abloom throughout the year. This portion of the town contains the courthouse, City Hall, Hall of Records, postoffice, two fine buildings belonging to the I. O. O. F., a Masonic Temple, a pavilion for floral and agricultural fairs, numerous excellent hotels and boarding-houses and several churches. The terraces, mentioned in the letter above, offer most attractive building sites, many of which are occupied by residences and grounds, where the owners have vied with each other in tasteful ornamentation and adaptation of the wonderful possibilities afforded by climate and soil. Mission Hill is formed of two semi-circular terraces and a plateau, which was the site of the original Mission of Santa Cruz, and where the Roman Catholic church of to-day stands. Hotels and churches are also found on this hill. "Beach Hill" intervenes between the business portion of the city and the beach and is a favorable location for homes and hotels.

In 1885 bituminous coal was the most valuable mineral product, but in 1886 it was surpassed by pig iron, which had a higher total value than silver and gold combined.

WOOL FROM BUENOS AYRES.—The State Department is informed that the Argentine Republic will repeal the export duty on wool.

The Orange Crop of 1888.

Accounts seem to differ somewhat as to the output of oranges from our southern counties this winter. The real estate excitement has damaged the crop in some parts by cutting up the orchards into town lots, and by winning the attention of the people away from production and into speculation. On the other hand, there are other parts where the boom has taken more moderate phases, that new orchards have come into bearing, and old ones increased their bearing capacity, so that a large increase of crop will be enjoyed. There has been, however, during the last few days, a windstorm which has knocked off 10 to 15 per cent of the crop, according to the Riverside Echo of Dec. 29th. On the whole the available surplus will be larger than last year, and for the most part of very fine quality.

The Los Angeles Express gives an interview with Mr. Germain, the leading fruit-packer of that city, in which the following points are set forth:

I have just received full reports from my examiners, which show that the Los Angeles crop

earlier have gone as high as 2500 carloads. Probably the lower estimate will be nearer the truth. Last year the surplus was 1600 carloads.

Potatoes at the East.

We have a letter from Sgobel & Day of New York, alluding to our recent mention of the potato shortage at the East, and stating that there are now arriving in New York from Europe fully 20,000 sacks of potatoes which will partially supply the Eastern lack. The best of these potatoes are coming from Scotland and are of the Magnum Bonum, Regents and Champions, and having been grown on light soils are very attractive in appearance. We recognize in these varieties the ones which we have read most about in our English exchanges as comparatively new sorts, propagated largely because of their resistance to rot. If we remember correctly, some of them have been introduced for trial in this State.

Our New York correspondents write that the potatoes from England grown on dark soil do not look as well as the Scotch tubers, and those

ENTOMOLOGICAL.

The Fluted Scale in Town and City Gardens.

W. G. Klee, State Inspector of Fruit Pests, has issued the following circular addressed to town trustees and city aldermen in California:

I desire to call your attention to the fact that the fluted or cottony cushion scale (*Icerya pur-chasi*) exists in large numbers in the midst of your town, being found on your streets as well as in your gardens. It is impossible for me personally to agitate the suppression of this insect in every one of the localities affected by it, since it is found in gardens and yards of all descriptions. I hereby appeal to you, as the representatives of the municipality, to do all in your power to prevent its further spread, and, if possible, to accomplish its total extermination. It should be borne in mind that the whole community is vitally interested in this matter, for the presence of this scale renders the cultivation of most of our garden plants and ornamental trees almost an impossibility. Let the whole community take hold and every property-holder do his share; and, if united, their efforts are bound to tell.

As a step in the right direction, I advise the removal from the streets of all locusts, acacias and French elms which are found to be the least infected, and the eventual substitution for these of trees less liable, such as the olive and the large-leaved California maple. In gardens, we recommend a severe cutting-back of all deciduous bushes affected, the total destruction of the pittosporum, the entire cleaning-out of all annuals, the thorough overhauling of the premises, the burning-up of all infested twigs, and the raking-up and burning of all leaves and rubbish.

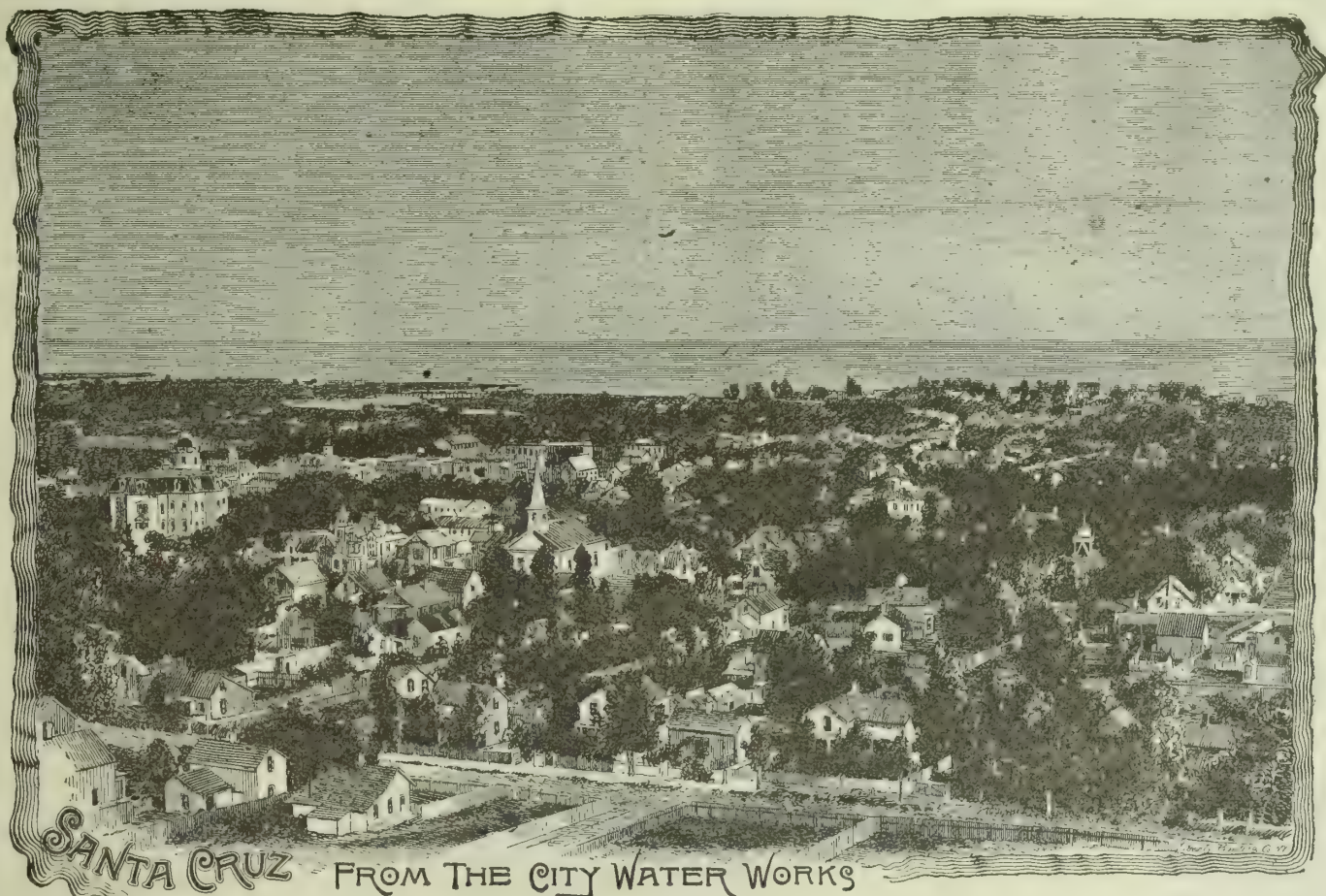
If the infection of the *Icerya* is simply confined to a few trees in any portion of your jurisdiction, we advise the most thorough destruction of everything infested, and the infested spot should be closely watched for at least six months afterward. The peculiar habit of this insect of crawling into the earth, crevices and cracks, together with its power of subsisting without food for a long time, makes this insect by far the most difficult of extermination, and we ask every lover of plant life to do his share in preventing a spread of this insect; otherwise it will only be a question of time when it will be found all over this State.

A valuable cheap remedy deserving thorough trial has been found in the resin washes first recommended by Prof. Riley: Four pounds of resin; three pounds of sal-soda; water to make 36 pints. Dissolve the sal-soda in a few pints of water; when thoroughly dissolved, add the resin. Heat until dissolved, and add water finally. Use two pints of solution to the gallon of water. Use at a temperature of about 100° Fahrenheit. Also the following: 60 pounds of resin, 60 pounds of tallow, 10 pounds of potash, dissolved in 10 gallons of water; 10 pounds of caustic soda (Greenbank, 98 per cent.) Dissolve the resin and tallow; when dissolved, add caustic water slowly. After mixture is made, add ten gallons of water. Use at the rate of one gallon of mixture to ten gallons of water.

These solutions are cheap, and if rightly and persistently applied, will clean off smaller trees and bushes. But we concede the impossibility of exterminating this insect by spraying on large trees without complete defoliation.

We hereby repeat the recommendations made last year and also give the sulphide of soda soap mixture in a slightly different proportion: 10 pounds of best whale-oil soap (80 per cent soap). Dissolve in 50 gallons of water, and boil 1 pound lye or 4 pounds of Greenbank caustic soda with 1½ pounds of sulphur.

When thoroughly dissolved it is a dark-brown liquid (chemically sulphide of soda). Mix the two, the soap and the sulphide of soda, well, and allow them to boil for about half an hour, and it is ready for use. Apply it warm, at about 130° F., by means of a spray pump. Used warm its effect is better, and less material is required than when cold. It must, however, be remembered that the minute scales are especially numerous on the under side of leaves. This fact makes the extermination on a large



will not, on the whole, be a good one. By the Los Angeles crop I mean that of what is known as the Los Angeles district, i. e., Santa Ana, Anaheim, Ranchito, Downey, Norwalk, Fulton Wells and the country immediately adjacent to this city and between it and Santa Monica and Compton. The great trouble with this district is that the orchards have been too much cut up into town lots and acre villa tracts, thus ruining their crop. The trees have been largely neglected in the craze of real estate speculation, and many of them are therefore infested with white scale. The crop will be as good on those trees that have been taken care of, but it will be late. Oranges will not be fully ripe before February or March. They will be yellow before that time, but sour. The yield will be 500 carloads—about the same as last year. Fully 200 carloads have been wasted by neglect of the orchards.

Next comes the San Gabriel belt, i. e., San Gabriel, Pasadena, Duarte, Azusa, Santa Anita, El Monte and Savannah. The Duarte crop will be full and good; the San Gabriel, light, but good fruit, what there is of it. The Duarte and Pasadena, and the foothill oranges generally, are better than those of the valleys. The Duarte fruit is the best in the county and is entirely free from scale, but both red and black scale is found on the San Gabriel valley fruit. The yield for this district will be 400 carloads—about the same as last year.

The Pomona district, i. e., Pomona, Puente, Spadra, Claremont and surrounding towns, will yield an excellent crop, almost free from scale. There will be 50 carloads from this district, to 25 carloads last year.

San Bernardino county—including the San Bernardino foothills, Riverside, Arlington, etc.—shows even finer fruit than it has for years past. This district will yield 1000 carloads of magnificent fruit, to about 400 carloads last year.

Mr. Germain thus puts the surplus this year at about 2000 carloads. Other estimates made

from Germany, though of good quality, have suffered from cold weather there and are not arriving in good condition.

Sgobel & Day are large receivers of these foreign potatoes, and they write us that prices on December 23 were \$2.25 per bag of 168 pounds net on the Magnums and \$2 per bag on Regents and Champions. The freight is 23 cents per bag, and the duty 15 cents per bushel of 60 pounds, or 42 cents per bag, and present prices leave a fair profit to shippers.

As the Government estimate of the American crop is lower than it was in 1881, when over 500,000 of these bags were imported, Sgobel & Day believe that very heavy supplies will be received for the rest of the season. Potatoes grown in the Eastern States have considerable rot in them this season, do not keep well, and orders are coming to New York from Chicago, St. Louis and other Western cities for the foreign goods, which demand, they think, will grow to large proportions later on.

These facts indicate that the East has other large sources of supply than we considered in our previous allusion to the subject. Still the coming weeks are likely to state these supplies, and if a good new potato can be sent East early enough and cheap enough, it seems to us that large sales could be depended on.

AN IMMENSE OIL PIPE-LINE.—The projected Standard Oil Company pipe-line will be 1000 miles long, extending from Chicago to New York.

CAPITAL has been subscribed to build a lumber mill at Woodland, Yolo Co. The land has been donated.

tree in full foliage almost next to impossible. Only small trees may be successfully treated in this way. Large trees must be either deprived of their foliage or cut down to a few limbs. Neither of these methods can be safely applied on tender trees during a season when sharp frost may be looked for. A spraying should, however, be done, as it will check their spread most effectually. Too great pains cannot be taken in removing infected limbs, as the insect spreads often in this way. A canvas should be spread around the tree, so that none of the insects can escape. When the tree has been treated, spread hot ashes around its base and apply tight-fitting bands smeared with a greasy substance around the trunk to prevent any insects reascending.

For the treatment of orchards we earnestly recommend that every one interested make himself acquainted with the workings of the hydrocyanic gas remedy, as tried by Mr. F. W. Morse of the University of California.

Our wholesale condemnation of the locust and acacia is based on the belief that the *Icerya* has spread, and is still spreading, to a large extent by means of these two trees.

In conclusion we would still emphasize the fact that the insects, unlike other scale insects, are active travelers, and that they may adhere to your clothing and thus be carried many miles.

*Bulletins explaining this method can be obtained by addressing Prof. E. W. Hilgard, Berkeley.

A Foe of the Cottony Cushion Scale.

The project of sending some one to Australia to seek out natural foes of the cottony cushion scale and to bring them here if any are found, has been under discussion among our horticulturists for a long time. The Riverside convention last spring adopted a resolution favoring the idea and other horticultural bodies have done likewise since that time. The measure seems to be the wiser from the fact that effective foes of the pest are now being found in Australia by local observers. The following letter recently received by State Inspector W. G. Klee from Frazer S. Crawford of Adelaide, South Australia, gives information concerning it and its work:

I announce the receipt of your letter about the *Icerya* parasite with much pleasure, as I hope it may lead to correspondence that will be to our mutual advantage.

I had intended writing to you about this very matter as soon as I found that I was in a position to do something; so that your letter has only caused me to write sooner than I otherwise would.

Since Mrs. Ormerod's little work was published I have made what I think is an important discovery, viz., that one of our native coccids, a *Coelostoma*, is likewise attacked by this parasite fly. The *Coelostoma* is a very large sluggish insect, capable of living a long time without food, and one that could be conveniently sent through the post. I therefore propose to send you some specimens, of course taking the chance of their being attacked by the parasite. I will do the same with Maskell in New Zealand. I might also try the effect of posting some *Iceryas*, as they might live long enough to survive the voyage.

The parasite so completely did its work that I have not a single *Icerya* left in my garden. I am now trying to introduce it again, but it has some other enemy that I must find out. Some two months ago, I received a small branch of the common gooseberry covered with *Icerya* egg sacs nearly full size. One-half, containing say 50 *Iceryas*, was placed in a lemon tree, two or three of the finest specimens being put separately. The other part, with about a similar number, was placed in a glass bottle. Now, at the present time, the gooseberry branch in the lemon is as bare as it could be—not a vestige of the *Icerya* is to be found; but that in the bottle is nearly as thick as ever, although two coccinellidæ larvæ have been living and fattening upon them for the last two months, while the bottle is swarming with myriads of newly-hatched larvæ running about. This shows that the coccinella larva is not of great efficacy in putting down *Icerya*, but what clears off the rest in the lemon tree I am quite at a loss to make out, unless birds, and if so, in all probability the English sparrow.

My next experiment will be to cover over some *Icerya* (should I succeed in rearing some from the larvæ in the bottle), with wire netting, so that no bird can get at them, and then note the result.

As soon as Mr. Klee received this interesting communication, he took steps for the introduction of the fly described by Mr. Crawford, and it is expected that a small consignment will arrive within a few months. Mr. Albert Koebele of Alameda, Prof. Riley's local assistant, has kindly consented to take charge of the importation and will endeavor to multiply them until enough are secured to distribute them for location where the cottony cushion scale is abundant in different parts of the State. For this purpose a small orange tree infested with cottony cushion scale will be completely covered with fine wire gauze so that no escape of the minute fly is possible. It is of course possible that mishaps may occur with the introduction or breeding, but the effort will be continued until definite conclusions are reached.

The Cabbage Louse.

EDITORS PRESS:—In our struggle for existence with the passive yet active scale bug, his humbler congener, the cabbage louse, gets neglected, "gets left," unfortunately.

I want to know all about him from the authorities, especially the readiest method of slaughtering him. The work a single louse can put in by way of reproduction is, I know, both theoretically and practically, something appall-

ing. Will some kind friend increase my New Year's happiness by instructing me in the most effective method of warfare against this ubiquitous and ever-vigilant enemy?—EDW. BERWICK, Monterey.

Velvet and Felt Hats.

Fig. 1, in the group shown on this page, is a high-crowned hat, with a medium brim that widens at one side near the back and is caught up in a point. Bronze velvet covers the entire shape in the smoothest fashion. A fold of velvet is about the lower part of the crown, and wide loops of it stand up high on one side and in front. Against these rests a white bird with brown spots upon its wings. A pin of dull bronze is just in front.

Fig. 2 is a black felt hat; the crown is of medium height and square, and the broad brim is only covered slightly at one side. It is effective to outline the brim with binding showing black and gold. Two straps of velvet are



VELVET AND FELT HATS.

about the crown, and they are drawn to stiff loops in front and each fastened with a small gold butterfly. At the side, quite far back and well up on the crown, are several full though short ostrich tips, from out of which springs a dainty aigrette of the somber hue.

Fig. 3 shows a hat for a girl; it is a very large shape in brown and white felt. The broad brim, which curves slightly at each side, is faced on both sides with brown velvet. In the crown near the front are stuck two gold crescents, and the other decoration is a soft mode ribbon, plainly drawn about the crown and tied in long loops and ends at the back. The simplicity of the hat is most commendable, for there is nothing in such bad taste as an over-trimmed hat on a little woman.

WILD SILK IN YUCATAN.—The *Economista Mexicana* says that the Government of Yucatan is experimenting with the product of the wild silkworm, *Bombyx Psydii*, which is closely allied to the domestic silkworm. The silk on the cocoons proves to be elastic and of an excellent quality, though rather uncertain in color, varying from white to pale brown. It presents a peculiar difficulty, however, it being covered with a gum which is not easy to dissolve.

Citrus Fair Premiums.

The various notes of the Butte County Citrus Fair, which have come in since our last issue, only go to deepen the impression in its favor. It is claimed that "while previous expositions of similar character may have excelled this one as regards quantity, none have equaled it in quality or variety. This judgment has been corroborated by the public expressions of parties from Los Angeles and other points in Southern California." Even people who had lived for years in Butte appear amazed at the successes achieved. Extensive land-sales in Thermalito and other places near Oroville have already resulted from the fair, and a general desire is evinced by Eastern people to visit and inspect the several valley districts of the county.

The Oroville Register publishes the awards, which we condense below. The exhibitors are of Oroville, when no residence is named. The Gridley Herald remarks: "The awards are based upon actual merit, and ought to give

- LIMES—Best indiv. exh.—1st, C. H. Wilcox.
OLIVES—Best indiv. exh.—1st, Wm. Dunstone, Wyandotte; 2d, Mrs. G. F. Jones, Chico; 3d, V. Bunnel, Biggs.
OLIVE OIL—Best indiv. exh.—John Bidwell, Chico (exhib. by Chico Board of Trade).
RAISINS—Best indiv. exh.—1st, C. H. Leggett & Son; 2d, C. L. Durban, Mesilla Valley; 3d, C. F. Lott.
PRUNES—Best indiv. exh.—1st, Matt Schween, Chico; 2d, John Bidwell, Chico (exhib. by Chico B. of T.); 3d, Jesse Wood, Mesilla Valley.
FIGS—Best indiv. exh.—1st, D. M. Mack, Bangor; 2d, M. V. Roe, Nimshew; 3d, C. H. Wilcox.
EVAPORATED FRUITS—Best indiv. exh.—1st, Jesse Wood, Mesilla Valley; 2d, John Bidwell, Chico (exhib. by Chico B. of T.); 3d, H. Wright, Concow.
SUN-DRIED FRUIT—Best indiv. exhib.—1st, B. F. Allen, Chico; 2d, John Bidwell (exhib. by Chico B. of T.); 3d, S. L. Skillen, Paradise.
ALMONDS—Best indiv. exh.—1st, R. Parker; 2d, John Bidwell (by Chico B. of T.).
WALNUTS—Best indiv. exh.—1st, Watt M. Pence, Mesilla Valley; 2d, John Bidwell (by Chico B. of T.).
CHESTNUTS—Best indiv. exh.—1st, C. F. Lott; 2d, Ole Lund.
QUINCES—Best indiv. exh.—1st, Joe Gardella; 2d, L. N. Eyster.
GRAPES—Best indiv. exh.—1st, C. H. Leggett & Son; 2d, C. F. Lott, Oroville.
APPLES—Best indiv. exh.—1st, Heckert & Co., Mesilla Valley; 2d, M. V. Roe, Nimshew; 3d, P. Hefer, Central house.
PEARS—Best indiv. exh.—1st, M. V. Roe, Nimshew; 2d, Jos. Entzman, Table Mountain; 3d, John Bidwell (by Chico B. of T.).
POMEGRANATES—Best indiv. exh.—1st, R. Parker; 2d, C. H. Wilcox.
PERSIMMONS—Best individual exhibit—1st, Watt M. Pence, Mesilla Valley; 2d, Wm. Thuanan, Cherokee; 3d, Wm. Greenleaf.
PRESERVED AND CANNED FRUITS—Best individual exhibit—1st, Misses Orton & Hingham, Berry Creek; 2d, Jesse Wood, Mesilla Valley; 3d, B. F. Allen, Chico.
GENERAL EXHIBIT—Largest and most varied exhibit by one person—1st, Joe Entzman, Table Mountain; 2d, M. V. Roe, Nimshew; 3d, Heckert & Co., Mesilla Valley.
Largest and most varied exhibit by any association or community outside of Oroville—1st, Chico Board of Trade, gold medal; 2d, Mesilla Valley, silver medal.
Most tastefully arranged exhibit of citrus fruits by an individual or association—1st, D. K. Perkins, orange church; 2d, Chico Board of Trade, citrus cottage; 3d, H. C. Bell; 4th, Mrs. S. S. Boynton; 5th, D. F. Fryer.
Largest exhibit of oranges by one person—1st, O. G. Le Rossignol.
Largest exhibit of minerals—1st, W. E. Duncan, Jr., Oregon Gulch, gold medal; 2d, Ingraham & Utterback, Magalia, silver medal.
Largest exhibit of canned fruits, catsups, etc., Mrs. Dr. Bussey, Thermalito.
Finest display of flowers and plants—1st, Heckert & Co., Mesilla Valley; 2d, Mrs. E. W. Fugg.
SILK COCOONS—Best individual exhibit, W. W. Long; 2d, Mrs. H. Poppe, Cherokee.
TOBACCO—Best individual exhibit—1st, John B. Thomas, Cherokee; 2d, J. W. Snyder, Wyandotte.
COTTON—Best individual exhibit—1st, J. E. Allen, Bangor; 2d, Edward Fagin, Gridley.
POTATOES—Best individual exhibit—1st, A. Liebhauer, Forbestown; 2d, N. W. Slater, Forbestown.
MELONS—Best individual exhibit—1st, S. C. Phillips, Gridley; 2d, A. Capura.
HOPS—Best individual exhibit—1st, Frank Cress, Wyandotte.
The committee are of the opinion that the following localities are entitled to honorable mention for the general excellence of their display, and the care and attention given the exhibits by residents of the several places during the fair: Clear Creek, oranges, apples, etc.; Biggs, grains, oranges, nuts, preserves, etc.; Bangor, citrus fruits, nuts, persimmons, dried fruits, etc.; Paradise, apples, dried fruits, etc.; Gridley, nuts, persimmons, grain, etc.

OREGON SWAMP LANDS.—Gov. Pennoyer has written the General Land Office at Washington that Colonel Elliott, Special Agent, has forwarded reports to that office of all his examinations of swamp land in Oregon, and Colonel Shackelford has informed him that all of his reports will be completed and forwarded by the 1st of February next. The Governor asks the commissioner to act at once upon such reports, and cause patents to issue to the State of all the swamp lands so reported on by the 1st of March next. He also informs the commissioner that the State relinquished all claims to the lands embraced in list No. 38 rejected by the Land Office March 21, 1883, for want of proof, but which lands are yet withdrawn from settlement in the local Land Office, except as to such lands concerning which supplemental proofs have been furnished, and asks that with these exceptions the land embraced in said list be opened for settlement.

NO DELAY.—We have received notice from the Hiram Holt Co. of East Wilton, Maine, that the burning of their shops on the night of Dec. 20th will in no way interfere with the prompt shipping of all orders made upon them for Lightning hay knives, their storehouses not being damaged.

AGRICULTURAL DIRECTORS have lately been appointed by the Governor as follows: For District No. 19: W. B. James of Santa Barbara, E. O. Roedor, Santa Barbara. For District No. 16: P. W. Murphy, L. M. Warden, and E. Leedham.

AGRICULTURAL SCIENCE.

The Extraction of Color and Tannin during Red-Wine Fermentation.

University Experiment Station Bulletin, No. 77.

The observations of wine colors made last season in connection with the experimental fermentations at the Viticultural Laboratory, showed unexpectedly great differences in the behavior of the wines from different grapes during the period following fermentation. It was found that some grapes while yielding a very deep color at pressing would lose it rapidly afterward, and frequently fall below others that at pressing had shown materially less color. It was also shown by comparative experiments in fermentation of the same grape under different conditions, that not only the initial intensity of color (i. e., at pressing) varied materially, but also that the rate of loss was different, and that apparent advantages gained (e. g., by hot fermentation) in securing intensity of color do not hold out, and that in certain cases an actual inversion of the proportion at first existing between different samples derived from the same grape may take place. It was further shown that with the deposition of color the tints of wines change from the purplish-reds toward red, and from the reds toward orange-red.

Considering the importance at present attached, commercially, to depth of tint, it was determined to study more closely, this season, the exact course of the development of color in the wines formed under different methods of fermentation, in order to determine the conditions that would secure the greatest depth of tint from the same grape, not only at first but permanently. While the question of permanency cannot, of course, as yet be decided with respect to the present season's wines, the results already obtained are of sufficient interest to render a preliminary statement desirable. It is not intended to discuss at present other points elicited, that require a longer time for their full demonstration.

As it is usually supposed that the extraction of color and tannin go together and continue to the limits of the ordinary periods of drawing-off, no special arrangement for the control of the progress of tannin extraction was made in the first series of fermentations. But after these had shown conclusively that the above supposition is incorrect, another set of two was carried through with the very last grapes available for the season, viz., a lot of third-crop Zinfandel courteously sent by Mr. John Gallejos. The material for the first series, amounting to some 2500 pounds of excellent Carignane (sugar 25.75, acid .53), was donated for the purpose by Mr. A. Salazar, Jr., of Mission San Jose. The upper part of the table below refers to this last-named lot, the lower to the Zinfandel; (sugar 21, acid .60.)

The conditions established for the several fermentations were as follows:

The bulk (eight) of the first series of fermentations was carried out at the air temperature of 75°, which may be considered as practically the most desirable for most purposes. The charge was 200 pounds for each tank. Four of the tanks were provided with grating frames ("false bottoms") to hold the pomace submerged; one having three of these (Perret's process) so as to divide the pomace into three equal portions; another having the grating placed half way down, so as to hold all the pomace near the bottom of the tank. The two others had the grating placed near the top of the mash, as is usually done; but in one the wine was pumped over from below and sprayed over the top twice daily, in lieu of any other mode of stirring or aeration; while the other (788) was left to complete its fermentation without any kind of agitation. Of the other four tanks, one (794) was charged with unstemmed grapes, to be gradually crushed by daily stirring ("Morel" process); another (792) was left open and stirred twice daily with a cross-peg stirrer; the third (793) was similarly left open, but was stirred by pumping air to the bottom; while the fourth (787) was treated according to the method adopted for general purposes in the laboratory, viz., a floating, solid cover and twice-daily stirring.

One charge of 230 pounds (796) was fermented according to the same method, with an air temperature of 62°. In this, as well as in the eight preceding, the mash was set at 63°.

Two charges of 230 pounds each were fermented with the air temperature kept at about 90°; the mash was set at 86°. One of these tanks (795) was provided with floating cover as above; the other (797) was left uncovered and both received twice-daily stirring.

The observations given in the table are those made at 9 A. M. In the second series, two tanks only were used, both with floating top and stirring, as above; but one (799) with an air-temperature of 75° and set at 63°, the other (800) set at 86° and kept in a warm chamber with air at about 90°; the charges in this case were 60 pounds each; the observations were made at short intervals in order to be sure of not missing the maxima of color.—The latter are printed in full-face type, for a readier view of the facts.

The figures given in the columns headed "Intensity" refer to the scale in which a disc of wine four-tenths millimeter or about the sixty-

second part of an inch in thickness is equal in intensity to the type discs of Chevreul's color scale.

In the columns headed "Tint," r. means red and v. r. violet-red, the figures referring to the numbered tints of Chevreul's scale.

The last column to the right shows the percentage of decrease, referred to the deepest tint observed, taken as 100.

A glance at the full-face figures shows at once the very great differences in the greatest intensity of color attained in these experiments, under the varying conditions. The maximum, 77.0, was reached on the third

when, as in the case of No. 789, the pomace was held down near to the bottom of the tank, a maximum of 60.0 of the color scale was reached within the same time. Where the single frame was used near the surface, but the wine pumped over from beneath (No. 790), 55.0 was reached, and that two days earlier; where the three frames were used (No. 791) 57.1 was the color, the maximum being reached at the same time as in the two former, viz.: on the sixth day.

Comparing the three tanks treated in the same manner, but at different temperatures, to wit, Nos. 796, 787 and 795, having a floating cover and stirring twice daily, it appears that the same maximum of 70.0 was reached within the same time (fifth day) both with air-temperatures of 62° and 75°; in the one kept in a chamber at 90°, the maximum of 77.0 was attained on the morning of the third day. This marked influence of high temperature upon the extraction of color is also shown in the second series of the table, as well as in last year's.

Contrary to expectation, the "Morel process," in which the frequent stirring and prolonged fermentation would lead one to expect a deep color, comes next to the lowest, with only 50.0 of color, reached on the sixth day.

It thus appears that in all but one of these cases (795) the maximum of color was attained between the fourth and sixth days. After reaching the maximum, whether the wine is drawn or not, there immediately begins a decrease, which, on the whole, is the more rapid the higher the intensity that has been reached. But the percentage of decrease (see last column of table) varies materially, according to the method of fermentation employed, as will be seen from the figures in the last column to the right. But what interests us most is the absolute intensity remaining after the same lapse of time; and in that respect the color readings last made (Dec. 12th) are very instructive, as they doubtless foreshadow the ultimate outcome more or less accurately. It will be seen that the deepest tint (45.0) was at that time retained by the wine made according to the mode (with floating cover and twice-daily flogging) adopted in the viticultural laboratory, and at 75° air temperature (No. 787). Next highest (38.0) are Nos. 796 and 791, the first also fermented with floating cover but at 62°, the second, according to Perret's method, with three frames. No. 795, fermented with floating cover but at 90°, and at first showing the deepest tint of all, comes next below (35.3) having lost 54.2 per cent of its color. Nos. 792 and 793, both greatly exposed to air during fermentation, stand respectively 12 and 14 points below No. 787, fermented with cover on; and the same influence of excess of air in diminishing colors is even more strikingly shown on comparing Nos. 795 and 797, both fermented at the high temperature but one with cover on, the other open; the color ratio being 35.3 to 20.0.

Omitting for the present the discussion of the causes of these differences, the broad fact remains that in all cases the maximum of color was reached, and its diminution began, long before the fermentation was completed; that therefore the increase of alcohol beyond a certain point which from actual measurement in one case was only five per cent, has no influence in promoting extraction of color. Also, that the long-continued maceration sometimes practiced with the idea that it increases the color, is erroneous.

In the second series of the table, as in the first, the hot fermentation completed the extraction of color (12 hours) sooner than the cooler one; and it is interesting to note the rapid course of these fermentations, as compared with the long-drawn-out process in the Carignane series, due, of course, to the difference in the sugar and acid contents. The high temperature in this case rushed the fermentation right through, but the maximum reached was only 98.5° against 106° in the former case. Here also the color was at first much deeper in the hot than in the cold fermentation (66.6 against 55.8), but the decrease was also more rapid, as is shown in the later observations.

But during the whole time there was a steady increase in the tannin contents, ending with .20 per cent for the hot and .144 for the cooler fermentation. As it is proved that in sound wine there is no subsequent diminution of tannin, this shows that longer time on the pomace steadily increases the tannin, as has been supposed; also, that hot fermentation materially favors the extraction of tannin.

The practical precepts following from these experiments may then be thus stated:

1. Maceration of the wine on the pomace after fermentation is through, increases tannin, but adds nothing to color.
2. When blends are to be made for the sake of color, or when blends of white and red wines are to be made, it should, whenever possible, be done before fermentation, in order that the white juice may help to hold up the color that otherwise will come down very rapidly during the first weeks after drawing-off.

Berkeley, Dec. 30, 1887. E. W. HILGARD.

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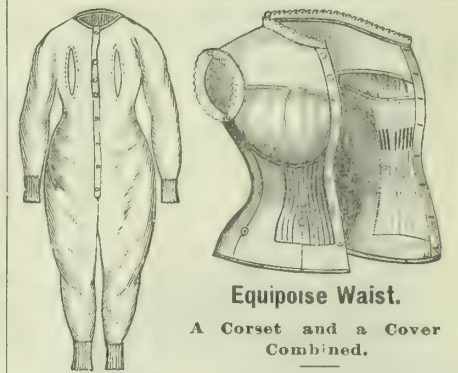
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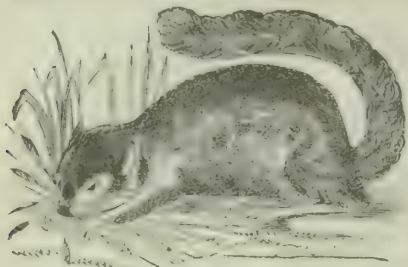
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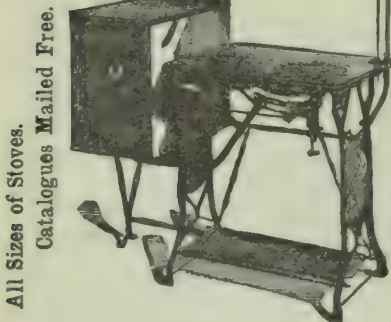
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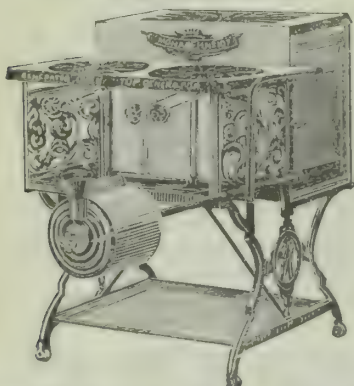
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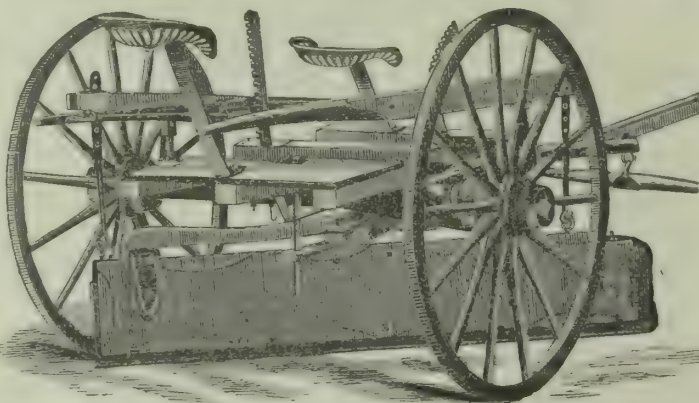
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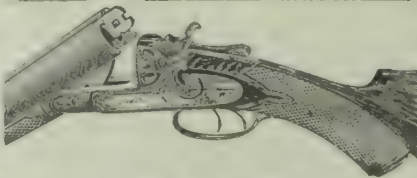


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STANDS WITHOUT AN EQUAL.

THE LIGHTEST RUNNING,

THE MOST DURABLE,

THE FINEST FINISHED,

THE BEST SATISFYING.

WHITE SEWING MACHINE COMPANY,

108 & 110 POST ST., S. F.

This space is reserved for the
NEW HOME SEWING MACHINE
COMPANY, 725 Market St., Ban-
croft History Building, S. F., Cal.

IT STANDS AT THE HEAD!



DO NOT FAIL to SEE THE "DOMESTIC"
Before Buying a Sewing Machine.

It is the leader in practical progress. Send for price list
to J. W. EVANS, 29 Post St., S. F.

WHERE TO BUY PIANOS!



Each Piano on our list is SELECTED for PARTICU-
LAR MERIT, and every one the Best of its class.

DECKER BROS., the A-1 Piano.

MASON & HAMLIN, Improved Method of String-
ing.

IVERS & POND, Eighty in constant use in the New
England Conservatory of Music.

BEHR BROS., Patent Cylinder Top.

BOARDMAN & GRAY, Celebrated for Tone and
Durability.

THE FISCHER, the Old Favorite.

APOLLO, and other German Pianos.

WE BUY FOR CASH and "Take our Pick."

We can suit all purses and tastes.

We guarantee every instrument, backing it with a
guarantee, if necessary, of \$50,000.

Particular attention given to orders by mail.

KOHLER & CHASE,

No. 39 POST ST., SAN FRANCISCO.



SPECTACLES, OPTICAL GOODS
PHOTOGRAPHIC OUTFITS ETC

HIRSCH, KAHN & CO.

333 KEARNY STREET.

SAN FRANCISCO.

Microscopes, Telescopes, Field & Opera Glasses,
Magic Lanterns, Barometers, Thermometers,
Compasses, Electric Batteries, Drawing, Mining,
Surveying and other Scientific Instruments.

Send for Illustrated Catalogue and Eye Tests, free.

ON 30 DAYS' TRIAL.

THIS NEW

ELASTIC TRUSS

is a Pad different from all

others, is cup shape, with self-

adjusting ball in center, adapts

itself to all positions of the body, while

the ball in the cup presses back

the intestines just as a per-

son does with the finger. With light pressure

the Hernia is held securely day and night, giving radical

cure certain. It is easy, durable and cheap. Sent by mail

Circulars free. EGGLESTON TRUSS CO., Chicago, Ill.

FUN CARDS, set of scrap pictures, one checker

board, and large sample book of hidden name

cards and age-la outfit. All only 2c. CAPITAL

CARD CO., Columbus, Ohio.

Grape-Growers' Meeting.

At a meeting of the Grape-Growers' and Wine-Makers' Association in this city on Tuesday, I. De Turk of Santa Rosa presided in the absence of the president, Capt. H. W. McIntire.

Mr. John T. Doyle introduced and supported the following resolutions:

Resolved, That the increased and increasing production of wine and the decline in prices renders it highly important to enlarge the market for California wines, and that we urge on our delegation in Congress an earnest effort to secure an exemption from tax of pure grape brandy used in fortifying such wines.

Resolved, That while we desire the privilege of fortifying pure wine with pure grape spirits free of internal revenue tax, we are of opinion that if that privilege cannot be obtained for all purposes, our delegation in Congress should use their efforts to secure the privilege of so fortifying for exportation, and that a measure conceding the latter privilege should not be antagonized merely because it fails to give us all we ask for.

The resolutions were vigorously opposed by J. H. Wheeler. Mr. Estee offered an amendment to Mr. Doyle's second resolution, adding the word "sweet," as referred to by Mr. Wheeler, and also to change the word "brandy" to "spirits" in the first resolution. Mr. Doyle accepted the amendments, and the resolutions were adopted.

On motion of Mr. Estee, a committee of 12 was appointed for the purpose of representing the different branches of the grape and wine industries; to take into consideration the future of the grape and wine industry of the State, and to formulate such action for the benefit of producers and wine-growers as may seem necessary to protect these industries; the committee to report at the next meeting of the society. The following were appointed such committee: M. M. Estee, E. C. Priber, George West, John T. Doyle, Captain C. de St. Hubert, L. J. Rose, E. W. Davis, H. M. Larue, E. W. Maslin, J. P. Smith, H. W. Crabb and F. Pohndorff.

Considerable discussion was given to the holding of a grape-growers' convention in March next. It was finally decided by adoption of the following resolution:

Resolved, That a committee of five be appointed to co-operate with the Viticultural Commission in holding an annual convention of viticulturists, and that such committee see that a proper time during the convention be set apart for the annual meeting of the association.

The following were appointed as the committee: Messrs. Priber, Estee, Humann, Portal and Rixford.

Prof. Hilgard addressed the meeting upon the subject of extraction of color and tannin during red-wine fermentations. The subject-matter of the address appears as University Bulletin No. 77 on another page of this issue. The association then adjourned to the first Tuesday in March.

Geo. W. Meade & Co.

A meeting of the creditors of this firm, whose suspension was noted last week, was held on Tuesday. A very considerate and kindly feeling seemed to prevail. The following statement of resources and liabilities was made:

LIABILITIES.	
Bank of California.....	\$ 30,287
Bills payable.....	110,500
F. A. Schneider.....	33,480
Accounts payable.....	6,859
Unpaid bills.....	21,922
Los Angeles bank.....	10,000
First National Bank of Fresno.....	10,000
Unpaid accounts at Fresno.....	5,000
Total.....	\$288,048
ASSETS.	
George W. Meade & Co., in Los Angeles..	\$ 27,166
Assets receivable.....	19,714
Bank of California securities.....	12,000
Merchandise, per inventory.....	155,354
Plant at Fresno.....	22,400
Plant at Santa Clara.....	10,000
Surplus in hands of Eastern consignees.....	153,240
Real estate of George W. Meade.....	208,910
Etc., etc.....	6,636
Total.....	\$615,420

From the two tables it will be seen that there is a surplus amounting to \$387,276. Mr. Meade proposed to make payments in full in three parts, the first payment to be due in six months, the second in nine and the third in 12 months, with interest at seven per cent. A committee was appointed to consider this proposition as follows: Thomas Brown, D. D. Shattuck, J. Woodward, Frederick Gibbs, Frank S. Johnson and H. L. Dodge. After a day's deliberation, the committee decided to advise the creditors that the proposition be accepted. The real estate is deeded to the Bank of California in trust as security for the notes. It is stated that all creditors for sums less than \$100 will be paid at once.

The valuable cargo of sheep gathered from various parts of Vermont, and shipped for Australia a few weeks ago, arrived in London safe and sound. None of the sheep died on the voyage, although about 100 cattle on the same vessel succumbed on account of the unusually rough weather.

MR. MOULTON of French Corral, Nevada county, harvested 100 pounds of large, juicy, well-flavored clingstone peaches in November.

Truman, Hooker & Co.

The following circular has been sent to some of the patrons of the above firm, and will no doubt be of interest to many other users of agricultural implements:

SAN FRANCISCO, Dec. 27, 1887.

DEAR SIR:—We desire to inform you that A. H. Isham is no longer a member of our firm and that his connection ceased the 20th inst., though he was restrained previously from transacting business for the firm. The new firm of Truman, Hooker & Co. will continue the business with increased facilities for the transaction of a large trade, and thanking you for past favors desire a continuance of your orders, which shall have prompt and careful attention. We are selling agents for the David Bradley Mfg. Co. of Chicago, one of the oldest, most successful, and the makers of the best steel and best chilled plow in the world. They have now put on this market what they call their Square-Corner sulky 2-gang, 3-gang and 4-gang riding plows and 3 and 4-gang walking plows. These new Bradley plows give great satisfaction. The following telegram is just received: "Williams, Colusa Co., Dec. 23, 1887.—Gang trial Grimes' Landing yesterday, Bradley Square-Corner victorious over the 'New Deal,' 'New Model' and 'Williams Gang.' Sold six Bradley walking gangs." Signed, Geo. W. Bruckner. The new Bradley Gangs have iron center molds and shares. The others have common sheet-steel molds. This is why the Bradley is more durable. They have the rear wheel, which makes the draft lighter than other plows. The Bradley Garden City Clipper Steel plows are models of perfection. They scour in any soil.

We are also agents for Messrs. Biddle, Smart & Co., the largest carriage-makers in Amesbury. We carry a full line of their carriages, buggies, surreys, etc., and will be pleased to give you prices for either a carload or single vehicle.

The Milburn hollow iron-axe wagon is greatly improved in material and workmanship. They are guaranteed.

The McCormick mowers and binders were the best last year, and are perfection this year. It will pay you to buy these if you need a mower and binder. We have a full line of implements, buggies, carriages, etc. Thanking you for past favors, we desire your patronage and influence in the future. We wish you a merry Christmas and a happy New Year.

Yours truly,
TRUMAN, HOOKER & CO.

THE CHINO VALLEY MANUFACTURING AND IMPROVEMENT COMPANY has lately filed articles of incorporation at San Bernardino in order to push a great industrial enterprise, which is outlined as follows in the Los Angeles Times: Richard Gird has sold 23,000 acres of his famous Chino rancho to a Minneapolis syndicate for nearly \$4,000,000, himself retaining a handsome interest. The syndicate includes Mr. Gird, H. L. Drew (president of the Farmers' Exchange Bank, San Bernardino), R. B. Hunter, H. M. Ryan, J. R. Wolcott and others. The capital stock is \$10,000,000, all subscribed. The company intends to spend at least \$1,000,000 within the next 18 months in the way of improvements on the property. Rolling-mills, blast furnaces, pipe-mills, etc., will be erected at the new town of Chino, which Mr. Gird has already started, and which the company proposes to make the Pullman of Southern California. The company controls an immense deposit of fine iron ore, 25 miles from Daggett, said to be better than Lake Superior ore, which has driven European ores out of the market. To get plenty of coke cheap the company has purchased a lot of Washington Territory coal lands, from which an excellent coking coal is being mined. It is claimed by the company that it can manufacture pig iron in Southern California for only \$3 per ton more than Cleveland prices, while freight from Cleveland costs \$15 to \$16. Such an establishment, operated in a town of its own workmen, will be of great financial importance in Southern California.

A GREAT EVENT WITH THE TEACHERS.—The California teachers had a grand time in Berkeley last week, when several hundred of them gathered in the halls of the University to hold their semi-annual convention. Three days were passed in discussions, etc., relating to the science and art of teaching, and the season was pleasant and profitable to all. One of the most interesting items of action to the public was the arrangement for the meeting of the National Teachers' Association, which will be held in California next summer, and which will bring several hundred Eastern educators to our State. It is evident that they will be received warmly and hospitably.

AN ITEM OF ESTEEM.—A friend writes us that in his locality it is the practice with our subscribers to lend their copies of the RURAL to "all their neighbors for five miles around." We are glad people think enough of the RURAL to go that far to borrow it, for it shows that they must think something of it. Possibly a "borrower's edition" printed on cloth would not be a bad thing for people who get their information that way. We submit, however, that the time expended in going so far to borrow would be worth more than it would cost to have a copy of one's own. Then, too, the RURAL should not only be read but should be filed for reference. However, we will not complain; if the RURAL is so valuable to you, get it any way you can, except by stealing it.

The tonnage of the United States vessels engaged in the coasting trade increased largely last year.

The public debt was diminished during the past year \$117,016,000.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING DECEMBER 27, 1887.

- 375,471.—CHAIR-BACK AND HEAD-REST—F. Binder, Alameda, Cal.
375,344.—SECURING SASHES IN WINDOW-FRAMES—S. R. Deacon, Los Angeles, Cal.
375,480.—CABLE RAILROAD CHANNEL—W. Dunham, Igo, Cal.
375,486.—GRAIN SEPARATOR—J. Grider, Stockton, Cal.
375,490.—APPARATUS FOR DISTILLING WOOD—G. Hunziker, Cloverdale, Cal.
375,496.—MUSIC CHART—C. S. Mason, Orange, Cal.
375,565.—TWO-WHEELED VEHICLE—N. S. Parker, Salem, Ogo.
375,509.—WAD-SORTER—P. Selby, Oakland, Cal.
NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

ATTENTION is called to the advertisement in another column of M. Ehret, Jr., & Co. This company are the largest manufacturers and distillers of coal tar, asphaltum and roofing material in the United States, their output on roofing alone being 200,000 squares, or 500 carloads. Their celebrated Black Diamond roofing has been in use in all climates in the United States, Canada, West Indies and Europe, nearly six years, and it is considered all and more than they claim for it. They claim superiority as a roofing covering from the following: Any one can put on six to eight squares per day; it is water and fire-proof and adapted to any climate; it is inexpensive and will outlast metal or shingles with less expense for repairs, and weighs but 75 pounds to 85 pounds to 100 square feet. They guarantee the goods first-class, and make shipments anywhere delivered, or at their houses at St. Louis, Mo., at satisfactory prices.

Bees in a Chimney.

EDITORS PRESS:—Several of my swarms have left their hives and gone into a chimney where a large number have collected during the last two years. Can I by placing a weak swarm on top of the chimney trap them so they cannot get down the chimney again? Any information how to recover them would be gladly received through your columns and would no doubt be of interest to other readers besides. WM. STYAN, San Mateo.

WELLS, RICHARDSON & Co's

IMPROVED Butter Color.

EXCELS

IN STRENGTH PURITY BRIGHTNESS

NEVER TURNS RANCID.

Always gives a bright natural color, and will not color the Buttermilk.

Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color.

Three sizes, 25c. 50c. \$1.00. For sale everywhere.

WELLS, RICHARDSON & CO. BURLINGTON, VT.

ROOFING!

BLACK DIAMOND BRAND
PREPARED ROOFING
CHEAPEST & BEST ROOF
YOU CAN PUT IT ON YOURSELF.
FIRE AND WATER PROOF
FOR ANY ROOF
AND ANY CLIMATE.

M. EHRET JR. & CO.

SOLE MANUFACTURERS.

113 N. 8th St., ST. LOUIS, MO.

W. E. CAMPE, AGENT.

Rural Seed Offering—1888.

Great Inducements for New Subscribers.

To encourage gardening and further extend the circulation of the PACIFIC RURAL PRESS, we will offer, while this notice remains in our columns, to furnish to all old or new subscribers the following seeds on the favorable terms named below:

VEGETABLE SEEDS.

83 Varieties.

In Papers, postpaid. Cts.

- | | | | |
|---------------------------------|----|---------------------------------|----|
| 1 Early Blood Turnip..... | 10 | 94 Cactalia Coccinea (Tas- | 5 |
| 2 Early Extra Bassano..... | 10 | sel flower..... | 5 |
| 3 White Sugar..... | 10 | 95 Ca. panula Speculum..... | 5 |
| 4 Yellow Sugar..... | 10 | (Veus) King Glass..... | 5 |
| 5 Early Long Dark Blo'd..... | 10 | 96 Cauldrot, white tr..... | 5 |
| 6 Early York..... | 10 | 97 CentaureaCynus(Bach- | 5 |
| 7 Early Dutch..... | 10 | elor's Button)..... | 5 |
| 8 Early Wakefield..... | 10 | 98 Clarkia, fine mixed..... | 5 |
| 9 Exa Fine Large Dutch..... | 10 | 99 Couvolvulus (Morning | 5 |
| 10 Exa ly French Oxheart..... | 10 | Glory) mixed..... | 5 |
| 11 Large Late Drumhead..... | 10 | 100 Forgl-ve, mixed..... | 5 |
| 12 Red Dutch (pickling)..... | 10 | 101 Globe Amaranthus..... | 5 |
| 13 White Solis..... | 10 | 102 Gye optilia Elegans..... | 5 |
| 14 Early Paris..... | 10 | 103 Ice Plant..... | 5 |
| 15 Extra Early Forcing..... | 10 | 104 Larkspur, finest mixed | 5 |
| 16 Long Orange..... | 10 | 105 Linum Grandifl(a)Flax..... | 5 |
| 17 Early Corn..... | 10 | 106 Love-in-a-mist..... | 5 |
| 18 White Bell..... | 10 | 107 Australia, Cal. Dula..... | 5 |
| 19 White Spine..... | 10 | 108 Marigold, African, dbl..... | 5 |
| 20 Early Cluster..... | 10 | 109 Mizoutine, Sweet..... | 5 |
| 21 Early Frame..... | 10 | 110 Nastu-tium..... | 5 |
| 22 Long Green..... | 10 | 111 Nolana..... | 5 |
| 23 Eng. Ghe kin, Pickles..... | 10 | 112 Portulaca, mixed..... | 5 |
| 24 Early Curled Silesia..... | 10 | 113 Poppy, Double, mixed..... | 5 |
| 25 Ice Drumhead..... | 10 | 114 Sweet William, mixed | 5 |
| 26 Simpson's Early Cur'd..... | 10 | 115 Sunflower, Cal. Dula..... | 5 |
| 27 Prize Head..... | 10 | 116 Sensitive Plant..... | 5 |
| 28 White Paris Cas..... | 10 | 117 Sweet Pea, White..... | 5 |
| 29 Hanson..... | 10 | 118 Sweet Pea, Crimson..... | 5 |
| 30 Boston Market..... | 10 | 119 Everla ting..... | 10 |
| 31 Large Yel. Canteloupe..... | 10 | 120 Sweet Peas, mixed..... | 5 |
| 32 Extra Fine Nutmeg..... | 10 | 121 Sweet Peas, mixed..... | 5 |
| 33 Casaba (m w)..... | 10 | 122 Sweet Peas, mixed..... | 5 |
| 34 Cuban Queen W'm lon..... | 10 | 123 Sweet Peas, mixed..... | 5 |
| 35 Mt. Sweet Wat rmelon..... | 10 | 124 A-ter, China, mixed..... | 10 |
| 36 Iron Ball Watermelon..... | 10 | 125 A-ter, China, mixed..... | 10 |
| 37 Sealy Bark do..... | 10 | 126 Australian Vine..... | 10 |
| 38 Black Spanish do..... | 10 | 127 Elephant (Slipper) | 10 |
| 39 White Imp. or Lodi do..... | 10 | fine mixed..... | 10 |
| 40 Early Red..... | 10 | 128 Bals'm, fine Paris, dbl | 15 |
| 41 Red Webber field..... | 10 | 129 Balsam, Splendid, dbl | 15 |
| 42 Yellow Danve s..... | 10 | 130 Balsam, Dwarf, double | 15 |
| 43 W. Forgal or Sil. Skin..... | 10 | 131 Balsam, Rose Fl'd, dbl | 15 |
| 44 White Dutch..... | 10 | 132 Balsam, fine..... | 15 |
| 45 White Dut h..... | 10 | 133 Balsam, fine..... | 15 |
| 46 New Early Round..... | 10 | 134 Balsam, fine..... | 15 |
| 47 Mammoth California..... | 10 | 135 Balsam, fine..... | 15 |
| 48 Olive Shaped Radish..... | 10 | 136 Balsam, fine..... | 15 |
| 49 Ea ly Scarlet Turnip..... | 10 | 137 Balsam, fine..... | 15 |
| 50 Blk Spanish or Wint'r..... | 10 | 138 Balsam, fine..... | 15 |
| 51 Early Scalloped Bush..... | 10 | 139 Balsam, fine..... | 15 |
| 52 Early Sum. r k Neck..... | 10 | 140 Balsam, fine..... | 15 |
| 53 California Field..... | 10 | 141 Balsam, fine..... | 15 |
| 54 Mar blehead..... | 10 | 142 Balsam, fine..... | 15 |
| 55 Bo ton Marrow Win'r..... | 10 | 143 Balsam, fine..... | 15 |
| 56 New Bush or Winter..... | 10 | 144 Balsam, fine..... | 15 |
| 57 La ge Yellow..... | 10 | 145 Balsam, fine..... | 15 |
| 58 The Conqueror..... | 10 | 146 Balsam, fine..... | 15 |
| 59 Early Red Smooth..... | 10 | 147 Balsam, fine..... | 15 |
| 60 Trophy..... | 10 | 148 Balsam, fine..... | 15 |
| 61 Canada Victor (earl'st)..... | 10 | 149 Balsam, fine..... | 15 |
| 62 Acme..... | 10 | 150 Balsam, fine..... | 15 |
| 63 Cow Horn..... | 10 | 151 Balsam, fine..... | 15 |
| 64 Yel. Rutab'a or Sw'd h..... | 10 | 152 Balsam, fine..... | 15 |
| 65 Early White Flat Dutch..... | 10 | 153 Balsam, fine..... | 15 |
| 66 Long White French..... | 10 | 154 Balsam, fine..... | 15 |
| 67 Imp. Lat- Rutabaga..... | 10 | 155 Balsam, fine..... | 15 |
| 68 Round Leaf..... | 10 | 156 Balsam, fine..... | 15 |
| 69 Large Fland r..... | 10 | 157 Balsam, fine..... | 15 |
| 70 Extra Early..... | 10 | 158 Balsam, fine..... | 15 |
| 71 Champion of England..... | 10 | 159 Balsam, fine..... | 15 |
| 72 Yorkshire Hero..... | 10 | 160 Balsam, fine..... | 15 |
| 73 Queen of Dwarfs..... | 10 | 161 Balsam, fine..... | 15 |
| 74 Kohlrabi..... | 10 | 162 Balsam, fine..... | 15 |
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| 81 Monterey Cypress..... | 10 | 169 Balsam, fine..... | 15 |
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| 143 Kohlr | | | |

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

JERSEYS—THE BEST HERD—All A. J. C. registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands, Aargie's and Case Strains. Punch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page Station, S. F. & N. P. R. E. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

POULTRY.

H. J. GODFREY, Box 185, San Leandro, Cal. Thoroughbred Plymouth Rocks. Eggs, \$2 per 13.

T. D. MORRIS, Sonoma, Cal. Toulouse and Embden Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

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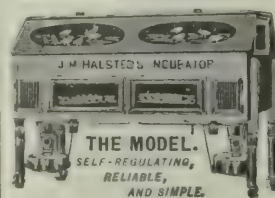
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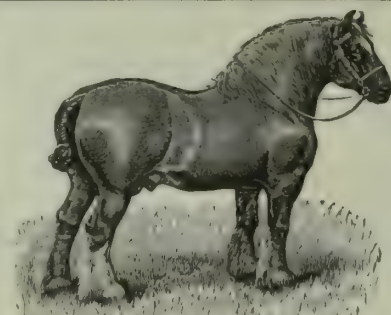


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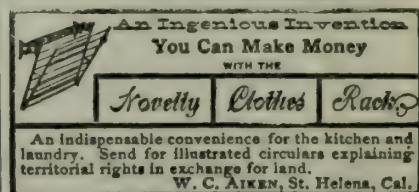
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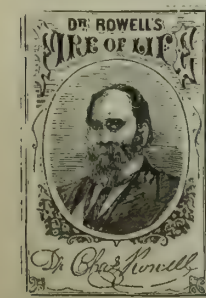
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DR. J. KOEBIG—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Pota-h.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
BERKELEY, Nov. 20, 1886.

DR. J. KOEBIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

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Every Can Warranted.

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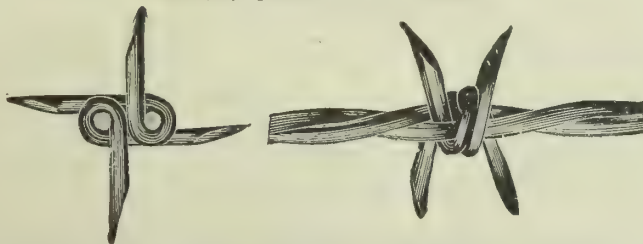
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Free Coach to and from the Hotel.

CHAS. & WM. MONTGOMERY, Prop'rs



THE DOG In health, habits and disease. All breeds
and treatment; 60 cuts; 25c. This office.

S. E. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Jan. 4, 1888.

The three days' heavy rains the past week have put farmers and dealers in farm products in a more cheerful mood. As the rains were well distributed, plowing is reported to be very general. In farm products the New Year opened dull, but with prices showing no material change. Eastern and English advices continue to give a strong wheat market.

Foreign Review.

LONDON, Jan. 2.—The *Mark Lane Express*, in its weekly review of the British grain trade, says: English wheat is firmer. In the provincial markets the supply is smaller and quotations are 6d to 1s higher. In London the prices have advanced 6d. The sales of English wheat during the past week were 41,560 quarters at 30s 9d against 34,766 quarters at 35s for the corresponding week last year. Foreign wheat was stronger, and Indian, Russian and American winter wheat better. In Liverpool the prices are 1d to 2d per cent higher. Linseed has risen 1s. There were two arrivals of wheat cargoes; one was withdrawn and three remain. At to-day's market both English and foreign wheat were held for 1s advance; 6d to 9d was readily obtainable. Flour was 6d higher. English barley is dearer.

Eastern Grain Markets.

CHICAGO, Jan. 4.—Wheat, 77½¢ for Jan., 78¢ for Feb., 78½¢ for March and 84½¢ for May.

NEW YORK, Jan. 4.—90½¢ for Jan., 91½¢ for Feb., 92½¢ for March, 93½¢ for April and 94½¢ for May.

California Fruit at Chicago.

CHICAGO, Jan. 2.—The *Tribune*, in its annual review of this morning of the commerce of Chicago for 1887, says: During the year about 800 carloads of California fruit arrived, including oranges. Owing to the light crop in some sections of that State, the shipments of grapes did not show any increase over 1886, and were estimated at 150,000 packages, averaging \$2 per case. The usual number of pears, apricots and peaches arrived, while few lemons were off red. Navel oranges were popular with the trade, while other varieties ranged at \$2 to \$3.

Honey.

NEW YORK, Dec. 24.—The *Mail and Express* reports that California honey is bringing about double in this market what it did one year ago. The stock is small.

Local Markets

BAGS—There is an improved inquiry for June-July delivery, but so far as can be ascertained, the price remains at 7½¢ to 7¾¢.

BARLEY—Owing to the heavy rains, many thought prices would break, and have been surprised at the strength of the market. On Call, there was free selling of futures, but strong buyers took all offered, only allowing prices to shade off a little. To-day's sales on Call are reported as follows:

Morning Session: Buyer season—300 tons, 95½¢; 300, 95½¢ per cwt. Afternoon Session: Buyer season—300 tons, 95¢. Buyer 1888—100 tons, \$1 per cwt.

BUTTER—The market is bare of pickled. Many large retail dealers are selling solid packed. Owing to rains and improving pasture, receipts of fresh roll are not kept, but worked off as soon as possible.

CHEESE—New mild cheese is wanted at full figures; old, strong cheese is slow. Eastern is unchanged.

EGGS—Under free receipts and accumulating supplies, prices are weak at a lower range.

FLOUR—The market is steady for standard brands, but in Oregon and interior brands, more or less cutting in prices continues.

WHEAT—The sample market holds strong, with no sellers, except at figures, and even then only a few are willing to let go. Buyers still bid down, notwithstanding higher prices in England and lower charters. On Call, trading was fair up to Saturday, but on Tuesday nothing was done, both buyers and sellers appearing to be afraid. To-day's sales on Call are as follows:

Morning Session: Buyer season—100 tons, \$1.48½; 800, \$1.48½ per cwt. Afternoon Session: Buyer season—100 tons, \$1.48½; 100, \$1.48½ per cwt.

[COMMUNICATED.]

Market Information.

The following are the receipts of the principal items of California produce at San Francisco from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year.

	July 1 to Dec. 31, '86.	July 1 to Dec. 31, '87.
Flour, qr, sks.....	2,530,269	1,815,149
Wheat, cts.....	8,866,015	4,937,617
Barley, cts.....	1,778,147	1,558,241
Oats, cts.....	106,341	125,692
Potatoes, sks.....	534,585	650,717
Corn, sks.....	49,137	122,160
Rye, sks.....	13,662	13,240
Black wheat, sks.....	4,148	744
Beans, sks.....	346,881	328,713
Bran, sks.....	261,324	255,829
Hay, tons.....	59,911	69,151
Salt, tons.....	13,498	9,740
Wool, lbs.....	15,412	37,372
Hides, No.....	60,315	53,939
Raisins, 20-lb boxes.....	111,628	80,777
Quicksilver, flasks.....	7,552	16,768
Hops, lbs.....	12,163	14,135

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 to Dec. 31, '86.	July 1 to Dec. 31, '87.
Flour, sks.....	44,879	127,735
Wheat, cts.....	243,122	473,142

Barley, cts.....	1,693	75
Oats, cts.....	191,805	107,860
Corn, cts.....	52,775	12,590
Wool, bales.....	9,058	7,189
Bran, sks.....	26,418	33,290
Hops, bales.....	753	228
Hides, No.....	17,462	18,054
Potatoes, sks.....	35,397	2,455

Cereals.

The estimated production of all India as officially given is 251,690,880 bushels wheat in 1883-84, against 299,155,384 bushels in 1884-85; 258,317,632 bushels in 1885-86 and 238,885,947 bushels in 1886-87. The aggregate gives an average of 261,937,511 bushels. In 1884-85 the average yield was nearly 11 bushels per acre, and last year a fraction under 9 bushels. The average yield taking several years together has been about 9 bushels.

The wheat exports from India from January 1 to December 3, 1887, have been 27,672,000 bushels, comprising 13,984,000 bushels to the United Kingdom and 13,688,000 bushels to the continent of Europe, against 41,232,000 bushels the corresponding time in 1886, comprising 18,356,000 bushels to the United Kingdom and 22,876,000 bushels to the continent of Europe. The decrease for 11 months of 1887 is 13,560,000 bushels.

English advices report that the stock of wheat in the leading seaports is fully up to last year at the same time, but the stock in the interior is considerably less.

The New York *Produce Exchange Reporter*, Dec. 25, reports as follows: A strong effort was made to break the market, but it was only partially successful; the inherent strength of the position (and which is now better understood) caused buyers to take hold boldly and a marked change in public sentiment was soon apparent. Every day's experience makes the situation more pronounced, and it is becoming plain to all that the exporting power of the country has been overestimated, and the very unpromising condition of the growing crop is an element of great strength which should not be ignored. It cannot fail to be interesting to dealers in options to note the fact that an unusual proportion of the spring crop grades below No. 2. The lower prices of Nos. 3 and 4 spring has attracted the attention of feeders of live-stock, as at the current low prices they are cheaper than new Indian meal, because they possess fattening elements in a large degree and are selling at low figures, and the latter is true of all grades. The export demand has continued extremely light, more so than any one familiar with the trade had any idea of, but notwithstanding the paucity of the output, prices of spot have slightly improved and a feeling of confidence is noticeable on all sides; this is chiefly due to the fact of the visible supply being so much below that of last year and the quality on passage is also much smaller. Our correspondents in the winter wheat States all agree in saying that the quantity in the hands of farmers is much less than at the corresponding time last year; this accounts for the reluctance of farmers to sell, which is almost universal.

The same authority says: "The news from the West the past three months has been of more than usual interest, especially south of this parallel, where the cold weather they have experienced has created much apprehension for the growing crop, as they have very little snow to protect the wheat plant. In many localities the plant looks poorly; the growth this month has been slow, though in some sections very much better than others. The cold wave they have experienced during the week has created some anxiety for the growing plant and some damage is reported. The general condition in the Western wheat belt is much below that of last year. We have discouraging reports of the crop from Kansas, also from Illinois, Ohio and Michigan. From the Southern States we have few complaints. At the Northwest there was a decided falling off in farmers' deliveries, and after this month the visible supply is likely to decrease steadily. Our domestic wants it is believed will exceed farmers' deliveries during the month of January. The consumption of spring wheat in this country is rapidly increasing; it is being used in the winter wheat States more generally than ever before; it is claimed this will exert a marked influence in its value later on."

Portland, Oregon, advices report that the wheat shipments from that place from August 1, 1887, to January 1, 1888, aggregate larger than for the like time in 1886. The demand was fair from exporters, with California buyers still taking freely of the more choice grades. Prices ruled the same as reported in last week's *RURAL PRESS*.

In this State plowing is very general. It is now claimed that a larger acreage will be seeded to wheat than last season.

The stock of wheat in this city and Port Costa was on January 1st over 20,000 tons less than on December 1st. As the tonnage on berth is large with new charters being made, it is not at all unlikely but the stock will show a much larger decrease on February 1st.

The wheat market in this city is very strong, with holders holding off, and buyers not in the market. As the latter's wants are known to be quite large, they will be forced to come in soon. Private cables from England report a very strong market and further advances looked for. If this is realized a higher range of values is looked for in our market.

Barley is very strong; the late rains not affecting the market to the extent looked for, indeed values did not go off a cent a cental, owing to stocks being under good control. The consumption continues free, while receipts are only fair. The stock here January 1st was a little over 38,000 tons, a reduction of about 1500 tons since December 1st.

The stock of oats shows a further reduction on January 1st. As receipts are light and demand good it is claimed that a higher range of values is likely to rule before the end of the season.

Corn is very strong at a further advance for choice grades. The stock in the city shows a further reduction on January 1st. The prevailing impression is growing that the output of the 1887 crop will not come up to the preliminary estimate of 1,453,000,000 bushels, some estimates being nearly 100,000,000 bushels less. The corn crop in the six commercial States, or those from which the surplus is largely moved for local use and export, is probably less than the crop of 1881 therein. The advance of three weeks ago was too rapid to hold, and a part of it has been lost, but is generally expected to be again resumed and a further advance obtained. The Argentine Republic exported 9,627,035 bushels of corn in 1885 and 5,583,970 bushels in 1884, with a

still larger movement in 1886. Southeastern Europe, if all accounts shall be confirmed, will have much less surplus in 1888 than usual, and the only countries that can make up the European deficiency are the United States and the Argentine Republic. If, however, the price shall be too dear, Europe's consumption will be diminished.

Both rye and buckwheat rule strong at full figures. The stock in hand is light and under good control.

Fruits.

Cold-storage grapes come in sparingly. The quality is good, but the demand is slow. Some of the grapes have been in store over four months, and show nearly as well as at the time of picking.

Pears are in light stock, but as the demand is slow, values are unchanged.

Oregon continues to send us fair supplies of apples, which, with free receipts of California and Eastern, cause the market to continue at unchanged prices, notwithstanding the demand is good.

California oranges are weak, under free receipts and a light call. Receipts so far are considerably below last season for the like time. At the lower prices and more settled weather, a better demand is looked for.

Lemons and limes are slow. Mexican limes are strong and California weak.

Dried fruits are quiet. There are no buyers in the market, consequently any selling pressure will be met by low bids. The stock is not large for the season, particularly of the more choice grades.

Holders are indifferent, believing in better prices before the close of the season.

Raisins are dull, but as the stock is light, no lower range is looked for unless a selling pressure sets in, which is hardly likely. Eastern advices report a light stock for the close of the year, smaller than for several years past. This causes a generally expressed opinion that values will rule much higher before another season.

Feedstuff.

Bran and middlings are lower and weak at the decline. Feedmeal and ground barley are firm. The call for all kinds is only fair.

Under continued light receipts, hay rules firm, particularly the better grades. The supply to draw from is reported light, while the consumptive call is unabated.

Live-Stock.

Bullocks are in lighter receipt, and as the demand is good, prices show a slight advance for the better grades. Considerable poor is offering.

Mutton sheep are firm, but no higher. More calves have come to hand, but the market took all at full prices. Spring lambs are scarce and high. Grain-fed hogs continue scarce and high. Acorn-fed are arriving more freely. In horses, there is nothing new to report. The rains stopped trading, but with more settled weather and improved driving, a good demand is expected for general utility horses, driving horses and matched teams.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 8½¢; first grade, grass fed, 7½¢ to 7¾¢; second grade, 6½¢ to 7¢; third grade, 5½¢ to 6¢.

MUTTON—Ewes, 5½¢ to 6¢; wethers, 6 to 6½¢.

LAMB—Spring, 12½¢ to 15¢.

VEAL—Large, 6 to 7¢; small, 6 to 8¢.

PORK—Live hogs, 4½¢ to 4¾¢ for heavy and medium; hard dressed, 6½¢ to 7¢ per lb; acorn fed, 4 to 4½¢; dressed, 5½¢ to 6½¢; soft hogs, live, 3½¢ to 4¢. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Vegetables.

Rains and milder weather have caused more active outdoor work.

Cabbages are strong for the better grades. The demand for the moment is quiet, but an improvement is looked for before the close of the month.

Mushrooms are strong and in light receipt.

Root vegetables are quiet, but as the supply is only fair and vegetation backward, the market holds strong.

Under light receipts and a good demand, potatoes are strong at a slight advance. At the close, buyers only take for immediate use, fearing that with more settled weather, heavy receipts will follow and a lower range of values result.

Onions are lower, but at the decline the tone is firmer, as receipts have fallen off.

Miscellaneous.

The market for turkeys is quiet and weak, but for hens, roosters, broilers and ducks, the demand is good, with receipts light, as are stocks in dealers' hands.

In wool there is nothing doing. The stock on hand is 6,000,000 lbs. against 4,500,000 lbs. last year at this time. The bulk now held is inferior and hard to place.

Hops are slow, with nothing reported to be doing. The bulk of the holdings is poor and undesirable. Both Eastern and European advices report a slow and low market.

Deerskins are 5c a lb. higher. Hides are weak at last week's prices.

Both honey and beeswax are strongly held at full prices.

Beans rule very strong. Stocks are light, receipts fair and Eastern inquiry good.

The tonnage movement compares with last year at this date as follows:

On the way..... 320,644 215,943

In port, disengaged..... 121,477 63,981

In port, engaged..... 23,865 49,241

Totals..... 465,986 329,165

To obtain the carrying capacity, add 60 per cent to the tonnage.

Charters have fallen to 22s for wooden vessels and 25s for iron to U. K.

San Francisco, Jan. 4, 1888.

THE STATE BOARD OF TRADE has now 26 affiliated organizations. El Dorado county is the latest that has come in. Dr. G. G. Blanchard of Placerville has presented his credentials as delegate from the county Board of Trade which was organized Dec. 29th. An exhibit of the products of the county is being prepared and will soon be forwarded to the headquarters of the State Board in this city.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Jan. 4, 1888.

Beans, etc.....	2 10 @ 2 50	Beans.....	11 @ 12
Butter.....	2 50 @ 3 25	Peanuts.....	10 @ 16
Peas.....	3 10 @ 3 35	Pilberts.....	4 @ 6
Red.....	2 05 @ 2 40	Hickory.....	10 @ 12
Pink.....	2 20 @ 2 30	POTATOES.....	5 @ 6
Large White.....	2 05 @ 3 00	Burbank.....	1 10 @ 2 00
Small White.....	3 00 @ 3 30	Early Rose.....	95 @ 1 00
Lima.....	2 10 @ 2 50	Cuffey Cove.....	80 @ 1 10
Old Peas, blue eye.....	2 00 @ 2 16	Petaluma.....	75 @ 1 10
do green.....	1 50 @ 1 75	Tomas.....	1 00 @ 1 15
do Niles.....	1 50 @ 1 75	River Falls.....	85 @ 70
BROOM CORN.....	50 @ 75	Jersey Blues.....	75 @ 80
Southampton.....	50 @ 75	Humboldt.....	75 @ 80
Northampton.....	50 @ 75	do Kidney.....	75 @ 80
CHICKEN.....	6 @ 7	Peachblows.....	87 @ 1 10
California.....	6 @ 7	do.....	87 @ 1 10
German.....	7 @ 8	do Oregon.....	87 @ 1 10

DAIRY PRODUCE, ETC.			
BUTTER			
Cal. fresh roll, lb.....	37 1/2 @ 45	Sweet.....	1 25 @ 2 25
do Fancy brands.....	45 @ 47	Heus, doz.....	5 50 @ 9 00
Pickle roll.....	25 @ 30	Roosters.....	5 50 @ 11 00
Firkin, new.....	25 @ 30	Broilers.....	4 00 @ 8 00
Eastern.....	20 @ 25	Ducks, tame.....	7 00 @ 11 00

CHEESE, Cal. D.....	13 @ 17	do Mallard.....	4 00 @ 4 50
Eastern style.....	12 @ 16	do Sprig.....	1 50 @ 2 00
do.....	12 @ 16	do.....	1 75 @ 2 25

Cal. ranch, doz.....	37 1/2 @ 35	do Goats.....	2 50 @ 4 50
do store.....	30 @ 35	do Wild, doz.....	2 50 @ 4 50
Ducks.....	— @ —	Turkeys.....	14 @ 16
Oregon.....	— @ —	do Dressed.....	15 @ 18
Eastern.....	20 @ 25	Turkey Feathers.....	— @ —

BRAN, ton.....	16 00 @ 17 50	Snipe, Eng, doz.....	— @ —
Cornmeal.....	25 00 @ 27 00	do Common.....	— @ —
Grd. Barley ton.....	20 00 @ 21 40	Quail.....	1 75 @ 2 00
Hay.....	11 00 @ 11 40	Rabbits.....	1 00 @ —
Middlings.....	10 00 @ 11 50	Hares.....	1 25 @ —
Oil Cake Meal.....	26 50 @ 28 50	Venison.....	— @ —
Straw, bale.....	40 @ 60		

EXTRA, City Mills.....	4 00 @ 4 25	Cal. Bacon.....	10 @ 11
do O'Leary Mills.....	3 75 @ 4 00	Heavy B.....	10 @ 11
Superfine.....	3 25 @ 3 50	Medium.....	11 @ 11 1/2
GRAIN, ETC.		Light.....	11 @ 12 1/2
Barley, feed, cwt.....	85 @ 95	Extra Light.....	12 1/2 @ 13 1/2
do Brewing.....	1 00 @ 1 15	do.....	9 @ 11
Chevalier.....	1 15 @ 1 30	Cal. Smoked Beef.....	14 @ 14 1/2
do Coast.....	1 15 @ 1 30	Hams, Cal.....	12 1/2 @ 14
Buckwheat.....	1 15 @ 1 45	do Eastern.....	14 @ 15
Corn, White.....	1 20 @ 1 30	SEEDS	
Yellow.....	1 15 @ 1 27 1/2	Alfalfa.....	8 @ 9
Small Round.....	1 25 @ 1 34	Canary.....	3 1/2 @ 4
Nebraska.....	1 10 @ 1 20	Oregon red.....	11 @ 12
Oats, milling.....	1 55 @ 1 60	White.....	20 @ 22
Choice feed.....	1 42 1/2 @ 1 47 1/2	do.....	20 @ 22
do good.....	1 37 1/2 @ 1 40	Flaxseed.....	2 @ 3
do fair.....	1 30 @ 1 36	Hemp.....	4 @ 4 1/2
do black.....	1 25 @ 1 40	Italian Rye Grass.....	10 @ 11
do Oregon.....	— @ —	Perennial.....	7 @ 9
Eye.....	2 00 @ 2 55	Millet, German.....	5 @ 6
Wheat milling.....	1 45 @ 1 47 1/2	do Common.....	5 @ 6
Gilted.....	1 40 @ 1 42 1/2	Mustard, white.....	3 @ 3 1/2
do whole.....	1 40 @ 1 42 1/2	Brown.....	3 @ 3 1/2
do fair to good.....	1 37 1/2 @ 1 40	Kape.....	14 @ 22
Shipping choice.....	1 41 1/2 @ 1 43 1/2	Key Blue Grass.....	15 @ 17
do good.....	1 40 @ 1 41 1/2	do quality.....	13 @ 15
do fair.....	1 35 @ 1 38 1/2	Sweet V. Grass.....	8 @ 18

FEED				tail and wing..	@	
Bran, ton.....	16 00	@17 50		Snipe, Eng., dos.	-	@
Cornmeal.....	25 00	@27 00		do Common..	-	@
Gr'd Barley ton, 20 00	@21 00			Doves.....	-	@

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send note but worthy men.

F. B. LOGAN—Santa Clara Co.
M. S. PRIME—Alameda Co.
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WM. WILKINSON—San Joaquin and Stanislaus Co.'s.
A. F. JEWETT—Tulare Co.
E. H. SCHAEFFLE—Nevada and Placer Co.'s.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
DR. STANLEY T. PEET, San Diego Co.

Cottony Cushion Scale.

At last the remedy for this pest has been found. About five weeks ago the orange orchard of Mr. Frank M. Pixley at Corte Madera (badly infested with cottony cushion scale) was treated with Ongert's Liquid Tree Protector, according to direction. The insects and all eggs are killed, the trees are now free from this pest and also from black smut, and show increased healthy growth. As Ongert's Liquid Tree Protector does not contain any poisonous, caustic, or corrosive substance it can be handled without any danger.—From *Argonaut*, Dec. 31, 1887. For sale by Woodin & Little, 509 and 511 Market street, San Francisco.

Buena Vista Rancho.

This fertile tract of land, containing 7725 acres, has been platted into 60 farms suitable for mixed farming and fruit growing. It is four miles from Salinas City, Monterey County, and will be sold at low prices and liberal terms. Address, J. C. Hoag, 312 Van Ness avenue, San Francisco, or Tyler Beach, San Jose, Cal.

Sorghum.

Now that sorghum is once more attracting the attention of farmers throughout the country and has this time apparently come to stay, it is well to know that the Sorghum Hand-Book, a valuable treatise on the cultivation and manufacture of sorghum may be had free of charge on application to the Blymyer Iron Works Co., Cincinnati, O.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,
T. A. SLOCUM, M. C., 181 Pearl St., New York.

\$500,000

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Clothes boiled in a suds made from the King of Soaps become white and clean with each successive washing.

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With the New Year, many new pupils will commence to learn the Piano; to them and their teachers we commend

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KINKE'S COPY BOOK (75 cents), with the Elements and Exercises to be written, is a useful book for teachers and scholars.

Any book mailed for the retail price.

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C. H. DITSON & CO., 867 Broadway, New York.

John Saul's Washington Nurseries

Our Catalogue of New, Rare and Beautiful Plants for 1888 will be ready in February.

It contains list of all the most beautiful and rare Gr-enhouse and Hothouse Plants in cultivation, as well as all novelties of merit, well grown and at very low prices. Every plant lover should have a copy. Orchids—A very large stock of choice East India, American, etc. Also, catalogues of Roses, Orchids, Seeds, Trees, etc. All free to applicants.
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Made from Zinfandel grapes. Put up in quart and pint bottles. Price, \$6 per dozen quart bottles; \$4 per dozen pint bottles. Orders can be filled through this office or by H. MILLS & SON, Lakeville, Cal.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Dec. 29-Jan. 4.																								
Thursday.....	.16	38	S	Ry.	.41	48	S	Cy.	.88	48	S	Cy.	.95	52	SW	Cy.	1.16	56	W	Ry.	.00	6	SW	Cy.
Friday.....	.35	43	S	Ry.	.05	46	S	Cy.	.12	48	SW	Cl.	.27	51	NE	Cy.	.73	56	W	Cl.	.74	58	NW	Cy.
Saturday.....	.34	40	S	Cy.	.00	42	N	Cy.	.00	42	SW	Cy.	.04	48	SE	Fr.	.1	54	SE	Cl.	.10	54	W	Cy.
Sunday.....	.20	44	S	Cy.	.56	56	NW	Ry.	.14	44	SE	Ry.	.19	48	SE	Ry.	.00	58	E	Cl.	.00	56	NW	Cl.
Monday.....	.22	34	NW	Ry.	.24	42	S	Ry.	.30	50	S	Cy.	.85	55	S	Ry.	.00	60	SE	Cl.	.00	58	NW	Cl.
Tuesday.....	.04	36	S	Cy.	.46	50	NW	Cl.	1.86	52	SW	Cl.	1.50	51	NW	Cl.	.14	48	E	Ry.	.00	58	S	Cy.
Wednesday.....	.24	32	E	Fr.	.1	34	NW	Sy.	.00	42	S	Cy.	.21	37	SW	Slt.	3.26	54	W	Fr.	1.04	52	NW	Cy.
Total.....	1.55				1.72				3.30				4.00				5.29				1.78			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Ry., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.



PERCHERON HORSES.

FRENCH COACH HORSES.

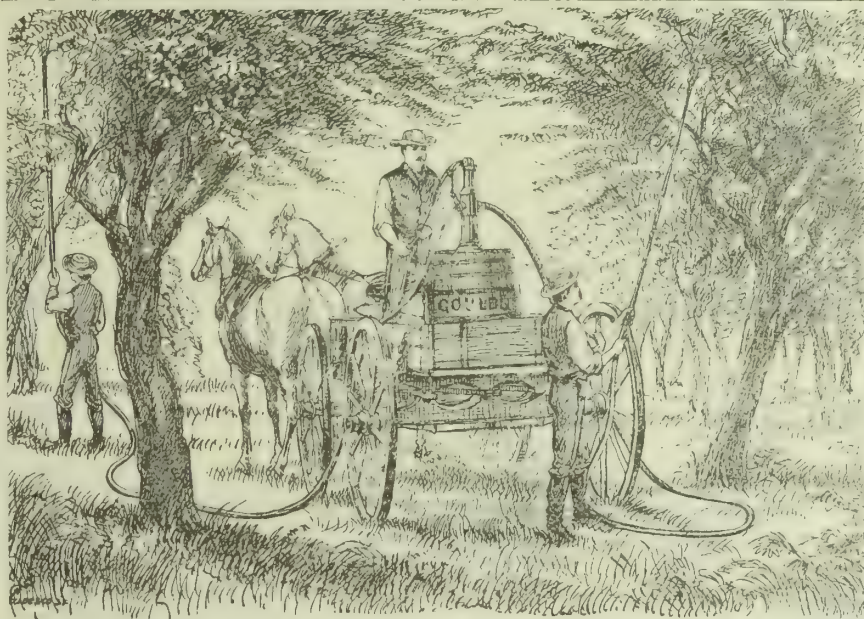
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With Two Hose and Bamboo Extensions, Barrel and Nozzles—all complete in operation.

The above cut represents our Double Acting Star Spray Pump arranged for one or two Sprays or Hose. This Pump is especially adapted for spraying liquids or poisons of any kind upon trees, shrubbery, orange trees, vines, etc., affected by bugs, worms, insects, etc. The valves are constructed entirely of Brass and even to the packing it is made of asbestos, which resists acids or hot mixtures of all kinds, and is capable of doing infinite more service than any other pumps in the market, as it is of greater capacity, and, being double-acting in principle, throws a continuous and powerful stream.

The need and usefulness of a Pump of this kind as an aid to the Orchardist and Fruit Grower, is so well known as to hardly need any encomiums from us, although we could ap end hundreds of letters from private parties, as well as prominent members of State Agricultural Societies, which show this to be the only reliable and effective manner of treating these pests. We make these pumps so they will fit on the head of an ordinary barrel, capable of holding from 30 to 50 gallons of the liquid to be used, according to the purpose intended. With one of the Star Spraying Pumps attached, this barrel may be placed on a wagon or stone boat, and a spray directed from either ONE OR BOTH SIDES, as may be required, thus saving nearly one-half of the labor usually consumed in doing the same work.

ONGERTH'S LIQUID TREE PROTECTOR should be used for spraying to kill the Red Scale, Black Scale, White Cushion Cottony Scale, San Jose Scale, or any other insect.

Send for Prices and Complete Circular of Spraying Outfits.

WOODIN & LITTLE,

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FOR SALE.

Grapevines and Cuttings,
OLIVE TREES and CUTTINGS.

RIPARIA SEED.

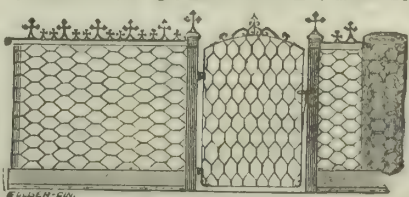
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Gabilan Rancho,

Containing 7865 acres, situated near Salinas City, Monterey County, is offered for sale. For particulars address J. C. HOAG, 312 Van Ness avenue, or TYLER BEACH, San Jose, Cal.

This paper is printed with Ink Manufactured by Charles Eneu Johnson & Co., 500 South 10th St., Philadelphia. Branch Offices—47 Rose St., New York, and 40 La Salle St., Chicago. Agent for the Pacific Coast—Joseph H. Dorsey, 529 Commercial St., S. F.

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The best Farm, Garden, Poultry Yard, Lawn, School Lot, Park and Cemetery Fences and Gates. Perfect Automatic Gate. Cheapest and Neatest Iron Fences. Iron and wire Summer House, Lawn Furniture, and other wire work. Best Wire Stretcher and Plier. Ask dealers in hardware, or address, SEDGWICK BROS., Richmond, Ind.

AGENTS LOOK HERE
and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made \$1800 a day, \$76.50 a week. So can you. Free and catalogue free.
J. L. SHEPARD & Co., Cincinnati, O.



H.H.H. HORSE LINIMENT.
THE H. H. H. Horse Liniment puts new life into the Antiquated Horse! For the last 14 years the H. H. H. Horse Liniment has been the leading remedy among Farmers and Stockmen for the cure of Sprains, Bruises, Stiff Joints, Spavins, Windgalls, Sore Shoulders, etc., and for Family Use is without an equal for Rheumatism, Neuralgia, Aches, Pains, Bruises, Cuts and Sprains of all characters. The H. H. H. Liniment has many imitations, and we caution the Public to see that the Trade Mark "H. H. H." is on every Bottle before purchasing. For sale everywhere for 50 cents and \$1.00 per Bottle.

For Sale by all druggists.

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This Fire-proof Brick Building is centrally located, in the healthiest part of the city, only a half block from the Grand and Palace Hotels, and close to all Steamboat and Railroad Offices.

Laundry Free for the use of Families

HOT AND COLD BATHS FREE.

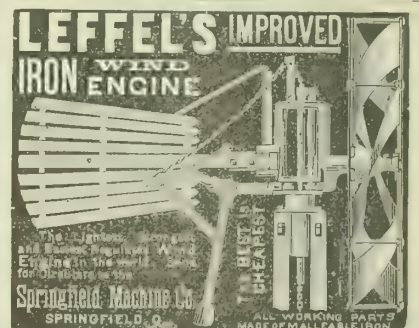
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ROOMS WITH OR WITHOUT BOARD.

FREE COACH TO THE HOUSE

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DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending December 31, 1887, the Board of Directors of the German Savings and Loan Society has declared a dividend at the rate of four and one-half (4½) per cent per annum on term deposits, and three and three-fourths (3¾) per cent per annum on ordinary deposits, and payable on and after Tuesday, the 3d day of January, 1888. By order

GEO. LETTE, Secretary.

DERICK'S HAY PRESSES.

are sent on trial to operate against all other presses, keeping the one that suits best.



Order a trial, address for circular and location of Western and Southern Storehouses and Agents.
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To Dairymen, Fruit-Growers and Farmers!

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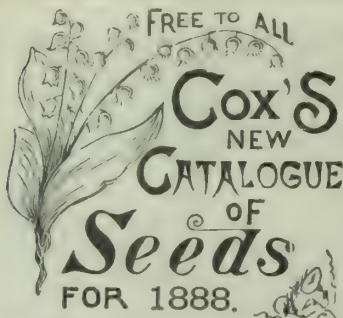
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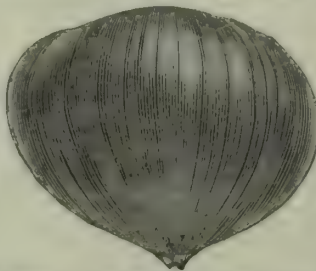
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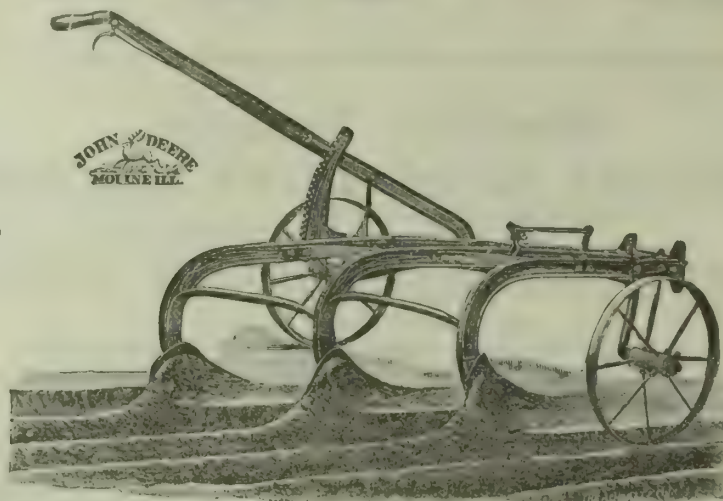
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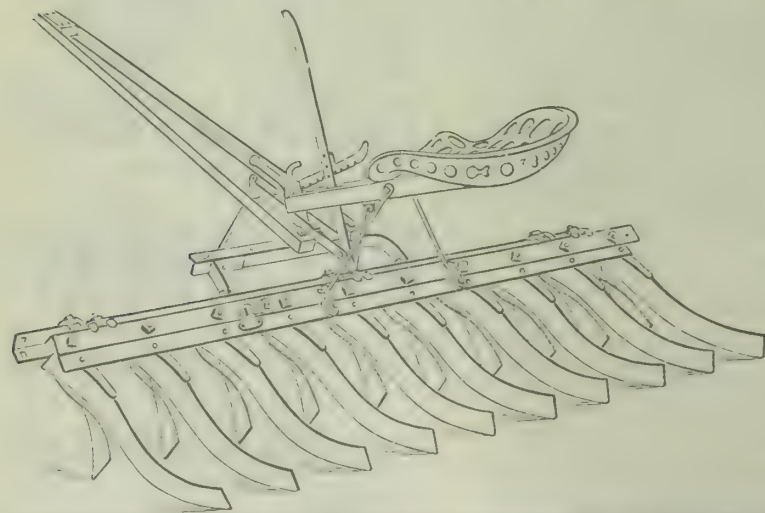
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Vol. XXXV.—No. 2.

SAN FRANCISCO, SATURDAY, JANUARY 14, 1888.

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Driving the Jack-Rabbits.

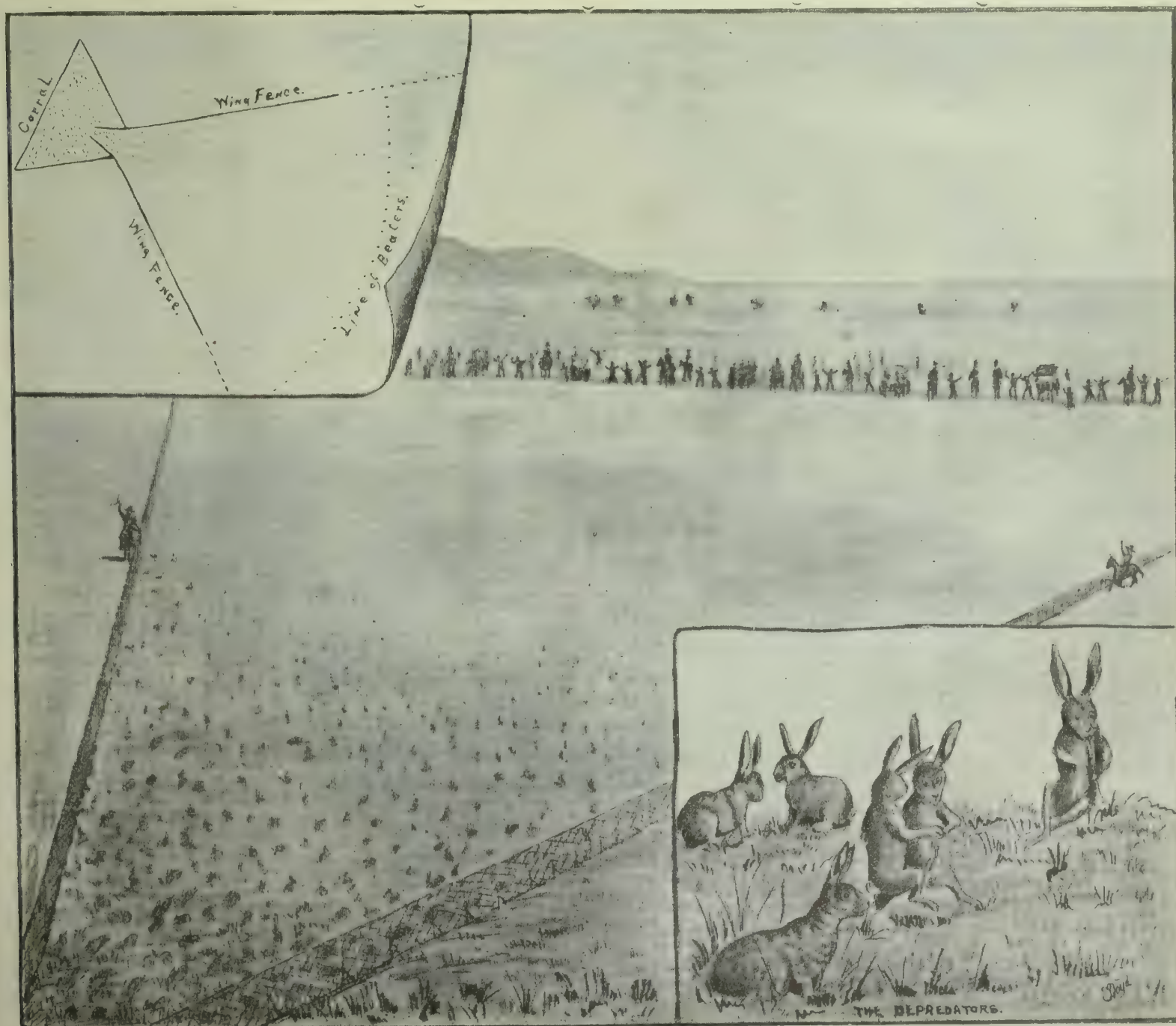
We present on this page an ideal sketch of one of the rabbit-drives which are becoming so popular on the plains of the upper San Joaquin

By two o'clock in the afternoon a large number of people had gathered, some on horseback, others in light vehicles. They had a commanding officer and a few field-managers. No dogs were allowed upon the ground, and but a few

was found that the drive had been a grand success. By actual count after they were killed, there were 1126 rabbits in the pen. Another march was ordered, and by passing over the same territory 796 rabbits were corralled and

5075 of the nimble nuisances are shown by actual count to have been destroyed. This beats the Tulare county record.

Our picture calls for but little explanation. The upper left-hand corner gives a ground plan



IDEAL SKETCH OF A RABBIT-DRIVE AS PRACTICED IN THE GREAT VALLEY OF CALIFORNIA.

valley. The plan first put in practice near Pixley two months ago, and since repeatedly pursued there with so gratifying results, has been adopted in Kern county with even greater success.

The Bakersfield people celebrated New Year's Monday with their initial round-up of the rabbits, at Henry Borgwardt's ranch, four miles from town, westward. There was a circular corral at the corner of his alfalfa-field where the sagebrush and pasture lie side by side. From this inclosure two wings of lath fence were stretched at right angles for a few hundred yards.

guns in the hands of experienced sportsmen. The crowd having been so distributed and marshaled as to form a curving line about a mile in length, a signal to move forward was given and the drive toward the corral commenced. The area inclosed by the drivers must have been less than a square mile, but the *Echo* says that "as they drew near the apex of the triangle it seemed as if there were acres of rabbits. Of course a great many ran back past the people, and several hundred were killed with sticks while doing so, their fright being so great that they would run within a few feet of one's conveyance. When the corral gate was shut it

killed, besides a large number that fell by the way. It was generally believed that 2500 was a safe estimate of the total number killed in the two drives."

Of course no firearms whatever can be used inside the corral; only clubs are permissible. Another observer writes: "It looked like very cruel sport, but their destruction is an inexorable necessity. Relentless war must be waged against them or they will take entire possession of the country."

The farmers of the neighborhood appear to have been pushing the campaign farther, for a dispatch from Bakersfield, 10th inst., reports that

of the fence. The line of beaters would of course be thrown much farther off and more in the form of a semi-circle at the beginning of the drive, while the persons would be more widely scattered.

This method of dealing with the destructive rodents bids fair to become quite general, where they abound and the lay of the land favors; and as our "rabbits" are all *hares*, which know not the trick of escaping into burrows, the results of the process are comparatively certain. The conceit of the artist in the lower corner must be a melancholy reminiscence of the days before drives were introduced.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Meandering the Mokelumne.

EDITORS PRESS:—One frosty morning in December last I "pulled out" from the pleasant village of Woodbridge, bound for New Hope, another small but ambitious town on the Mokelumne river, a few miles below.

My first adventure was to help an old friend "corral" a band of hogs, and I was rewarded for my trouble by a cordial invitation to help myself to as many apples as I wished, of which fruit Mr. Axtell has a large and thriving orchard, and several hundred barrels of red and white beauties, stored for winter use. I believe that these river-bottom lands will produce as fine apples as Oregon or any other State in the Union.

My next halt was at the finely improved farm of Mr. Robert Boyce, whom I secured as a subscriber to the RURAL. Right here in this neighborhood can be found a satisfactory answer to the question: Does wheat farming pay in California? The Boyce Bros., of whom there are several, own quite an extensive tract in this vicinity, and for the last 20 years have been almost exclusively engaged in raising wheat.

By thorough cultivation and judicious management, these gentlemen have plainly demonstrated that wheat can be raised with profit on any of the lands bordering on the Mokelumne river. Farther west I passed the fertile fields of the De Vries Bros., old subscribers to the RURAL and Patron. These gentlemen were among the early settlers of this county, and, judging from appearances, they, too, are making wheat-raising profitable.

But the greatest surprise of all was still in reserve for me after I reached the vicinity of New Hope. Twenty-five years ago I sailed a boat over the present site of this village, and the Sacramento river was making a clean sweep directly southward, with such a mighty current that the channel of the Mokelumne could not be distinguished save by the trees that outlined its course. That was my last visit to this place prior to this, and it seemed difficult to realize that a quarter of a century could make such a change. Now this region is almost entirely one vast wheat-field, and last season's crop was simply immense, many farms yielding from 60 to 75 bushels per acre.

The Sargent brothers own a very large tract near here, and are extensively engaged in both grain and stock-raising.

At New Hope I found my genial old friend, Arthur Thornton, looking as young as ever and still taking the lead in every project for public improvements in this section. Mr. T. is in the merchandise business at this point, and largely engaged in general farming besides. He is very enthusiastic as to the future of this part of the county, and if the levees on the Sacramento river can be made permanent, I see no reason why Mr. T.'s hopes may not be realized. Before leaving I convinced Mr. Thornton that he needed the RURAL to make everything complete, and he kindly gave me his order for a year's subscription.

Turning southward from this point, I visited the ranches of Jacob Brack, Sargent brothers' home place, Treadways, J. Fowler, Harsen, Gillinghams, and many others, and so back to Woodbridge, where I arrived after dark, cold and hungry, but very well satisfied with my day's work, and well pleased at the signs of substantial prosperity to be met with on all sides in the region between this town and the tule.

The next day I went to Clements via Lodi and Lockford. Lodi, as most of your readers are aware, is on the line of the C. P. R. R., and about one mile south of the Mokelumne river, and is somewhat celebrated in modern history as being the "watermelon center" of the State. It is truly wonderful what an immense quantity of melons an acre of this land will produce without irrigation, and planted, too, after all the rain for the season is over. Judging from the way melons grow, it seems to me that this land ought to raise any kind of fruit if the people only knew how.

Lodi met with a very serious misfortune last fall from a fire which almost destroyed the business portion of the town; but rebuilding is going on with vigor and Lodi will soon present a much better appearance than before the fire.

Lockford, eight miles east of Lodi, is a thriving village on the narrow-gauge railroad, and also on the Mokelumne river.

There are a great many prosperous farmers in this vicinity. Land is rapidly rising in value, and almost everybody seems hopeful of brighter times in the future. The bottom-lands on the river from here to Clements, seven miles above, are among the very best in the county. Ranging in width from one-fourth to one mile, seldom overflowed, these river-farms are bound to be very valuable in the near future, and to those who were so lucky as to locate here in time have no reason to complain, for this bottom-land will grow anything to perfection they see fit to put into the ground. The crops of alfalfa, corn, potatoes, hops, pumpkins, etc., as well as grain and fruit, almost surpass belief.

I spent the night with Mr. Thos. Clements, from whom the town received its name, and found him to be quite enthusiastic on the sub-

ject of fruit culture, especially of the olive. He thinks that the culture of this fruit will soon become one of the leading industries of the State, and says he will furnish 500 acres of good land to any one who understands the business, to go in with him in the olive-branch trade. Mr. Meyers of Stockton had better correspond with Mr. Clements.

Mr. Jos. Putnam, an old subscriber of the RURAL, is also quite a successful fruit-grower. His ranch is about one mile above this place. This town can boast of the handsomest public schoolhouse of any town of its size in the county. There is a fine bridge across the river at this point, and, going over this, I next took in that portion of San Joaquin county lying between the Mokelumne river and Dry creek, the boundary line of San Joaquin and Sacramento counties. This tract contains about 75 square miles of the very best land in the county. It is in this section that A. T. Hatch of Solano and Senator Buck of Vacaville have been making such extensive purchases of late. These gentlemen have bought 1200 acres of the Langford tract, and are already hard at work preparing the land for the reception of various kinds of fruit—apricots, almonds, olives, etc.

From what I have seen and heard in regard to the former efforts of these parties in the fruit-growing line at their old homes, I can readily believe that they will make a grand success of this venture also. And if they do there is no telling to what prices land may jump in this locality. There have already been some tracts sold at prices ranging from \$100 to \$110 per acre, which is pretty good for land that 10 years ago would have been thought dear at \$50, and 20 years ago was thought to be almost worthless.

There is quite an excitement on both sides of the river on the irrigation project, and the Ditch Company are hard at work on their dam at Westmorelands bridge, and if the water is brought out, it will doubtless give a decided boom to this portion of the county. After leaving the Langford tract I visited the town of Elliott, more widely known as Hawks Corners. How it came by the name is one of those things that no fellow can find out. Instead of being on the corner of anything, or at the crossroads, the village, or what is left of it, is right in the middle of a section, and only one road passing by it.

There is but little doing around here in the way of fruit culture as yet—nothing but wheat, wheat all along the line. Heading again to the westward, I passed many neat and substantial homesteads, among which may be mentioned those of Wm. Carter, Wm. Smithson, Lyman Titus, Herman Childs, Justus Schomp, J. W. Holmes, the Jahant Bros., J. G. Nolans and many others, all showing that with industry, perseverance and good soil combined any man can win a comfortable independence, if not all the luxuries of civilization, out of wheat-growing in Northern San Joaquin.

On my return to Woodbridge, I passed through Acampo, quite an important shipping point on the C. P. road, two miles north of the river. Here is located a fine brick warehouse, under the management of Smith & Wright of Stockton. The wheat in store at this place amounts to about 2000 tons. This house is a great convenience for the surrounding district, and I can hardly understand how the farmers got along without it.

From this point I went down into what is known as the "Pocket" at the junction of Dry creek with the Mokelumne, and then retraced my steps to the old town of Woodbridge, which still retains a fair proportion of its former greatness. Owing to the fine school facilities of this place, it has not gone down as bad as some of the ancient cities of California.

During my three days' trip around this part of the county, I met with a great many old acquaintances and made quite a number of new ones, besides, all of whom I hope to meet again in some of my future rambles in the interests of the RURAL. My next trip will be to the east and south of Stockton, and after that to Stanislaus county, where you may, perhaps, hear from me again. W. W.

Foothills of Calaveras County.

EDITORS PRESS:—Very little has ever been written concerning this section. To many, Calaveras is associated with mining and stage-robbing, while its agricultural features are almost unknown. Scattered throughout the entire foothill region are charming little valleys dotted over with cozy homes of well-to-do ranchers. Up to the present time the principal crop has been barley for hay. On almost every ranch a small garden spot in the low moist lands has been set out to trees, while here and there a vineyard and fruit-ranch of considerable size greets the eye. In no portion of the State can a finer wine grape be grown than in these redlands of Calaveras, grapes raised without irrigation commanding \$25 a ton the past season. As for her fruits, apples, pears and prunes, equal to any, excelled by none, grow to perfection in every locality. The fruit-growers have but to learn what every other fruit section has long since proven, that the highlands are exempt from frosts and best adapted to fruit culture. Once this fact is admitted, the old orchards in the bottoms dug up and planted in pears or other hardy fruits and the sides and tops of the hills set out in Bartlett pears, peaches, prunes,

the late blossoming and exceedingly fertile Proporturians, English walnut and Tokay grapes, and the prosperity of the county's foothill section is assured. So far her hill land, in most cases, has been deemed of little value and is held at very low prices. In time it will be proved the most valuable. No section can raise a finer Tokay grape than can be grown anywhere on these hills, which, in most cases, are deemed worthless except for pasture. To the poor man, seeking a cheap home, Calaveras offers every inducement—a mild climate, free from fogs and malaria, with almost any desirable altitude. That this section will in time become one of the great fruit and grape-producing counties is evident. That she can and does raise unexcelled fruits of the kinds adapted to her soils has long since been proven. That the people of this foothill section are not aware of the great possibilities of their section is evident to any one that has traveled over other counties in the same altitude. So to the homeseeker I would say, take a trip through the foothills of Calaveras and locate 160 acres of Government land or buy the same improved for what three to five acres in some other counties would cost. E. H. SCHAEFFLE.

SHEEP AND WOOL.

The California Wool Product of 1887.

We have received from George Abbott the following statistics in relation to the wool trade of the State for 1887. The receipts for each month of the year were as follows:

	Bags.		Bags.
January.....	53	July.....	8,016
February.....	64	August.....	4,020
March.....	2,200	September.....	7,588
April.....	11,715	October.....	9,916
May.....	18,224	November.....	7,963
June.....	14,756	December.....	1,020
Total bags.....			85,555

The following is the description and weight of the above total; also the amount carried over from 1886:

	Pounds.
Spring wool, 56,768 bags, weighing.....	17,881,920
Spring wool shipped from interior.....	1,916,270

Total spring production.....19,828,196

Fall wool, 28,787 bags, weighing.....	9,643,645
Fall wool shipped from interior.....	757,100

Total fleece wool.....20,228,941

Pulled wool shipped from San Francisco and interior.....1,335,290

Total production of California.....31,564,231

On hand December 31, 1886.....	4,500,000
Received from Oregon, 24,187 bags.....	7,256,100
Foreign wool received, 133 bags.....	40,466

Grand total.....43,560,737

The exports during the past year have been as follows:

	Pounds.
Per rail, inclusive of shipments from interior.....	22,048,564
Per sailing vessel.....	1,835,426
Per steamer.....	3,557,960

Total shipments.....27,461,950

On hand December 31, 1887 (about).....	6,000,000
Value of exports.....	\$5,000,000

Difference between receipts and exports arises from consumption of local mills and wool on hand awaiting shipment in the grease or scoured. Foreign wool is chiefly from Australia in transit to Eastern markets. The weights of above are gross. Tare on bags received, three pounds each; pressed bales shipped, 14 to 16 pounds each.

Quotations on spring clip are as follows:

Choice northern (Mendocino and Humboldt).....	21@23 1/2 c
Good northern (Red Bluff, etc.).....	18@21 c
Defective northern.....	15@17 c
Good to choice San Joaquin.....	15@18 c
Good San Joaquin (12 months).....	14@17 c
Southern coast.....	13@15 c

Quotations on fall clip are as follows:

Choice northern (Mendocino and Humboldt).....	14@16 c
Good northern.....	12@14 c
San Joaquin.....	9@12 c
Heavy San Joaquin and southern.....	8@9 c

Quotations for Oregon wools are as follows:

Choice valley.....	22@27 c
Choice Eastern.....	18@22 c
Good Eastern.....	16@20 c

The production of wool in this State since 1854 was as follows:

Year.	Pounds.	Year.	Pounds.
1854.....	175,000	1871.....	22,187,188
1855.....	300,000	1872.....	24,255,468
1856.....	600,000	1873.....	32,155,139
1857.....	1,100,000	1874.....	39,356,781
1858.....	1,428,000	1875.....	43,532,223
1859.....	2,378,000	1876.....	50,550,970
1860.....	3,055,325	1877.....	53,110,742
1861.....	3,721,998	1878.....	40,862,091
1862.....	5,993,300	1879.....	46,903,360
1863.....	6,268,480	1880.....	46,074,154
1864.....	7,923,677	1881.....	45,076,639
1865.....	8,049,931	1882.....	40,527,119
1866.....	8,532,047	1883.....	40,848,690
1867.....	10,288,600	1884.....	37,415,330
1868.....	14,232,657	1885.....	36,561,390
1869.....	15,413,970	1886.....	38,509,160
1870.....	20,072,660	1887.....	31,564,231

Freights during the year have been on grease

wool by rail 1 cent per pound, by sailing vessel 1 1/2 cents per pound, and by steamer 60 cents and 75 cents per 100 pounds. On scoured wools freights by rail have been about \$1.15 to \$1.50 per 100 pounds, and by steamer 60 cents to 75 cents per 100 pounds.

Wool-Growers' Meeting.

Pursuant to a call the wool-growers and wool-dealers of Mendocino and Sonoma counties met in Cloverdale, Thursday, Dec. 27th, to discuss and pass resolutions pertaining to President Cleveland's message relative to placing wool on the free list. The meeting, which is reported by the *Reveille*, was organized by electing E. M. Hiatt of Yorkville to the chair, and Geo. B. Baer, secretary. Mr. Hiatt on taking the chair made some appropriate remarks pertinent to the subject. After which W. P. Ink and J. G. Heald were appointed to act with the chairman, E. M. Hiatt, in drafting resolutions. A recess was then taken, and on again convening, the following resolutions were unanimously adopted:

WHEREAS, The wool-growing industry is of great importance to the financial prosperity of the State of California, by increasing her wealth, building up manufactures and furnishing employment to thousands of laborers at good and remunerative wages. But owing to our foreign competition of cheap labor, cheap lands, the reduction of the tariff of 1888 and other discouragements, our wool product has greatly decreased. And, furthermore, the recommendation in President Cleveland's late message to Congress to put inoperative wool on the free list is disastrous, if not entirely fatal to the progress and existence of the great wool-growing industries, not only of California, but of the whole United States. Therefore be it

Resolved, By the wool-growers and wool-dealers of Sonoma and Mendocino counties in convention assembled, that any reduction in the tariff on wool would seriously cripple this industry and greatly decrease if not fatally destroy its production in this State, because our wool-growers cannot compete with the cheap labor and cheaper ranges of foreign countries without the protection which the tariff affords.

Resolved, That we are opposed to any reduction in the tariff on wool and manufactured woolen goods, and furthermore, we protest against reducing the tariff on wool and retaining it on woolen fabrics, as such legislation would be an unjust discrimination between two great industries without affording any relief to the consumer of manufactured woolen goods, and we are unalterably opposed to promoting the manufacturing interest of the East by legislation at the expense of the great consuming masses of the nation, and by the same means discouraging the production and development of the wool industry of the great West.

Resolved, That we appeal to Congress to neither repeal nor reduce the tariff on wool, and we hereby earnestly request our Senators and Representatives in Congress to use their united efforts to maintain our present tariff.

Resolved, That we heartily indorse the views expressed by the National Wool-Growers' Association and extend to them our hearty co-operation in their endeavors to protect the wool industries.

Resolved, That a copy of the above resolutions be forwarded to the Senators and Representatives of our district and also to Senators and Representatives of other districts, that speedy and effectual action may be taken. E. M. HIATT, Chairman.

GEO. B. BAER, Secretary.

THE VETERINARIAN.

Equine Pneumonia.

EDITORS PRESS:—I have read with much interest the article written by Mr. H. Baker of Hollister and published in your issue of Dec. 31, 1887, on the subject of a disease of horses, of which several have died in that vicinity recently. I have lost eight head of horses between 1872 and 1881 with what I afterward learned was pneumonia or lung fever and congestion of the lungs, the symptoms of which as I have observed them are clearly described by Mr. Baker in his article referred to.

While it is some satisfaction to a man when he has lost a fine animal to be able to determine the nature of the disease and the cause of death, yet that does not enable him to prevent further loss from the same cause unless he has a remedy to apply. Mr. Baker may think his description of the disease is sufficient (and I admit it to be correct according to my experience and observation), but if he wishes to do the public a favor, why does he not give a remedy if he has one? Possibly he thinks to give the public the benefit of his knowledge he would sustain pecuniary loss. In the latter part of his article he says: "It now alone remains for me, sir, to express my opinion upon the cause of death in some of the cases—which is, that two out of the three animals lost by Mr. McDonald died from congestion of the lungs."

While we regret to hear of our friends losing valuable stock or of a disease spreading through our country, it matters little to the public, nor is the public greatly benefited by a man's opinion regarding diseases, unless they are informed of a remedy that they can apply in case they have an animal affected as he describes. His article reminds me very forcibly of one written by a gentleman from San Diego county, I think in 1875, if I remember rightly, giving a description of the disease called fistula and poll evil in horses, assuring the public that he was in receipt of a specific remedy, but he was

careful not to let the public know what that remedy was. I immediately forwarded to you a tried remedy, which you published and some of your subscribers preserved it and made some tests with it since.

Now, I have been a constant reader of the PRESS for 16 years, save a part of one year, and I hardly know how I could dispense with it, as many of the articles contributed by your able correspondents and subscribers are worth the year's subscription. As I have been benefited by the experience of others, I feel like giving to the many readers a recipe for the treatment of pneumonia in horses, which I obtained free from a veterinary surgeon of the U. S. Army, and with which I have treated six of my horses successfully during severe attacks of pneumonia. I feel that I have given it a fair test; besides, I have personal knowledge of five horses that were treated at the same time in this community with the same remedy and every one was saved. Now for the remedy:

When it is a settled fact that the horse has the pneumonia (and that may be determined by Mr. Baker's description of the disease), place him in a warm house or stall, taking care to avoid any circulation of air, and proceed to sweat him by wrapping him from ears to tail in cotton cloths or barley sacks (three thicknesses), dipped in a tub of hot water. Over this place dry blankets or a carpet, wrap closely and tie with a rope to keep the cloths close to the body and effectually exclude the air. At the same time inject a 25-cent plug of tobacco previously soaked in warm water as far up as the arm can reach. Keep him sweating two to three hours; then remove the wraps and rub vigorously till dry. Now take a teaspoonful of gum camphor, drop on it 15 to 20 drops of tincture of aconite; add one teaspoonful each of capsicum and pulverized ginger; wet with water, or, better still, alcohol. Mix to a mass, roll out into a large pill or pills, roll in flour, pull the horse's tongue out, lay the pills well back on the back part of the tongue and let loose the tongue, when he will immediately swallow. Repeat the pills twice a day for three days, and sweat once a day for three days, taking care that he is not exposed to cold wind. Give all the cold water he will drink. I have not known a single horse lost where this remedy was employed.

W. G. PENNEBAKER.

Farmersville, Tulare Co.

Retention of Placenta.

EDITORS PRESS:—If Mr. John H. Eden and neighbors, who are troubled by their cows retaining the placenta, will feed them liberal rations of roots and house them warmly, I think they will have no trouble with their cows in calving. It is customary to put the cow up the day before calving in a roomy, warm, quiet place. In the evening give her, in the feed of bran, one pound of ground flaxseed—not cake meal—after calving another pound, and for the next three days a half-pound. Nothing more, as a rule, is necessary. Should this fail, however, inject a warm two-per-cent solution of corrosive sublimate, due care being exercised to have the proper strength and no more.

E. H. SCHAEFFLE.

Murphys, Cal.

Mistletoe for Cows.

EDITORS PRESS:—A correspondent from Nevada City wants to know what to give cows to make them clean. Allow me to make known through your valuable columns what is a sure remedy here. Take an armful of green mistletoe from an oak tree and give the cow. They will generally eat it without much trouble. If not, allow them to get hungry and they will eat it. If one batch does not do it, give another. I never knew it to fail.

Big Bend, Butte Co. WM. H. MULLEN.

Swine Pest.

EDITORS PRESS:—A year or more ago it was stated that a hog disease had made its appearance near Woodland. Since then I have not seen a word in regard to it through the papers—not even here, where we are peculiarly interested, but about the same time it was the neighborhood talk that the same or another disease had shown itself in the lower part of Colusa county and just across the river in Sutter. The destroyer has continued on its slow but sure and fatal march north along both sides of the Sacramento, until now it is within six or seven miles of Colusa town, having traveled a distance of 15 or 20 miles in a direct line during the past summer and is still traveling. It has not kept up on the Sutter side, so far as I have heard.

Not having made personal examination of affected herds, I can only state what I have heard. The affected swine refuses to eat, coughs, vomits, runs off at the bowels, becomes very much emaciated, and then it lingers and usually dies in from one to four or five days. Many herds have been almost exterminated. A neighbor told me this morning that he had lost 40, and they were still dying, he having 18 left. He had killed his winter's pork about a week before the first were taken. Another whose drove was affected earlier in the season risked butchering, after a lapse of about a month from the last death.

Sulphur and bluestone water have been tried,

but with what results, beneficial or otherwise, I have not heard.

The spread seems to be from one ranch to another, but one man was at a loss to know how it crossed the river. In one case a man bought about 60 head from one who had suffered losses, and after removing them several miles north they nearly all died.

I have waited long before writing these lines, but think others should be warned, and am in hopes some cure may be found. Hundreds of thousands of hogs are raised along the Sacramento river and throughout Colusa county, and anything affecting this interest would be a severe blow to our farmers.

If the disease is contagious, and indications point that way, then it would seem as though some kind of a quarantine should be effected before the whole State becomes infected and hog-raising becomes a thing of the past, or very uncertain at the least.

E. G. MORTON, JR.

Sycamore, Dec. 31, 1887.

P. S. Since writing I saw, by reference to your index, that this disease was spoken of as existing in Sutter, page 287, and remedies, etc., given, page 401, but as to the application of these remedies to this disease, I know nothing.

E. G. M.

[The subject is of great importance, and we should like to hear from our readers who have experience with it, both as to the character and effects of the disease and any remedies they may have tried.—EDS. PRESS.]

THE FIELD.

Ramie Culture.

EDITORS PRESS:—I note in the last issue of the Visalia Delta an article on ramie culture, copied from the Florida Horticulturist, and signed by Dr. Gustav Eisen, which is calculated to create an unfounded prejudice against what, in my view, is one of the most promising cultures for California. As one who has for 15 years past followed closely every phase of this subject, and has personally witnessed the culture of the plant both in Louisiana and in California, I may feel justified in setting up my judgment in opposition to the derogatory statements and opinions set forth by Dr. Eisen, some of which seem hardly to do justice to that gentleman's practical and scientific knowledge, as heretofore known to me.

After stating that "as to the growing of ramie little difficulty need be experienced," Dr. Eisen proceeds to demolish that assertion in detail, by averring that the plant requires the richest soils, and that even in these it cannot be depended upon for more than three years, being one of the most exhaustive culture plants known.

The latter statement is simply and absolutely incorrect, except upon the assumption of the most irrational practice of culture, viz., that the trash and leaves are continuously wasted, instead of being returned to the field. When the latter is done, ramie is one of the least exhaustive crops; just as it is the case with cotton when all but the lint is returned.

It is true that ramie appreciates a good soil, but three-quarters of the lands of the great valley of California, and of the larger Coast Range valleys, have soils amply adequate to its demands, and a good many (e. g., alkali lands) on which ramie will do better than anything else now known.

In reply to the allegation that ramie will yield only three paying crops even on the best lands, I simply state that the ramie plantation on the University grounds at Berkeley, made with roots in 1881, has just yielded its fifth crop, at the rate of five tons of dried stalks per acre; in two cuts, which is all the cool climate permits to grow. This without a particle of manure, in a soil filled with the roots of a row of trees adjacent, without the return of any waste and without any use of water save once, in order to promote the second growth for a special purpose. That with the use of irrigation, at least three cuts can be made in the San Joaquin valley; as in Asia, has been abundantly shown by experience; and this at the rate ascertained at Berkeley, would come nearer seven tons per acre than the 4½ upon which Dr. Eisen makes his calculations. His further assertion that the soil needs to be kept "constantly wet," is conclusively disproved by our experience. Any soil moist enough to grow field corn will grow two cuts of ramie without irrigation. But it is doubtless desirable to irrigate once after each cut, in order to promote growth; just as is done with alfalfa and Egyptian corn.

The further count in Dr. Eisen's indictment, that "ramie once in the ground cannot be displaced for years," would weigh even more heavily against alfalfa. But we have yet to learn that the culture of this, our great stand-by, is under a cloud for that reason. A year's diligent cultivation under some hoed crop will dispose of ramie as well as of alfalfa roots.

As regards the last count, viz., that referring to the expensiveness and laboriousness of the cleaning of the fiber, the allegation that the best machines at present known, or in this State, cannot produce over 200 pounds of fiber per day, would have been reasonable some

years ago. While I have not had an opportunity to gauge accurately the output of the machine now at San Francisco, what I have seen of its work under unfavorable conditions has led me to set down its efficiency at fully four to five times 200 pounds per day. If Dr. Eisen has reason to make a lower estimate, it is easy enough to set the question at rest by an actual trial. But it is true that a machine of which the work is based on the brittleness of the stalk may not work well in Florida and Eastern India, but may nevertheless do excellent work in the dry summers of California and Arizona, in which both stalk and rind break away from the flexible fiber like so much glass.

As no one pretends that ramie should be grown in this country except upon the basis of cultivation by our usual methods, and extraction of fiber by machinery, I fail to see the relevancy of Dr. Eisen's reference to the pauper or coolie labor of other countries as a condition of this culture. His question, why the Hindoos and coolies do not become rich by ramie culture, is answered very simply by the consideration that even they cannot afford to spend their labor upon the hand stripping and scraping of the stalk and bark, except in spare time; hence the smallness of the production and the scarcity of the fiber in commerce.

It is well and necessary to be cautious in making heavy investments in new and untried industries. But ramie has been grown in California for 18 or 20 years past, and its success as a culture plant is a well-established fact. The only unsettled question about it has been the economical extraction of the fiber, for the market demand is practically unlimited. If, as the rapid development of ramie culture in France and Algeria and my own observation lead me to believe, this problem has been solved, the importance of this industry for California cannot easily be overestimated. It deals with a product capable of long transportation, being of high value and indefinite conservation—qualities of especial importance in our remote location. It requires less manual labor than cotton, and will flourish wherever cotton will, and in many regions where cotton will not. It is too promising to be lightly discarded, and it assuredly should not be upon any such grounds as those set forth in Dr. Eisen's article.

E. W. HILGARD.

Berkeley, Jan. 5, 1888.

Culture of the Sugar Beet in Austria.

EDITORS PRESS:—The proposition to introduce the culture of the sugar beet in this State makes it appear opportune to publish something about the culture of this plant in a country where this industry has become a leading branch of farming, supports thousands of families, and supplies, by its taxation, a very good revenue for the Government. Of course it would be a great fault simply to transfer the methods of cultivation from that country to this State, because here are quite different conditions in climate, soil, and, what is the principal thing, in human labor; although it may be that the practical farmer might use something from this essay.

The sugar beet (*Beta vulgaris* L.) has become biennial by cultivation and has several varieties. For culture such are to be selected as answer the following conditions required by the sugar manufacturer:

1. Rich in sugar; 9 to 16 per cent.
2. Regular form like a cone, pear, or olive; many side roots or prongs (*anastomosis*) are disadvantageous because they make the cleaning difficult and cause more waste.
3. A medium size, one to two pounds, as small beets give a small crop and large beets have usually little sugar.
4. A white, compact, brittle flesh. Such beets are more resistant against destruction while in storage.
5. A small head standing only a little if any out of the ground. The reason is that the head must be cut off because it contains only very little sugar.

The varieties which answer the above demands are: The white beet of Silesia, the Quedlinburger, the Imperial, the sugar beet of Moravia and the famous Vilmarin.

Conditions Required for Production.

The sugar beet requires a warm location because it is very sensitive to early frost, and experience shows that the sugar capacity increases and diminishes with the amount of heat of the locality. The sugar beet needs very much water and requires, therefore, in a dry climate, a fresh, deep, rich soil. The best soils are deep humus clay (loam) and marl. The roots of the beet go very often 3½ to 4 feet in the ground, and take nourishment out of the deeper soil, where fertilizing is impossible. It is, therefore, economical not to raise more than one crop of beets in three or four years on the same ground. However, a rich soil will produce a good crop for several successive years (we have examples of raising beets on the same ground 10 successive years without any fertilizer, and yet a good crop), but in the same time the vegetable and animal enemies of the beet will be increased enormously.

Preparation of the Soil.

The beet follows usually wheat or rye and is followed by barley. A direct application of manure to the beet increases the crop, but also, at the same time, the amount of nitrogen and

ashes; it is best, therefore, to raise beets the second year after manuring. The best fertilizers are, guano, ashes, potassic salts, superphosphates, bone dust and compost. If beets are raised year after year, and the leaves are not needed to feed cattle with, it is very good to spread the leaves all over the ground and then to plow 12 to 15 inches deep. If it is the intention to raise beets after grain, it is good to plow shallow as soon as possible and to plow deep after several weeks. Care has to be taken that no "dead soil" comes to the surface, as it would tend to stop the growth of the beets, at least for the season. During winter-time the land remains in "rough furrow," and in spring the harrow is used and the roller for pulverizing and leveling the land. If there are many weeds on the land it is necessary to cultivate or to plow. The principal thing is to keep the moisture in the ground, and the beet-raiser has to pay his first attention to this point.

Different Methods of Sowing.

Of course it is necessary to select for sowing only seeds from beets with above-named conditions. In Austria, sowing commences the last week of March and continues till the end of April. Occasionally, if the time is unfavorable, or if the first sowing is destroyed by insects, seed can be sown till the middle of May. The sowing is performed in four different manners:

1. Drill, distance 1-1½ feet; amount of seed, 13-17½ pounds per acre.
2. Beet-planter (Dippel machine G.) distance, the same as by drill. The machine is so constructed that 4 to 5 seeds are planted every 6 to 12 inches in the row; amount of seed 8 to 9 pounds an acre.
3. By marking the field with the marker, making a hole on the crossing point, and putting 3 or 4 seeds in the hole; amount of seed, 8 to 9 pounds an acre.
4. For a moist country it is customary to form small ridges and to put the seed in them; the beet gains by this method a somewhat drier stand and is more capable to suppress the weeds. For this last method a machine has been invented by Director Bartel, general superintendent of the imperial estate in Bohemia.

It is not recommended to transplant beets which are raised in a seed bed; the transplanted beets produce many prongs, and are, therefore, unsuitable for the sugar factory.

The use of the corn-planter with the check-rower for planting beets would be worth an attempt. The seed must not be laid deeper than one inch in a moist country and two inches in a dry country.

Cultivation.

The beet has to be cultivated as soon as possible, as otherwise it is overgrown by weeds. The first hoeing will be given as soon as the rows are visible. Where human labor is cheap it is preferable; if not so, the cultivator has to be used. After this work is done comes the thinning. The seed of the beet presents a glomerate containing five to six seeds; of those two or three are capable of germination and produce plants; but as every plant wants a certain space for its development, it is necessary to take out so many plants that only one remains every 6 to 12 inches. By planting with the drill a great deal of work will be saved by cultivating across the rows; the distance of the shares is usually six inches. An old rule among the farmers is that beets ought to be thinned if they have three leaves, because it doesn't take so much time as when they are smaller.

During the season a second or third cultivation is given, according to the weeds, and at last the beets will be ridged up to cover the heads.

Harvesting

Is done in two methods: First, by hand with a fork or a spade, and second, by the beet plow. Care has to be taken that the beets are not injured, as it would cause rotting if the beets are to be stored.

As a rule, harvesting commences if the leaves of the beets are discoloring. In Austria, this is from September to November. The beets are cleaned from the earth with a knife, and the green head with the leaves cut off.

The beets are either carried immediately to the factory or piled up on the field covered with the leaves or with earth.

Profits and Contracts.

The crop per acre is from 10 to 20 tons. The price per ton in 1885 and 1886 was \$3.85 to \$4.50.

The small farmer does all the work on the beet-field alone with his family. On large ranches there are different ways to have the work done.

1. By contract. In fall usually the contracts are made with the following conditions: The proprietor puts his seed in the ground; the contractor cultivates and harvests. Price per acre, \$7 to \$8 30.
2. Only the harvesting is given to contractors. The price per acre is \$2.60 to \$3 50, or per ton, 32 to 48 cents.

The work is done by laborers, men, women, children, hired from the next village. Price for day work (12 hours) is from 16 to 30 cents, without any board.

A laborer can in one day cultivate one-tenth to three-tenths of an acre, or he can thin out one-tenth to one-eighth of an acre, or he can ridge up one-tenth to three-tenths of an acre, or he can harvest an eighth to a sixth of an acre.

ANTON J. VEITH.

Eisen Vineyard, Fresno.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Anti-Debris Gains.

On the authority of a gentleman just returned from the mountains, the Marysville Appeal of 6th inst. states that the Eureka Lake Hydraulic Mining Company has abandoned its unlawful operations. No hydraulicking is going on in the mine, and a portion of the pipe is being removed. This company had been a persistent offender, and had an elaborately organized system of law-breaking. The workings were guarded by sentinels, and the telephone was used to warn the men in the mine of the approach of agents of the Anti-Debris Association. Operations were carried on from the bottom of a deep cut, in such a way that the miners were invisible from above.

It is noticed, also, that since the recent freshet the Yuba river has subsided to the four-foot mark, and the water is almost clear. Such water has not been seen in the Yuba for 25 years. It is evidence of the stoppage of hydraulic mining, and also shows that the river has scoured its channel, to a greater extent, of accumulated slinkens. Water dipped from the Yuba is now good for drinking purposes.

The Appeal concludes that there are no longer any large companies systematically engaged in violating anti-debris injunctions on the Yuba. There are still numerous offenders against the law, but these are mostly Chinese, who work in a small way. Most of them desist when warned of the punishment there is in store for them should they continue their unlawful work. While it remains necessary to maintain a thorough watch in the hydraulic mining region, to prevent any resumption of serious mischief, it is not likely that any very formidable violation of injunction will be attempted this winter.

At the same time, in view of Mr. Biggs introducing in the U. S. House of Representatives his threatened bill "to investigate the mining debris question in California," the Record-Union remarks: "The bill ought to be knocked in the head, just as the courts have brained the debris question itself. What do the friends of the measure want investigated? Facts that have been established and put on record in State and Federal Courts, and that admit no longer of any manner of dispute? Do they want the law investigated, which the courts have unanimously agreed upon and declared? Do they wish the decision of the War Department reversed, that hydraulic mining is so destructive of river navigation that the Government ought to make no attempt to improve it upon rivers on or near which hydraulic mining is prosecuted until the process has wholly ceased? Do they wish a commission appointed to ascertain that which every one knows, that low lands have been destroyed by reason of hydraulic mining, agricultural development checked, homesteads buried beneath slinkens, and rivers absolutely lifted up and carried over into strange places to flow in aimless courses?"

"Mr. Biggs could far better labor to push through Congress a bill to improve our river navigation, to clear the channels of some of the deposits of 20 years and more, placed in the streams under the eye and by the silent consent of the Government.

"We do not question Mr. Biggs' motive, he is too sincere a man to justify that; he probably hopes that engineering science may find a way to compass the impossible; he is probably urged by his mining constituents to present this bill in the hope that something can be done to save hydraulic mining from its fate. But we believe it is an ill-advised bill, and it should not pass. Unfortunately it is in danger of becoming a law, because it is a bill of inquiry, and the plea will be made that it can only serve to throw light upon the question. But if it passes it means postponement of the question of river improvement for another series of years."

A Mistake Corrected.

In the list of officers of State Granges, appended to the Journal of Proceedings of the 21st Session of the National Grange, P. of H., page 231, the address of the Secretary of the State Grange of California is erroneously given "Sacramento." It should read "A. T. Dawey, 220 Market St., San Francisco."

Dr. John Trimble, Worthy Secretary National Grange, in a personal letter says: "I deeply regret the grave error in your address, and do not understand how it occurred. My clerk took the Directory to each and every Master, and every one was examined by them and pronounced correct. I follow that rule every year."

Every person having a copy of the proceedings, and all Grange papers publishing the list, are requested to note this correction.

SACRAMENTO POMONA GRANGE, at its meeting for election of officers the last day of '87, enjoyed some fine remarks by W. P. M. Johnston on the working and outlook of the Order, and W. S. L. Flint's account of his recent tour in Southern California, besides a forcible Grange address from Bro. G. W. Hack.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

The National Grange, at its annual session in Lansing, Michigan, in November last, unanimously placed itself on record against a repeal of the Oleomargarine law, or any amendment of the same that would in anywise curtail its usefulness to the producers and consumers of dairy products in the Northern States. The State Granges that have held their annual meetings since that time, 22 in all, have indorsed and emphasized the action of the National Grange. It is well known that interested parties have for several months past been organizing and perfecting their plans for a combined effort before Congress this winter to have the law either entirely repealed or so amended as to make it inoperative. Now it becomes the plain duty of all members of the Grange, and of farmers not members, but who are equally interested in sustaining this law, to write personal letters at once to their members of Congress and their U. S. Senators, asking them to sustain the present law. Let each Grange at its next meeting prepare its memorial, have it signed by the Master and Secretary, and send it, with the seal of the Grange attached, to the Member of Congress who represents that district, and also send duplicate copies to both the U. S. Senators for that State. It is organization that has given us this and other good laws. Let organized work be done to save the law, and the sooner the better.

The dairy interests of the United States represent an investment of more than \$3,000,000,000, nearly five times as much as the entire bank capital of the country, which is \$671,000,000. The number of milch cows is estimated at 21,000,000. This is the great industry that is again threatened by the repeal of the Oleomargarine law, to say nothing about the interest of millions of consumers in being protected from a fraud.

The Committee on Agriculture of the Kentucky State Grange, at its annual session in December, presented the following, which was adopted:

Your committee is fully persuaded that the chief causes of the great depression of the agricultural interests of the country are due—

First—To the indifference and utter disregard of the National Government to this, the leading industry of the country. This is evident in the absence of any effort to open, on equal terms, the markets of the world to our constantly increasing surplus.

In Great Britain our cattle are slaughtered in quarantine on the seaboard, depreciating their value one per cent per pound gross on the flimsy pretext of pleuro-pneumonia. Our pork products are entirely excluded from the markets of Germany and France on the equally fallacious charge of trichinae, while the same products are admitted when shipped from Great Britain. Our wheat is met in the same countries by an import duty, yet no effort has been made to remedy these evils. On the other hand, the Government has made or attempted treaties with every South and Central American country in trying to build up a market for our manufactures, sacrificing as much as \$40,000,000 of duty on sugar from the Hawaiian Islands for the poor privilege of selling \$40,000 worth of manufactures. The only remedy for this evil would seem to be the constant demand of the farmers for recognition, emphasized by their votes and the agitation of the question by the press in the West and South.

Some 20 years ago an Order was devised and systematized for the purpose of aiding the farmer to aid himself. It was to do this by educating him in business and general information, by promoting his social welfare and assisting him in the necessary purchases and sales incidental to his condition. Its projectors named it the Grange, or, in other words, the farm. In the short period of its history it has proved itself to be the most practical of the beneficial Orders in existence.—Dr. George A. Bowen, Connecticut.

PROGRESS.—John Trimble, Secretary of the National Grange, reports the organization of forty-seven new Granges in the United States from October 1st to December 15th.

THE GRANGERS' BANK.—The annual meeting of the Grangers' bank of California was held Tuesday, the 10th inst., and the usual cash dividend of \$4 per share, equal to seven per cent free from tax, was declared. The balance of the earnings, amounting to \$9000 above the dividend for the year, was carried to the reserve fund. Next April the bank will have been in existence 14 years. Its capital paid up now is \$600,000, and during that time it has paid over half a million dollars in dividends to its stockholders. This result ought to be satisfactory to the many stockholders, and shows good management and a most prosperous and healthy condition of the institution. The old Board of Directors was unanimously re-elected to serve for the ensuing year, viz.: A. D. Logan, I. C. Steele, C. J. Cressey, Seneca Ewer, Uriah Wood, Thomas McConnell, J. H. Gardiner, Daniel Meyer, H. M. Larue, H. J. Lewelling and T. E. Tynan; President, A. D. Logan; vice-president, I. C. Steele; secretary, Frank McMullen; cashier and manager, A. Montpellier.

BRO. J. W. MACKIE of Tulare was thrown from a buggy, Dec. 20th, and had two of his ribs broken; but we are glad to learn that he was able to be out again in a fortnight, and hope to hear of his rapid progress in recovery. By the way, he has an original article on Socialism in the Patron for Jan. 11th, which sets the subject in a light new to many readers and will well repay perusal.

The Farmers' Union of San Jose.

In a communication to the Patron on Grange influence in San Jose, Bro. I. C. Steele speaks of the Farmers' Union of that city as follows:

It owes its existence to the Grange movement, and its success to the practice of Grange principles. It has a paid-up capital of \$150,000, a reserve fund of \$14,000, and a surplus of \$10,728. Its officers are: C. T. Settle, president; W. O. Andrews, manager. Directors—L. F. Chipman, Horace Little, Thos. E. Snell, C. T. Settle, J. Q. A. Ballou, W. L. Manly, J. A. Buck, J. M. Battee, C. W. Breyfogle. Its business, importers, wholesale and retail dealers in groceries, hardware, crockery, agricultural implements, etc. The company own the land and building they occupy, centrally located in the city of San Jose. The main building is a substantial brick structure 150x60 feet, with a cellar under the whole. Agricultural implement department, 16x40; mill and storage, 60x70; oil-house, 20x30; stables and stairs, 36x40; storage capacity of warehouse, 5000 bags of grain; oil-house, 3 carloads; capacity of mill, 300 bags per day, besides running elevator, coffee-mill and heating store. They have a large yard for hitching teams of patrons. Net profits of business, 8 per cent per annum. The stock of company, \$100 per share, worth \$135, with none for sale.

When this institution started in business the merchants of San Jose gave it just six months to close up its affairs, but it has gained and retains public confidence, with a steady increase of business. It now employs 22 men, and its sales amount to \$400,000 per annum. That it has done much to secure a fair proportion of the proceeds derived from the fruits of the soil to the producers there can be no doubt.

Grange Elections.

ROSEVILLE.—Dec. 17.—Walter Fiddymont, M.; J. Harris, O.; S. J. Crois, L.; Ed. Bedell, S.; Willie Murry, A. S.; E. J. Atkinson, C.; Geo. Williams, T.; Mattie F. Leavell, Sec.; Lee D. Thomas, G. K.; Jennie Harris, L. A. S.

SACRAMENTO.—Dec. 10.—Joseph Holmes, M.; Joseph Sims, O.; Sister Slauson, L.; Harry Foster, S.; Robert E. Greer, A. S.; John Reith, T.; Bro. Davenport, C.; Wm. Sims, Sec.; L. R. Davis, G. K.; Sister L. R. Davis, P.; Hattie M. Sims, F.; Ruth Merwin, Ceres; Lizzie B. Aiken, L. A. S.; Frankie M. Greer, Organist.

SACRAMENTO COUNTY POMONA.—Joseph Sims, M.; Morris Toomey, O.; Wm. Johnston, L.; A. M. Plummer, S.; L. H. Fassett, A. S.; E. M. Johnston, C.; W. C. Smith, T.; W. W. Greer, Sec.; Sister Krull, P.; Sister C. Hack, Ceres; Sister Frankie Greer, F.; Sister Crestwell, L. A. S.

SANTA CRUZ.—G. C. Wardwell, M.; E. B. Cahoon, O.; John Morgan, L.; C. T. Kirkpatrick, S.; E. Francis, A. S.; V. Humphrey, C.; J. Francis, T.; B. Pilkington, Sec.; Thos. Crooks, G. K.; Sister Wardwell, Ceres; Sister Cahoon, Flora; Sister Humphrey, P.; Sister Stikman, L. A. S.

WATSONVILLE.—N. A. Uren, M.; Mrs. E. Z. Roache, O.; Mrs. M. E. Tuttle, L.; A. Cox, S.; D. Tuttle, A. S.; Mrs. P. Haver, C.; G. W. Kidder, T.; Mrs. S. J. Kidder, Sec.; Mrs. R. W. Cox, G. K.; Miss Josie Roache, P.; Mrs. J. M. Rodgers, F.; Mrs. N. A. Uren, Ceres; Mrs. G. D. Rodgers, L. A. S.; J. M. Rodgers, Trustee.

YUBA CITY.—[Corrected List.]—M. J. Hardy, M.; Geo. Ohleyer, Jr., O.; Pauline Newkom, L.; Louis Woodworth, S.; W. E. Sammis, A. S.; Mrs. C. Woodworth, C.; F. Cooper, T.; Mrs. E. Wilkie, Sec.; C. E. Williams, G. K.; Sadie Walton, P.; Lella Walton, F.; Adella Fortna, Ceres; Mrs. Z. Sammis, L. A. S.

NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

Grange Installations.

Eden—January 14.
Florin—January 14.
North Butte—January 14.
Santa Rosa—January 14.
Sacramento Pomona—January 14.
Sacramento—January 14.
Lodi—January 21.
Watsonville—January 21.
South Sutter—January 28.
Valley—January 23.

SISTER M. B. LANDER, Secretary of Alhambra Grange, Martinez, has been threatened with a severe attack of typhoid fever. We are happy to say she was decidedly better at last accounts.

SISTER HETTY DEMING of Vallejo has recently been seriously ill with pneumonia. Her many friends will be pleased to learn that she is now recovering.

An Outspoken Admirer.

A surveyor in San Luis Obispo county, inclosing a postal order to pay for the RURAL PRESS another twelvemonth, adds:

"I have now been taking your paper for four years. Not being an agriculturist, strictly speaking, I at first subscribed for six months, merely to get rid of the importunities of your traveling agent; but, after glancing through a few numbers, I gradually became interested in its contents, until now I look forward to the weekly arrival of the PRESS with as much interest as to that of my daily."

Such words of sincere approval are always gratifying to editors and publishers, and we thank our friend for his kindly message.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

MEAT-PACKING.—Oakland Enquirer, Jan. 5: The Chicago Packing Co., incorporated some months ago with \$500,000 capital, in which Wm. Selover, Gov. Salomon, J. S. Emery and other large capitalists are interested, has purchased 10 acres of land from Geo. W. Grayson near the station of Posen, between the stockyards and West Berkeley, for a site for the establishment. The land purchased lies along both sides of the S. P. R. R., and is at an elevation of 25 feet above the bay, affording excellent drainage. The company will proceed at once to erect a building 60 by 275 feet and four stories high, to cost, with the plant, \$100,000. A large quantity of the most approved machinery will be brought from the East. It is expected that the establishment will be in operation in about three months, when over 100 men will be employed.

Butte.

NEAR NELSON.—Oroville Register, Jan. 5: W. A. Shippee, whose home is near Nelson, tells us that from one-half to three-fourths of the grain is sown in that locality. Of this nearly all is wheat, as but little barley is grown. Most of the land-owners have become interested in fruit-raising, and this year a large number of peach, apple, pear, plum and cherry trees and grapevines will be planted. Several will also test the orange and lemon.

AN UNCOMMON FRUIT, known as the Florida grape-fruit, grows here. It is rather larger than a lemon, which it resembles in general appearance and flavor, but it lacks the keeping qualities of the lemon, though while fresh it can be used for all the purposes that a lemon can. There is but one tree in the county and that stands in the yard of Mrs. Rollins in Oroville.

Fresno.

EDITORS PRESS:—It has come at last—a good hard rain—just what every one has been wishing for. We now have the best assurances for a good season and heavy crops. A great deal of farming will be done around Madera and in the foothills near by this year. There is water in the Fresno Dam and Irrigation Company's canal, and irrigation will soon begin. There is a much heavier fall of snow in the mountains than is usual for this time of the year. The snow is quite low down in the hills and gives promise of abundance of water for irrigation this season. It was quite cold here before the storm, with heavy frosts. The thermometer at 7 A. M. Dec. 24th marked 26°, and at 7 A. M. Dec. 25th 52°. The Shepherds' Home, owned by Mr. H. C. Daulton, was sold not long ago for \$175,000, David S. Terry being one of the purchasers. This is the second large ranch in this vicinity that has been sold to outside parties. Christmas was celebrated here, horse-racing, balls and parties being the principal features.—JUNIOR, Madera, Jan. 3, 1888.

ITALIAN MULBERRY TREES.—Fresno Republican, Jan. 6: G. W. T. Carter, a member of the State Board of Silk Culture, has been furnished by that board with a number of well-rooted Italian mulberry trees, which are known as the best trees for the silkworm that grow. These trees will be distributed by Mr. Carter among our farmers, and any one desiring to plant them will be furnished with a limited number free of charge upon application to him. The trees were imported direct from Italy, and are in fine condition; they make a heavy shade and bear delicious fruit, in addition to furnishing food for the silkworm.

Humboldt.

A PROSPEROUS SHEEPMAN.—Blockburg Cor. Standard: Six years ago L. C. Tuttle was several thousand dollars in debt. To-day he does not owe anything, and has money at interest. But himself and family have worked hard, and by giving the business their personal attention and improving their stock they are now the most prosperous family in this section. Mr. Tuttle has several head of thoroughbred Durham cattle, besides several thoroughbred horses. He says that it is just as easy to raise fine stock as poor, and that they pay double in the end. He always has something to sell in the way of stock, and does not depend on wool alone for his income. He has sold over \$3000 worth of cattle and \$700 worth of horses, mules and mutton sheep this year. I noticed that his ranch was all inclosed, and then divided into five or six different pastures by good substantial fences, so that it is comparatively easy for him to control his stock. He intends to build a fine barn and woolhouse the coming spring. Scab is about the only thing that bothers sheep here, and stockmen have got so they can manage that with comparative ease. I saw Mr. Tuttle's band of sheep. They had just been separating the ewes from the rest of the band, and out of over 2000 he had in the corrals the day I was there, there were not more than a dozen that were affected, and that but slightly. But he caught and handled every one, and when he found the slightest indication of rubbing, he doctored it. If all sheepmen would be as careful, they would soon have that drawback entirely obliterated.

Mono.

RESULT OF THE SHEEP-LICENSE ORDINANCE.—Bodie Miner: Sheriff Wat Morgan, ex-officio tax-collector, has collected to date, under the Mono county sheep-license ordinance, the sum

of \$4275, and to this may be added \$750 in penalties, aggregating \$5025. The cost of these collections will be about \$300, thus leaving the county a clear gainer by about \$4725 of taxes on a class of property which has heretofore paid no tribute into the county for benefits received and liberties enjoyed. While we do not believe that \$5000 a year will repay the damage done to Mono county pastures, it shows the wisdom of our Board of Supervisors in passing the sheep-license ordinance.

Placer.

NEW YEAR'S STRAWBERRIES.—Auburn Republican, Jan. 4: W. M. Crutcher brought up from Newcastle Saturday a box of large, ripe strawberries just picked from a ranch below that town on the Penryn road. Ripe strawberries, grown in the open air for New Year's, are a very good testimonial for Placer county climate.

Sacramento.

RECLAMATION.—Dixon Tribune, Jan. 7: We paid a visit last Saturday to the new dredger, Ajax, now at work on the lower end of Andrus island. It is a powerful machine, strongly and ingeniously constructed, and works like a charm. In size, convenience of structure and strength, it seems to be a great improvement on the one lately in use there. It is in the hands of the same engineers, Joe Miller and Jack Dennis, with about the same crew—only six men in all. They think they throw up, under favorable conditions, in the 20 hours' run about 1000 cubic yards of sediment. When in operation it seems to possess the strength of a regiment of giants, and it is handled with the precision of the simplest machine. We were informed that it cost the district \$17,500. The work of reclamation is progressing satisfactorily. Mr. Poage is doing effective work, with a small force of Chinamen, in strengthening the weak parts of the levee, to prevent its being carried away by wind and tide. He will be needed through the winter for this work, or a good deal of work may be lost by a break in the new, unsettled dikes. More than half of the land is now out of water, and we may reasonably hope that all of it will be ready for the plow next season.

San Benito.

MONTHLY HORSE FAIR.—Free Lance: A horse market has long been needed in Hollister. Horse-buyers come here and then know not where to look for what they want. Horse-raisers drive droves of from 5 to 25 horses into town, and then are obliged to wait perhaps a week or more before they are disposed of. To obviate this difficulty and to bring buyers and sellers together, the Hollister Board of Trade on Monday last resolved to establish a horse market in Hollister. The first Saturday in February was appointed as the day when the first mart was to be held. Circulars are to be sent to all prominent horse-dealers of California notifying them of the establishment of the horse market. All those having horses to sell should bring them in on that day. In three months' time, and after three markets have been held, the plan will have become well established, and the day of the horse mart will be regarded in Hollister as one of the liveliest of the month.

San Bernardino.

BEES AND HONEY.—Southern Californian, Dec. 24: F. H. Hunt, who has about 600 colonies of bees, gives us some interesting items about bee-culture. The ordinary life of worker-bees is from 30 to 60 days. Queen-bees hatch in 16 days, workers in 21 and drones in 24. Queen-bees live four or five years, but their usefulness does not generally extend to a period of over three years. Queen-bees raised in America cost \$2.50; Italian queens, from \$15 to \$20. The bees have guards at the entrance to the hives, which promptly exclude intruders. Queen-bees lay from 1000 to 2000 eggs per day. While sage makes the best honey, and the bees in this vicinity feed on that, Yerba Santa, wild buckwheat, alfalfa and eucalyptus. The honey is removed once a week, from May 15th to the first of September. The usual amount obtained from each hive in the East is about 60 pounds. About 150 pounds is a good average in California, while as much as 307 pounds has been secured. The price for extracted honey ranges from 3½ to 5½ cents per pound.

IMPORTING JERSEYS.—San Bernardino Index, Jan. 7: Last week a carload of very fine Jersey cows arrived in this city from the East, consigned to R. N. C. Wilson, of the Ivanhoe farm, about 12 miles northeast of this city. The cattle are all thoroughbreds and will be used for dairy purposes on that gentleman's place.

Santa Cruz.

FAIR ASSOCIATION DIRECTORS.—Pajaronian, Jan. 5: The Pajaro Valley Agricultural and Horticultural Fair Association met in the Town hall on Tuesday last, as per call of the secretary, and elected, by ballot, the following persons as a Board of Directors to serve for one year: James Waters, A. P. Roache, A. N. Judd, N. A. Uren, H. S. Stipp, Mesdames M. E. Tuttle, G. B. Card, J. L. Libbey, B. A. Osborn and C. W. Stipp.

JANUARY GRAPES.—Courier-Item, Jan. 7: Twenty-seven boxes of grapes fresh from Buena Vista vineyard were brought to town Thursday, looking just as if they did not know the difference between January and October. These midwinter grapes sell for \$4.50 per box in San Francisco. Who says there isn't profit in fruit-growing in the Santa Cruz mountains?

MORE STRAWBERRIES.—Pajaronian: Many of the berry-growers are preparing to increase

their acreage of strawberries next season. R. W. Eaton will have all of his place in strawberries, the Lake farm will set out another field, Waters & Brewington will increase the size of their strawberry tracts, and the smaller growers will follow in the same direction. The past season was a prosperous one for the strawberry-growers, and as the S. F. market is mainly dependent upon the Pajaro valley crop of berries—and the demand is increasing each year—the berry farmers propose to keep up with the times.

Santa Clara.

CITRUS SUCCESSES.—Los Gatos News, Jan. 6: A two-year-old orange tree in the yard of W. A. Stidston is certainly a sight to behold, especially to the visitor coming here from the frozen climes of the East. The tree has borne 32 oranges this winter. They are of the Navel variety, and exceedingly large and fine. . . . Mr. J. J. Groom brought to this office this week some very fine Navel oranges and Eureka lemons. They were finely flavored, large, and thin-skinned. They were grown on his fine place on the hill, on trees set two years ago last April, and from the lemon tree that these were picked from he gathered nearly three dozen ripe lemons in one day, and the tree contains hundreds of others all the way from the bloom to full-grown fruit. His trees are all healthy and clean.

Solano.

EDITORS PRESS:—We have had some unusually cold weather. The mercury stood this morning at 29° and the ground has been frozen all day on the north hillside. We had quite a snow-storm Wednesday; the snow did not lie long in the valley, but it still shows on the hills. Four inches of rain fell in the last storm, and ten inches for the season. Robins are very plentiful; orchards and vineyards are alive with them, and all seem to be very busy hunting something. . . . Fruit trees are very hard to get, especially peaches. D. B. Derby, agent for the Niles nursery, will not take any more orders for trees; says they have about sold out. —G., Vacaville, Jan. 8th.

Sutter.

WARRING ON THE BUGS.—Sutter Farmer, Jan. 6: The fruit-growers in and near Yuba City are now busy spraying their trees for the purpose of killing the San Jose scale. The remedy that is being generally used is the whale oil and sal-soda remedy, recommended by W. G. Klee, State Inspector of Fruit Pests. Mr. Klee was here a week ago, and expressed himself as well pleased with the activity of the fruit-growers in their fight with this pest.

Tulare.

THE CASABA MELON.—Visalia Times: On the 17th day of last October, W. R. McQuiddy bought at Boice Bros' store, Hanford, a muskmelon of the Casaba variety. It was at that time a little streaked with yellow, but not ripe enough to eat. Taking it home, he laid it away in a cool place, expecting that it would be fit to eat in a week or more. Being where it could be seen every day, it was watched to see that it did not spoil, and left to see how long it would keep. Although no attempt was made to protect it from freezing during the cold weather in December, it was sound at Christmas. Two days before New Year's it was cut and found to be sound and sweet, and, although it stood on one end all the time, it was as good at one end as at the other. A part of it was set away for New Year's day. Being forgotten that day, it was eaten on Monday, and was sweeter and better than most muskmelons when first from the vine.

FEEDING BETTER THAN SELLING.—A farmer residing near this city was heard to remark yesterday that he would raise no more alfalfa hay to sell at \$5 and \$6 per ton, as he had found it paid better to feed it to stock at that price. The gentleman's judgment is sound on that matter; there is not near as much to be made in raising either alfalfa or corn for market as there is in feeding it to cattle and hogs. Fat cattle are scarce all over the State during the months of January, February and March, and at that time command the top figure, but the farmer converts his hay into money and takes his chances with his stock until spring grass grows, when the price of beef also falls to a low figure. Grain-fed hogs are always in demand at top prices, yet it is safe to say that a half-dozen such hogs could not be procured in this market, though our ranchers raise thousands of tons of good corn.

Yuba.

PAVILION MATTERS.—Appeal, Jan. 6: The annual meeting of the Marysville Pavilion Co. was held at the new pavilion last evening, nearly all the stockholders present. W. T. Ellis, N. D. Rideout, D. E. Knight, Justice Greely and Peter Decker were elected directors for the ensuing year. J. C. White and P. C. Slattery each made an oral report relative to the new Park and Pavilion Co., stating that about \$10,800 had thus far been subscribed of the capital stock. On motion of N. D. Rideout, the directors were authorized to sell the pavilion to the new company at such time as they may be ready to purchase, at \$8500, and it was further agreed that the stockholders of the present company will subscribe the full amount owned in the present Pavilion Company to stock of the new company, if the balance is taken by other parties to the amount of \$16,500. The newly-elected directors organized by electing D. E. Knight, Pres.; W. T. Ellis, V. P.; T. J. Sherwood, Sec., and P. Decker, Treas.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Jan. 5-11.																								
Thursday.....	.00	24	NE	Cl.	.26	34	N	Cl.	.50	34	N	Cl.	.71	43	NW	Cy	1.12	46	NW	Ry	.22	54	W	Fr.
Friday.....	.00	24	E	Cl.	.00	38	N	Cl.	.08	34	NW	Fr.	.00	43	N	Cl.	.20	50	S	Fr.	.42	48	N	Ry.
Saturday.....	.00	22	NE	Fr.	.00	34	N	Cl.	.00	36	CM	Cl.	.00	42	SE	Cl.	.00	50	E	Cl.	.01	50	W	Cl.
Sunday.....	.00	18	NE	Cl.	.00	36	N	Cl.	.00	34	N	Cl.	.00	42	NE	Cl.	.00	46	NW	Fr.	.00	50	NE	Fr.
Monday.....	.00	20	SE	Cl.	.00	42	N	Cl.	.00	34	N	Cl.	.00	46	NE	Cl.	.00	52	SE	Cl.	.00	48	W	Cl.
Tuesday.....	.00	24	SE	Cl.	.00	50	N	Cl.	.00	40	SE	Cl.	.00	46	NE	Cl.	.00	54	SW	Fr.	.00	50	SE	Cl.
Wednesday.....	.02	28	SW	Ry.	.00	44	CM	Cl.	.00	42	SE	Cl.	.00	45	NE	Cl.	.00	56	E	Cl.	.00	54	SE	Cl.
Total.....	.02				.26				.58				.71				1.32				.65			

EXPLANATION.—Cl. for clear; Cy, cloudy; Fr, fair; Fy, foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Overland Freight Rates.

It will interest many of our readers to know that the Transcontinental Association, which includes all the overland lines, has issued a new tariff sheet on overland freights which will go into effect on Monday next, January 16th. It does not make any great changes, perhaps, in rates, but is in the line of an advance. The following items are of especial importance to our readers:

The rate on cattle by carloads to Missouri river points from Pacific Coast common points will be \$1.50 per 100 pounds; to Mississippi river points, Dubuque, New Orleans, etc., \$1.70 per 100 pounds; to Chicago, etc., \$1.77½ per 100 pounds. The rate on horses or horses and cattle will be greater, and on hogs less than the cattle rate. Live-stock, per passenger train, not to exceed 12 head per car, will go as follows: To Missouri river common points, \$525; to Mississippi river points, \$575; to Chicago and common points, \$600.

Following are some of the charges on special commodities: Baled wool for New York from this coast will be charged \$1.50, as against \$1 at present; scoured wool, \$2. Canned goods for the same destination will be \$1 per 100 pounds, and 75 cents to Missouri river points. Brandy or cherry juice to New York, \$1.25. Oranges and lemons for Missouri river points, St. Louis and Chicago, per passenger train, will be rated \$1.90, \$2.05 and \$2.15 respectively; per freight train, \$1, \$1.10 and \$1.15 respectively. Potatoes, straight, by carload to above three points, each 80 cents. It is to be noted that Chicago rates will apply on oranges and lemons to St. Paul and Minneapolis, otherwise Missouri river points will govern to St. Paul and Minneapolis.

Central California Citrus Fair.

EDITORS PRESS:—We wish to say to all that are intending to make exhibits at the "Central California Citrus Fair," to be held at San Jose, to be sure and have their citrus and other fruits on hand in San Jose by the 20th inst., in order that it may be placed in proper shape on the opening day, Jan. 24, the time that the American Horticultural Society meets, and it will save much confusion. We have every encouragement that there will be a very large exhibit of citrus fruit, and also a very large number of people present from all sections of the country. Therefore, we wish to have no delay in our preparations in making this the grandest Fair ever held in the State.

CYRUS JONES, Pres.

FRANK DUNN, Sec.
San Jose, Jan. 7, 1888.

AGEING WINES.—A dispatch from Washington states that a decision was rendered Jan. 9th in the Supreme Court in the patent case of Benjamin Dreyfus vs. Sophia S. Earle, executrix, on appeal from the U. S. Circuit Court for the district of California. This was a suit for an alleged infringement of a patent granted on July 11, 1865, to John S. Earle for an improved process of imparting age to wines by means of steam-heating. This court holds that the application of artificial heat for the purpose of imparting age to wines is old, and that there was no novelty in the process. The decree of the Circuit Court is reversed, and the case remanded with directions to dismiss the bill.

FRUIT UNION MEETING.—The annual meeting of the stockholders of the California Fruit Union for the election of a board of nine trustees for the ensuing year, and for the transaction of such other business as may come before the meeting, will be held on Wednesday, January 18, 1888, at 1 P. M., in Irving hall, Post St., S. F. Every stockholder is urgently requested to attend the meeting in person, as questions of importance will be brought before the meeting, and the policy for another year's business outlined.

The public debt decreased \$14,583,650 during December.

The Visiting Horticulturists.

As we go to press on Wednesday the excursion of the American Horticultural Society may be pictured as starting westward from St. Louis, for such is their intention according to program. They will come by the Southern route, and are expected to come through direct to San Jose or San Francisco. On Tuesday, January 24th, the formal reception and the opening of the three days' session will occur at San Jose. Preparations therefor are proceeding promisingly.

Riverside has begun active work for the citrus fair and meeting to be held in that city beginning Feb. 7th. A meeting of the Board of Trade was held last week; the management of the affair was entrusted to L. M. Holt, and he, with C. J. Gill, M. Gage, W. N. Mann and H. J. Rudisill, were appointed Executive Committee. P. D. Cover, E. Rosenthal and W. A. Hayt were appointed Finance Committee. A. S. White was chosen as chairman of the Reception Committee, with power to select his associates. Since the affair was finally begun there seems to be much interest and enthusiasm, and there will be no lack of welcome at Riverside, and a magnificent display of products is the sure result of an effort on the part of the Riverside people.

There seems to have been some little feeling, it is true, that Riverside was slighted by having an official announcement of the meeting made at their place and then the program changed to give another place priority, but it should be remembered that the plans were drawn 2000 miles away, and probably it was owing to some necessity appearing there that the northern part of the State was visited first. We cannot see what real ground there was for dissatisfaction, and the Riverside Press in its issue of Jan. 7th shows the right spirit when, speaking of the excursionists, it says:

They will have spent three weeks in California viewing its horticultural productions before reaching Riverside. After a careful consideration of this question, it is safe to conclude that this program is much better for Riverside than for them to come here first and then go elsewhere. The members of that excursion will have pretty much made up their minds about California before reaching Riverside, and when they get here and view our exhibit of citrus fruits, test the quality of the same and examine the appearance of the finest oranges grown in the world, and then take a drive down the valley that cannot be duplicated on the American continent, their enthusiasm will know no bounds, and they will declare Riverside to be the great citrus country of the world.

That is all right, of course. The last place on the floor in debate is the point of vantage, and when we used to play marbles the lingo was: "First, the worst; second, the same; last, the best of all the game." We are glad our Riverside friends have come to this conclusion, for it insures success on both ends of the line. San Jose is ready to eclipse all her former deeds in display in hospitality and otherwise. Let the people now come forward and aid in the environment of the meetings, and the work will be an honor to the State.

The air is full of these events. The State Board of Horticulture has issued a circular reproducing the program for the meetings and otherwise calling attention to them, and the officers of the State Horticultural Society also issue a special to their membership to participate in the fairs and in the cordial greeting to the coming hundreds who are linked with them in the sympathy engendered of pursuit of the same noble occupation. The whole affair looks very well, and we look forward to the meetings with much pleasure.

A GENERAL CITRUS FAIR.—The results of holding the Placer county exhibit at Los Angeles seem to have been so satisfactory that now J. Parker Whitney of Rocklin writes to the Record-Union recommending a united Central California citrus exhibit for 1888, to be made by the united efforts of the principal Central California counties; the display to be made at Los Angeles in preference to any other place.

The population of Los Angeles and its ratio of increase are thus stated: 1861, 6500; 1870, 8000; 1880, 11,183; 1885, 35,000; 1887, 60,000. The last two numbers are estimates.



The River Time.

Oh! a wonderful stream is the river Time,
As it runs through the realm of tears,
With a faultless rhythm and a musical rhyme
And a broader sweep and a surge sublime,
As it blends in the ocean of years!

How the winters are drifting like flakes of snow,
And the summers like birds between,
And the years in the sheaf, how they come and
they go
On the river's breast with its ebb and its flow,
As it glides in the shadow and sheen!

There's a magical isle up the river Time,
Where the softest of airs are playing,
There's a cloudless sky and a tropical clime,
And a song as sweet as a vesper chime,
And the junes with the roses are straying.

And the name of this isle is the "Long Ago."
And we bury our treasures there;
There are brows of beauty and bosoms of snow,
There are heaps of dust—oh! we loved them so—
There are trinkets and tresses of hair.

There are fragments of songs that nobody sings,
There are parts of an infant's prayer,
There's a lute unswept and a harp without strings,
There are broken vows and pieces of rings,
And the garments our loved used to wear.

There are hands that are waved when the fairy
shore
By the fitful mirage is lifted in air,
And we sometimes hear through the turbulent roar
Sweet voices we heard in the days gone before,
When the wind down the river was fair.

Oh! remembered for aye be that blessed isle,
All the day of our life until night,
And when evening glows with its beautiful smile,
And our eyes are closing in slumbers awhile,
May the greenwood of soul be in sight.
—Benj. F. Taylor.

Submission.

[Written for the RURAL PRESS by AUNT SUSIE.]

Father! I know thy ways are just
And full of kindness now;
Forever to Thy will I must
In meek submission bow.

And gladly I my cross must bear,
Breathing no bitter word;
O Father! Thou my heart prepare,
And let my prayer be heard!

And I with eagerness must press
Forever on my way.
O Father! heal Thy child's distress,
Oh, bless me through this day!

I long the path of peace to find
And lay my burden down;
The cross I bear, O Father kind!
When wilt Thou give the crown?

Home Education.

[Written for the RURAL PRESS by MARY P. AMES.]

Herbert Spencer has wisely said, "Always remember that to educate rightly is not a simple and easy thing, but a complex and extremely difficult thing; the hardest task which devolves upon adult life." That so much neglect exists in the home education of the young is a subject for serious consideration. Many parents, it is true, are anxious to secure for their children the advantages of the best schools within their reach, and having done this look well to their advancement. There are to be found young people all over our land being taught in those principles which shall make them grow up into Christian manhood and womanhood, while others, not religiously trained, are instructed in those things which go to make uprightness and integrity of character.

Many parents, too, give careful attention to the home education of their children in all the little courtesies of life. But while all these things ought we to do, are we not leaving many others undone?

Take the subject of the unequal distribution of wealth, for example. Though without charity for the idle and dissolute habits which keep so many in a state of poverty, and utterly condemning the spirit of communism which would give to the profligate and the vicious a share of the hard-earned proceeds of others' labor, yet, is it not a subject we may look well to that the wealth of the land is so unequally distributed among good men?

When we look at the Leland Stanford University, the Lick Observatory, Dr. Lane's generous gift of the Cooper Institute, and the magnificent donations of Dr. Cogswell, Mrs. Margaret Crocker and a host of others, which stand up like monuments in many places—not of the benefactions of men and women who, having done with life, can no longer use their wealth, but as the generous expression of living hearts beating with kindly human sympathy—we are glad that great fortunes have come to

these large-hearted people. But there are men of good intellects and educations, with just ideas and right views of things, who make most mortifying failures in earning a livelihood, always hampered with debt, and having their self-respect well-nigh crushed out of them under a weight of mortgages, promissory notes, etc.

Christian men having themselves a competence, sometimes give their sons fine educations and train them well in the broad principles of the Christian religion, as well as in the narrower lines of sect, but fail utterly to teach them the rules which govern business successes. A fear of producing worldliness sometimes causes fathers to fail to instruct their sons in the art of getting and spending money, and when such sons go out into the world, their lives repeat the same sad story of the neglect of home education in a matter we have no right to think lightly of, for the experiences of our lives do not teach us to agree with the poet that "Man wants but little here below." Should these young men, untaught in a matter of so much importance, blundering come into a position for acquiring rapid wealth, they often spend it so lavishly as they would not had their home education taught them its value, and, having spent their all, find themselves troubled, and that continually with questions of ways and means; and the problem of the bread and butter of life seems entirely beyond their solution.

The large development in the organ of destructiveness with which we often meet, shows serious lack of home education. Occasionally we see whole families in whose minds there seems to be no distinguishing line between using and abusing. Where everything is destroyed from the new toy of the baby, bought with the self-denial of some older member of the family, to the large armchair of the father, worn by children's feet, or, if that father be a farmer, the destructiveness extends to his mowing machine and farm wagon for which provident care has failed to provide shelter against summer's sun and winter's storms. The wear and tear of clothing which takes place in families of this character is something alarming to one of economic habits. We can easily look back beyond such homes to the ones in which that father and mother were little children, and understand that their toys were not "laid over their heads on the shelf, till the room should be stiller from noise, and the children more lit for such joys." In the matter of constructiveness, a great lack of home education manifests itself. The sons of parents in moderate circumstances are so brought up that when they become the heads of families, how often are they unable to mend a broken chair, put in a pane of window glass properly, fix a refractory door-knob, or, in short, take any of the "stitches in time to save the nine," in the wear and tear of house and furnishings. How often wives with many needs have never been taught in the home of their parents all those little arts of constructiveness which shall make little serve the purpose of much, and which shall mend and make over in wise ways. I once knew a lady whose circumstances did not remove the question of bread-winning from her, but who was entirely ignorant in the art of dressmaking. "Just think," she said, "of the amount of good reading I could do while making a dress." I did think, and have thought at times ever since, but it seems to me plain she might have gained more than she lost by an occasional experience dressmaking, though she found herself confused by a labyrinth of ruffles and pleatings and drapery. What she would have gained in constructiveness and in overcoming a difficult task might have taught her things more beautiful than those learned from books. The capable wife of a successful business man once remarked she had no patience with the busy women who would piece quilts. Being one of the number, I have thought much of the matter. Though quilt-piecing may not find a proper place in the full days of the housewife, it seems to contain lessons which extend somewhat to the root of the matter in home education. That a young child may construct something should increase her self-respect. That the small pieces remaining from her dresses and aprons may be made into something both pretty and useful carries with it a lesson in utility and respect for small things.

While the knowledge of sewing, the exactness required, the proper blending of colors, and the bit of kindergarten instruction which may so aptly fit in, as regards shapes and angles, all contain valuable lessons. Of all the neglects in home education none is more observable than in farmers failing to instruct their sons in the principles of agriculture. There is much wise talk in these days in regard to allowing boys to follow their natural bent in regard to their avocation in life. But what if the farmers' son shows no leaning toward anything? Why fail to teach him all those rules which govern successful farming for fear he will conclude to be a merchant or a mechanic?

Should he ever choose some very different calling from his father's, the lessons inculcated on the farm, teaching the boys to pick up a hammer or a hoe, a shovel or a saw, and put them in their proper places; teaching the best depth for plowing, and the number of pounds of grain which should be sowed per acre; the number of pounds of butter a good dairy cow should give, and the necessary feeding to produce such a yield; the weight to which a well-fed calf should attain in one year, and all the rules which govern successful farming, the con-

tinual looking out for farm leakage, and finding ways and means to stop it. All this knowledge given to the farmers' sons will not detract from the business man's success. A nephew of the writer, a successful book-keeper in Boston, was learning stenography, although he had no apparent need of the same, but gave, as a reason, that it was one more thing to know. So let us who are raising sons on the farm attend well to their home education, and when they go out into the busy world of workers, they may find most useful these home lessons we have taught them.
Beckworth, Plumas Co., Cal.

Horses Versus Hogs.

Von Osgood, the Duncan's Mills correspondent of the *Petaluma Argus*, is responsible for the yarn ensuing, which he offers as pertinent to the controversy whether the actions of the lower order of animals are controlled by instinct or reason:

Once upon a time a Sonoma county farmer had a number of horses of various ages, which he kept in a pasture near his barn. As the grass in the pasture was a trifle short, the farmer was in the habit of throwing some hay over the fence every day for the horses.

The farmer had also a great many hogs. A large number of the hogs had found their way into the pasture where the horses were, and, hog-like, were always on hand rooting and tramping around in the hay while the horses were eating, greatly to the annoyance of the horses. This thing continuing as it did, from day to day, was becoming monotonous. The horses as yet knew no way to get rid of the hogs and their everlasting rooting and tramping in the hay, and they were sorely vexed. They would bite the hogs and paw them and kick them, but it was of no use. The hogs would grunt and squeal and stay right there. Hogs in general are stayers from "way back," and these, being of the self-sharpener variety, were no exception. The horses were discouraged and tired. They could devise no means of disposing of the hogs. One silly young horse went away and wouldn't eat. Some of the older horses reasoned (yes, reasoned) with him, telling him that to give up now and sneak off was to acknowledge defeat, and furthermore, it would have a tendency to embolden the hogs and cause them to outthug any hoggishness they had yet attempted. This eloquent appeal (yes, horses can be eloquent) convinced the young horse and he came back.

One day, while the horses were eating their hay, the hogs, as usual, being there in full force, an idea struck one of the horses and he grabbed a hog in his teeth and hurled it up into space. The hog described a curve in the form of a parabola, clawing the air and squealing meantime, and struck the earth—with a sickening thud—on the other side of the fence. When the hog picked itself up and looked around, it was astonished upon beholding a great multitude of hogs in the air, curving and squealing gracefully (yes, squealing gracefully) beneath the cerulean vault and landing, invariably, outside the pasture. The other horses had "caught on," you know, and were making it exceedingly torrid for the hogs.

The hog that had just "picked himself up" (right here, by the way, a change in the personal pronoun seems imperative) wasn't a large hog nor a very old hog, but in the last few seconds he had lived years, and the spectacle upon which he now gazed completely unhogged him. The horses made a clean sweep, and the hogs, in a more or less damaged condition, marched off in a body to seek pastures new and company more congenial.

A Sensible Movement.

The Funeral Reform Association, just organized in N. Y. by leading Episcopalians, lay and clerical, aims to abolish ostentatious display and secure a simple and impressive observance of funeral rites. To this end the following reforms are advocated: The adoption of perishable coffins and plain hearse; the disuse of crape, scarfs, feathers and other conventional trapping; the avoiding of all Christian and heathen emblems, and the use of any floral decoration beyond a few cut flowers. The custom of following the body to the grave is also condemned, except in case of immediate relatives, as necessitating a great outlay on carriages.

The object of the organization is also sanitary. It seeks the abolition of burial plots in cities and the abandonment of family vaults. We do not know, as yet, whether it has expressed itself in favor of cremation.

The reforms proposed are certainly much needed, and the movement is likely to meet with warm approval and find strong support outside the limits of the Empire State and the Episcopal denomination.

A POINTER FOR LOTTERY-FOLLOWERS.—One of Beauregard's old soldiers sent him a dollar and requested him to send him a lottery ticket which would win a big prize. He said: "I was always at my post and obeyed orders. I came out of the war without clothes enough to wad a shotgun." The general answered: "My dear comrade, I send you a ticket that I hope will draw a prize. I beg leave to give the following pointer: If you stick to the Louisiana lottery for four years as faithfully as you did to the Southern Confederacy, you will not have clothes enough to wad a popgun."—*Ex.*

Hobbs' Experiences.

[Written for the RURAL PRESS by MRS. J. HILTON.]

Nearly every town has some one who is considered an oddity. While visiting at a neighboring town, a little old man came into the house where I was stopping, whose appearance made one smile. He opened the conversation by saying:

"My mule is dead."

"Why, how is that? I thought he was out to pasture."

"Yes, so he was; but Jones brought me word that my mule had got down and his feet were under the fence so that he could not get up, and he was starving. So I got a horse and went down there. Sure enough there lay the old fellow, and as I went up to him he rolled his head over on his side and looked at me, as much as to say, 'Come, old comrade, can't you get me out of this?' Of course I told him I would if possible. So I tore down the fence and tried to help him up, but it was no go; the poor old fellow was too weak. I got him some food, but he could not eat. And so I felt that he must be put out of his misery. As I never could kill anything, I went to a neighbor's and tried to get some one to do it for me, but the men folks were not at home. Well, I thought I would dig his grave ready. While I was there I borrowed a spade and went to work close to the mule's back. I had got it about six feet deep when I looked up and there was Mr. Mule kicking and trying to get up. Well, Hobbs, says I to myself, if you don't get out of this hole pretty quick, there will be two mules down here."

"How did you dispose of him?"

"Oh, I went back to the man's house, and as he was at home he came and —"

The old man looked kind of solemn, and then with a sigh he remarked:

"I don't see how it is every horse or mule folks gives me goes and dies. Now that old black mare Mr. W. gave me I fed her the best in the land, but one night she got down, and when I tried to help her up she kicked me on top of the head. It didn't hurt me a bit, but it made her lame, and the next day she couldn't walk, and then she died."

The truth was that the old man was so soft-hearted that every one who had an old or worthless animal gave it to Hobbs, knowing it would have good treatment. He is a good mimic, and tells a story pretty well. We were talking of slow horses. One said that if he had to go to the tribunal on the day of judgment behind a horse, he would like to go behind our old Polly. That reminded him of the livery-stable-man who always cautioned people who hired a horse of him not to drive fast. One day a man came along who hired a horse and carriage. As usual, he was cautioned not to drive fast. "Well, stranger," he drawled out, "I am going to a funeral, and I shall keep with the procession if it kills the horse."

Los Alamos.

Fancy Work.

[Written for the RURAL PRESS by POLLY PRINGLE.]

A very pretty and convenient addition to the work-basket of those who are old-fashioned enough to save the basting long threads taken out of finished work is a thread-holder. This is made by cutting six pieces of very stiff paper or thin pasteboard, like the following:

Cover three for the inside with bright-colored silk or woolen, the other three for the outside being of a darker or contrasting color. Lay each of the three lining pieces on those intended for the outside, matching, and evenly whipping the edges. Now having the three sides ready, sew them together with neat stitches over and over, leaving the third side open to admit of putting in the threads. You now have a three-sided little receptacle which will open by a slight pressure of the fingers and keeps your threads always handy and untangled. Finish the two ends by bows of ribbon.

To Make a Pretty Emery.

Another useful little thing and invaluable when sewing on goods with much dressing in them is an emery.

Take a little piece of strong, soft cotton cloth; fold it over or cut into the shape of a slightly elongated triangle. Sew up the side corresponding to the creased side (when the cloth was folded); fill with fine emery and gather up and fasten the top securely. If the pattern is rightly cut it should be a perfect strawberry in shape.

Now take some scarlet flannel or cloth of any kind and cover it by cutting the same shape as at first. For the hull use a tiny piece of green velvet or cloth (velvet is prettiest) round in shape and deeply cut into points.

Having made a strong loop one-half inch long for the stem, of double twisted green silk twist and attached it to the top of the berry, punch a hole in the center of the velvet hull, drawing the loop through and fastening every point of the velvet securely to the strawberry. After all else is done take a needleful of yellow sewing silk and, going over the whole berry, put in tiny, loose stitches at irregular distances to represent seeds. If still greater perfection is desired, pale, yellowish green silk may be used around the point of the berry and the stitches may be made closer together to represent the unripe seeds.

YOUNG FOLKS' COLUMN.

Spreading Fruit to Dry.

(Written for the RURAL PRESS by ADAH BATELLE.)

Upon a rambing farmhouse roof,
One day, as I rode by,
I saw a little barefoot maid
Spreading some fruit to dry
Within a sun-bonnet half hid,
But still I could descry
A smiling face, and sweet she sang
As she spread fruit to dry.

Applaud milkmaid or shepherdess,
Yet neither can come nigh
In rustic grace to the blithe lass
Who spreads the fruit to dry.

Marysville.

A Story for Boys.

(Written for the RURAL PRESS by AUNT SUSIE.)

Long, long ago Janet, the grown up sister of a family of boys, called out one morning: "Walter, Walter, come right in to breakfast." She listened, but no answering call came back to her.

The family breakfast was waiting on the table in the neat kitchen of a comfortable farmhouse, and as she had left the cornbread in the oven when she went to the gate, she could not wait long, so hastened back, and as the rest of the family sat down to the table she put on a plate of steaming cornbread "browned to a turn." It smelled so good and looked so nice, one of the boys exclaimed:

"I declare, Janet, nobody can make such cornbread as you do. I don't know what will become of us when Mr. Smith carries you off."

Janet was pleased with the boy's praise, but her cheeks got red nevertheless.

"What makes you blush so, Janet?" called out another brother. "I know one thing certain—Mr. Smith will always have awful good corn bread, and I mean to tell him so next time he comes."

And so the good natured conversation went on, and Janet forgot about Walter till the meal was nearly over. When all were finished she cleared off the table, then went to the "best room," as the parlor was called in the good old days of the past, and began setting a small table with a fresh cloth, best china, etc.

"Janet, what in the world are you doing?" called out her mother.

"Wait a few moments, mother, and you will see. I'm going to play a joke on Walter that I think will make him more punctual to his meals."

So she finished setting the table, then returned to the kitchen, and with great care prepared an extra nice breakfast.

At last she heard Walter go into the shed where the boys washed and brushed up before going to their meals. She hurried the breakfast on to the table in the "best room," and was back in the kitchen when Walter came in. He looked around and saw the breakfast-table all cleared away and was very much surprised and said:

"Janet, can't I have some breakfast? I didn't mean to be so late."

"Oh, yes; come right here."

He followed her, too much surprised to ask any questions, and when he saw the neat little table and dainty breakfast waiting for him, he felt so ashamed he could only sit down and eat in silence. Janet passed him the different dishes and served him most carefully. All she said was: "When a farm man has to work so hard he can't stop to eat when the regular meal time comes, when he does stop he needs an extra nice breakfast in a cool room this warm weather, and is too tired to serve himself." Simple words in themselves, but her tone and manner made them cut deep into the little boy's heart. He knew he had been so busy playing down to the creek trying to make a water-wheel that he had not heeded her call. She had often reproved him when late, but never had he received such a lesson as this; to eat all alone in the best room, and his tall, womanly sister waiting on him, was rather too much, but he was too proud not to eat, and, although he was hungry enough when he came in, he had to force down the nice food before him, and when he couldn't possibly make another mouthful go down he meekly asked, "Shall I go now, Janet?"

"Oh, yes, certainly; a very man must never be detained in the house. I'll fill the wood-box."

So out Walter went, but somehow his water-wheel had lost its fascination, and the water in the creek did not seem to sparkle half so much, and the stones in the bottom didn't look as pretty as they had when playing before breakfast. At last he said to himself:

"I declare, I wouldn't go through that again for all the play in the world. Catch me being late again very soon. I can't do anything more with this water-wheel. Wish I hadn't begun it till after breakfast." Then with a long-drawn sigh he ran back to the house, opened the kitchen-door, and called out:

"Say, Janet, please let me fill the wood-box? I don't want to play any more, and I'm sorry I made you so much trouble. I won't be late again if you will be good to me now."

"Wasn't I good to you? And didn't I give you a nice breakfast?" asked Janet.

"Oh, yes, you were too good, and gave me

too nice a breakfast; it made a feller feel awful mean."

"Well, you can fill the wood-box, and do your other morning duties, if you have time," said Janet—she couldn't resist a parting shot, as he eagerly ran out for wood.

Never was a big box filled quicker and yet with more care. He felt as if a load had been lifted from his shoulders, and ran here and there, merrily whistling as he went. His sister's way of giving him a lesson had worked like a charm, though it was "hard on a feller." And after that long-remembered morning he was the first one to obey the call to meals.

One day Walter was going down the road to school, when he met one of his playmates crying most bitterly.

"Why, Tom, what is the matter?" called Walter.

Tom replied, with much sobbing, "My—my—bro—brother is—is—dead."

"Oh, I'm so sorry," said Walter, "but don't cry any more now."

"Oh," said Tom, "fa—father—cri—cried and mo—mother—cried, and—and—we—all cried, but—I—I—I've cried—mor—more'n—any—body."

"Is that so? What makes you cry more than the others?" asked Walter.

"Cause—cause—cause—his—clo—clothes—are—too—too—small—for—for—me," sobbed out poor little Tom.

Walter wanted to laugh. It did seem so funny to cry about such a thing as that, but Tom was only a little boy, and Walter knew he really did feel bad about his brother's death, so he just said:

"Never mind, Tom, I wouldn't cry about that. There are lots of poor boys you can give his clothes to." Then, with a few more words of comfort, Walter went on his way. Somehow the thought of his breakfast in the "best room" always came before him if he dallied on the way to school or when sent on any errand.

When Walter was only nine years old his father died, and, although only a child, a good many cares and duties fell on him. One day his mother said:

"Now, Walter, you will have to take the bay horse to Ryegate and sell him to your uncle. He promised me \$50 for him, and I need the money now." So he started off on his journey. Fifteen miles over a strange road seemed rather a long horseback ride for a boy of ten, but in those days even children had to help with the family work and income. He had some lunch, and at noon stopped to rest and eat under a big tree, where it was nice and shady. After about an hour's rest, he mounted his horse and started off again. When he reached his uncle's he was a very tired little boy, but a good supper and sound night's sleep made him all fresh again, and the next morning he started to walk back the 15 miles, and he found that even harder than going over them horseback, but he trudged on, happy in the thought that he was "helping mother."

It took him all day to make the journey, as he had to stop a good many times to rest. His mother was at the gate watching for him; she felt it was a good deal to ask of a boy so young, and anxiously waited his return. When he reached the gate she said:

"Well, my brave boy, I am glad to see you back. I don't know what I should do without you, now the other boys are away from home."

These words of cheer were very pleasant to the tired boy; he followed her in and found a nice supper all hot and ready for him. He ate a hearty meal and soon went to bed very tired, but happy in the thought that he was a help to his mother.

The next morning after doing his "chores" about the house, he started off to school, but not to a large, handsome, comfortable building such as boys go to nowadays. The school-house he went to was an old cider-mill and corner combined, with a lot of corn piled up at one end, held in place by slats. The children sat on rough benches made of slabs—that is, rough pieces of wood not as good as boards. These benches had no backs to them and no desks in front. You boys who get tired in your comfortable seats at school, think of these boys and groan for them, instead of for yourselves!

One day the teacher sent two boys out for switches to be whipped with; they returned, bringing two heavy posts.

She said: "You naughty boys, what did you bring these for? Take them right out and bring some switches."

So off they went and returned with the "instruments of torture," and they each got the well-deserved switching.

Walter often worked at water-wheels, and when a man he made a very fine one that was used to run a sawmill, and, although he was late to breakfast sometimes then, he never had to eat alone in the "best room" again.

A PARROT belonging to a Portuguese gentleman, who had an English wife, would talk both Portuguese and English, but would never confuse the two. If addressed in either language, it would always reply in the same. Toward dinner-time, it would become very much excited, and cry very loud: "Sarah, lay the cloth. Want my dinner!" Its master used to punish it for talking so loud. So, when his step was heard, Polly would get down on the bottom of its cage very humbly, and, laying its head to the floor, whisper in its low tones: "Want my dinner! Sarah, make haste. Want my dinner!"

GOOD HEALTH.

For Smallpox or Scarlet Fever.

One who was connected with the medical and surgical departments during the late war says: "Between the battles of Stone River and Missionary Ridge a smallpox epidemic scared more than it killed. A large hospital was established at Bridgeport, Ala., and the average number of inmates was represented by more than three figures. But the deaths were very few and the treatment quite simple. We only gave the patients plenty of ventilation by raising the sides of the large hospital tents, kept their bowels freely open, and gave them good rations of English ale, a commodity that was generously supplied by the Christian Commission of the North and Uncle Sam's Commissary Department."

"I have here also in my pocketbook a distinguished physician's recipe for the smallpox, and I know it is good, but I will give it to you with his own comments."

"This recipe has been used to my knowledge in hundreds of cases, and I know it will prevent or cure smallpox, though the pittings are filling. When Jenner discovered the cowpox in England, the world of science hurled an avalanche of fame upon his head, but when the most scientific school of medicine in the world—that of Paris—published this recipe as a panacea for smallpox, it passed unheeded. It is unfailing as fate, and conquers in every instance. It is harmless when taken by a well person. It will also cure scarlet fever. Here is the recipe as I have used it and cured my children of scarlet fever; here it is as I have used it to cure smallpox:

"Sulphate of zinc, one grain; foxglove (digitalis), one grain; half a teaspoonful of sugar; mix with two teaspoonfuls of water. When thoroughly mixed, add four ounces of water. Take a spoonful every hour. Either disease will disappear in 12 hours. For a child, smaller doses, according to age. If counties would counsel their physicians to use this, there would be no need of pesthouses. If you value advice and experience, use this for that terrible disease."

Infants and Nicotine.

The Santa Rosa City Council, at its regular meeting January 3d, instructed the city attorney to draft an ordinance making it a misdemeanor to sell cigarettes to boys under 16 years of age, and also for boys under that age to smoke cigarettes. But such an ordinance, to be of any practical worth, should include cigars and tobacco in any form.

In reference to this matter the *S. F. Chronicle* observes: It is no uncommon thing nowadays to see children scarcely out of dresses puffing at a cigarette with all the nonchalance imaginable; and such cigarettes, too, as they generally are. The babies' means are so limited that they can buy nothing but the cheapest and vilest kinds of cigarettes, such as no man who knows anything about tobacco would look at, much less smoke; and with these indescribably nasty concoctions these youngsters proceed to poison themselves. The example of Santa Rosa is one that might be followed to advantage by other cities, San Francisco included. We make all sorts of health regulations; we enforce vaccination and prescribe how much air sleeping-rooms shall contain; we take care of the children's work-time, lest they be stunted and crushed before they have grown strong; we get up societies with long names to see that tiny acrobats do not turn one hand-spring too many, while at the same time we permit those same children to buy poison on every corner and to kill themselves by inches, and no one interferes. San Francisco should adopt an ordinance similar to that of Santa Rosa, and then see that it is enforced.

LITTLE THINGS THAT KILL.—At various times the newspapers have warned the public against swallowing the seeds of grapes, oranges, etc., because of the danger of such substances getting into a small intestinal bag, or cul-de-sac, called by doctors the *appendix vermiciformis*. This is a receptacle formed at the junction of the large and small intestines, but its use or object no physician knows. It has been thought to be a rudimentary or incomplete formation—or possibly some meaningless survival of a lost anterior type. At any rate, its existence, while presenting no apparent "reason for being," as the French say, is, on the other hand, a positive and constant source of danger, because of the liability of its becoming the receptacle of some undigested seed or other indigestible substance. In that case it produces a state of inflammation, which, in nearly all cases, proves fatal. Fortunately, but few seeds among the great number so heedlessly swallowed seem to get into this little death-trap—although any one seems likely to lodge there. Perhaps more cases of inflammation of the bowels than the doctors suspect may be, in reality, due to this obscure and disregarded cause. One sad case which to-day produces a feeling of deep regret among thousands, and which plunges a family into overwhelming grief, occurred in this city on Saturday evening, in the lamented death of J. Robert Dwyer, the much-esteemed adjutant of the Governor's foot-guard—a man whose place that corps cannot make good. His case so baffled the physicians that an autopsy was had, and that revealed a piece of peanut shell in the *appendix vermiciformis*.—*Hartford Times*.

DOMESTIC ECONOMY.

Unfermented Wine.

Pick the grapes from the stems and wash. Cook with as little water as for jelly till soft. Strain through a flannel bag. To one quart of juice add three-fourths of a pound of granulated sugar. Let the juice boil, and skim it; then put in the sugar and cook till dissolved. Put boiling hot in self-sealing jars or bottles corked and sealed.—*Union Signal*.

[A good, if not better way is simply to heat perfectly sweet wine, and seal in bottles or jars at once, as you would can fruit. We have tried it.—*Eds. Press*.]

TO TAN SMALL SKINS.—From a recent number of the *Prairie Farmer* we clip the following recipe for tanning: Small skins, such as those of the wolf, dog, badger, woodchuck or squirrel, are excellent for strings, whips, patching gloves, mittens and even shoes, repairing harness, etc., and can easily be tanned as follows: Put a layer of wood ashes two or three inches thick in some old vessel of convenient size, spread the skin out on this, put on two or three inches more of ashes; then pour on a little more water than the ashes will soak up. Let it stand until the hair can be easily scraped off with a chip, which will be from 24 to 48 hours; then scrape off and wash thoroughly in several changes of water, or better in running water. Hang up, and when the skin begins to get dry around the edges take down and pull and work until it is thoroughly dry and pliable, which will take perhaps two hours. As it dries it will turn to a beautiful white kid color.

CREAM PUFFS.—One cup of hot water, one-half cup of butter, boil together, stirring in a cupful of dry flour while boiling. When cold, add three eggs not beaten. Drop by tablespoonfuls on a buttered tin and bake in a quick oven 25 minutes, being careful not to open the oven-door more than is necessary. This makes 15 puffs. Take care that they do not touch each other. For filling, take a pint of cream, a cup of powdered sugar and whites of two eggs, with flavoring of any sort preferred. When the puffs are cold, cut a round piece out of the bottom of each, scrape out the inside; fill the cavity with whipped cream, fit back the piece taken from the bottom, set on a dish and ice.

STUFFED POTATOES.—Wash and peel eight large potatoes; divide them lengthwise through the middle; hollow them out neatly with a knife or spoon till they are reduced to the thickness of a dollar piece. Take the insides of two or three baked potatoes, two shallots chopped finely, a piece of butter the size of an egg, a small piece of fat bacon cut into dice, a pinch of chopped parsley and chives, and beat the whole to a paste, with pepper and salt; butter the inside of the potatoes and fill them up with this paste, except just at the upper part; then put the potatoes upon a buttered tin and bake in the oven; in half an hour, if both sides be browned, serve.

JENNY LIND CAKE.—Two and one-half cups of sugar, one cup of butter, one cup of sweet milk, four cups of flour, four eggs, two teaspoonfuls of baking powder; bake in three sheets (two of white). After taking out the quantity for the two of white, leaving less than a third, add two tablespoonfuls of molasses, one teaspoonful of cloves, one teaspoonful of cinnamon, one grated nutmeg; add a little more flour to the dark; put together with thin frosting.

BUTTERMILK MUFFINS.—These have but to be tried to become a standing breakfast dish. Beat hard two eggs into a quart of buttermilk, and stir in flour to make a thick batter, about a quart when it is mixed, and, lastly, a teaspoonful of salt and the same of soda. Bake in a hot oven in well-greased tins. Muffins of all kinds should only be cut just around the edge, then pulled open with the fingers.

FRITTERS.—Put into a stew-pan one pint of water, one tablespoonful of butter, one tablespoonful of white sugar. When it boils, stir in rapidly one pint of flour. Let it cool a little; while warm beat into it six eggs, each one broken by itself and well beaten in before another is added. Have boiling lard and drop the dough, which will be stiff, in lumps like a small hickory-nut, into it. Eat with syrup or melted butter and sugar, flavored with vanilla or nutmeg.

OATMEAL PORRIDGE.—Take two ounces of oatmeal and one and one-half pints of water. Rub the meal in a basin with the back of a spoon in a small quantity of water, pouring off the fluid after the coarser particles are settled, but while the milkiness continues repeat the operation until the milkiness disappears. Put the washings into a small pan; stir until they boil, adding a pinch of salt, and boil until a soft, thick mucilage is formed. Sweeten to taste.

FRIED PARSNIPS.—Scrape and leave in cold water for an hour, then cook half an hour in hot, salted water, wipe, slice lengthwise, dip in melted butter, then in flour, seasoned with salt and pepper, and fry in boiling dripping. Drain free of fat, and dish.

SMALL POTATOES.—Take potatoes about the size of a marble, put them into a stewpan with plenty of butter and a good sprinkling of salt, cover, and shake occasionally until they are quite done, about an hour.



A. T. DEWEY.

W. B. EWER.

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The Week.

As last week's topic was rain, this week's is cold. The thermometer has been given a chance to brush the dust out of its lower chambers and people have shivered as only Californians can when the temperature plays about the freezing point, while the abundant tourist who remembers blizzards and more degrees below zero than we have had above, smiles at the California idea of what the term "cold" means. But seriously we have had a spell of weather of unusual severity and the like of which we have not known for years, and our lack of effective house-heating devices has given occasion for our shivers. Snow has nestled here and there on the hills in all parts of the State and ice has enfilmed standing water over a great area of the State where the crystal covering is seldom seen.

We do not hear as yet of much injury to vegetation except to such tender plants as the callas, heliotropes and geraniums of our gardens. Possibly in some places the orange has been pruned of part of its newest wood, but anything more serious is not yet reported. The cold snap seems over, and the indicator is set again for rain which is the usual sequence of low temperature and north winds at this season of the year.

Pure Food and Medicine.

Since the days of the elders when the debasing of foods consisted chiefly of sanding the sugar and watering the vinegar in the back-room of the retail grocery, there has been most alarming progress made in adulterating and debasing nearly all materials which enter into the food of man or minister as medicine to the cure of the ills to which flesh is heir. So vast has been the extent of this evil work and so far-reaching the application of the nefarious art, that large volumes are published setting forth adulterations as fast as discovered, and still ingenuity begotten of greed is constantly devising new abominations more apt to deceive the consumer and more difficult of detection by the expert. As an indication of vastness one need only recall the mines of white earth which are worked to supply the candy-makers and the mills for grinding soft wood and other refuse for the use of the spice-makers, and these are only items of the great debasing industry.

The problem of checking this evil has been energetically taken up in some States, Massachusetts perhaps having done most to make hard the path of greedy evil-doers. As we recently stated in the RURAL, so strict is the surveillance kept of the retail stores of foods and drugs in the old Commonwealth that the Yankee skill in adulteration has to expend itself on articles for shipment to other States, as the danger is too great on home sales. The result is that the evil goods are shipped to other States where no particular attention is paid to the matter, and we have no doubt the Pacific Coast has its full share of these bad things to eat, drink and pay for.

Judging from the experience of Massachusetts and some other States, the true way to cope with the evil is for each State to equip itself not only with good laws on the subject, but with effective penalties and rewards and other executive machinery which shall carry the laws into effect. This each State must do for itself to meet the adulteration originating within its own borders. This State work should be supplemented by effort on the part of the General Government, and this will come before the present session of Congress, urged by organized support which will be rallied at a meeting to be held at Washington on Wednesday of next week. This meeting will call the attention of Congress to the great evil, and submit for its action a national anti-adulteration bill. The bill was drafted by the Commission, approved by the National Board of Trade, and was introduced in the last Congress, but owing to departmental jealousies, it did not become a law. Public opinion has again become so strong in favor of such a law that the convention will again recommend the measure, together with whatsoever amendments may seem judicious, and will urge its passage by the Fiftyeth Congress. The proposed Act, entitled "A Bill to Prevent Adulteration of Food and Drugs," is the result of much patient research by men of talent, who undertook their work for the National Board of Trade. Although the national Act has not yet become a law, another Act, drafted by the Commission on the same lines for enactment for the several States, has become a law in New York, New Jersey, Massachusetts, and substantially in Illinois and Michigan. It is evident that an Act applying to interstate transactions and commerce with foreign countries is needed. All States are, therefore, called upon to assist in this matter, and each State, other than the above, is petitioned to pass a State law in harmony therewith.

We have received a copy of the bill which will be reported and urged at the Washington meeting next week. It provides first for the establishment of a Governmental bureau to be attached to such department of the Government as Congress may see fit and to be called the "Bureau of Adulteration." It shall have a chief officer and a corps of assistants, analysts, etc., to carry out its work, which shall be in the main to furnish incontestible proof of the quality of articles of food or medicine which may be submitted to it or which it may obtain itself for examination. This bureau will thus furnish the evidence upon which all measures of prosecution, etc., must depend. The work of the United States in prosecuting evil-doers in this line must, of course, lie within the constitutional scope of

the Government, and the prevention of adulteration, as proposed by the bill, is a somewhat roundabout proceeding. Thus, we find that outside the District of Columbia and the Territories, over which, of course, the General Government has direct control, the penalties are fixed against any person or corporation which moves adulterated articles from one State to another, because interstate commerce is open to Government regulation, or imports from foreign ports to any State, because all imports are regulated by the General Government. The bill provides that any party convicted of transgression in these ways shall be fined not more than \$100 for the first offense and not more than \$500, and be imprisoned not more than one year or both, for each subsequent offense.

Other sections of the bill provide for the examination of suspected articles, and arrange for re-examination of the material at expense of the suspect, providing he is not satisfied with the first examination of the article. The selection of local analysts whose testimony can be accepted, is also provided for. The district attorneys of the United States are ordered to prosecute offenders of this class, and are paid for their services by the United States Government.

The definition of food is held to be anything which is eaten or drank, and adulteration thereof means (a) reducing its strength, (b), debasing it by introducing inferior material, (c), debasing it by extracting any valuable part, (d), introducing any unwholesome material, (e), coloring, coating or polishing so that a base article is made to appear like the genuine. These items are all described in detail in the Act. In the case of drugs, the offense lies in selling an inferior material under the name fixed by the U. S. Pharmacopoeia for any other standard work on *materia medica*, or if, when sold under another name, it differs from the standard of strength, purity, or quality therein; also, if, in these reports, it falls below the professional standard for such drugs.

Provision is made for frequent publications from the Bureau of Adulteration of the results of its examinations, and these will probably be quite as useful as the prosecutions in informing the people and in making the adulterators' business unprofitable.

There are a host of ways in which such a law will be of immense value to Californians, besides protecting us as consumers. It would force bogus wine-makers out of their arts, it would reach the horde of olive oil adulterators, who, even in our own city, we are told, are traitors to the prosperity of our State by putting up false brands of olive oil, hoping to profit by their wretched dishonesty because California is becoming known as an olive country. The Act would also supplement effectively the arrangements for pure dairy products and do good in ways innumerable. We trust the matter will commend itself to immediate action by Congress.

Silk Culture.

The Ladies' Silk Culture Society held a meeting on the afternoon of January 5th at the rooms of the State Board of Horticulture, 220 Sutter street, S. F. Present: Dr. Gibbons, president; Mrs. Pratt, secretary, Mrs. Washburn, Mrs. Kirk, Mrs. W. B. Ewer, Mrs. T. H. Hittell and Mr. Ewer. The society's bills for the past year showed expenditures amounting to \$1853. The president stated that as no meeting had been held in December, the bills for that month had not been audited, but as he had had some money to go on with, these accounts had been paid. The total amount of last month's expenditure had been \$334.50, leaving a balance in the Union Bank for Savings of \$376.94. These accounts were audited and passed. The proposed appropriation for the coming month was estimated by the president at \$350; an additional \$50 standing over from the last month's credit was also thrown in. On motion, resolutions to that effect were passed.

The next meeting is to be held Thursday, January 19th, when the new officers are to be chosen.

The State Board expects to receive during the current week the long-looked-for invoice of Italian mulberry trees for distribution to those who are desirous of propagating them with a view to silk culture. Applications must be

forwarded to the State Board of Silk Culture, 21 Montgomery avenue, stating how much land will be devoted to the enterprise, and as full particulars as possible with reference to the quality of the land, location, and other matters of interest, so that a judicious distribution may be made. As the number of trees is limited, applications should be sent in immediately.

Disposing of Indian Lands.

We are glad to see that President Cleveland has arrived at a conclusion concerning Indian reservations, which has been urged in the columns of the RURAL. We have protested against Indian wrongs which have been too frequent, but at the same time we have claimed that holding bodies of good land in excess of needs of Indians and for the purpose of herding them upon a large area so that they might follow a sort of ridiculous condensation of their old wild life is a bad thing for the Indians, and, at the same time, keeps much good land from actual settlement. The Indians are valuable as laborers, but to labor to advantage there should be considerable cultivated areas near by. We would, therefore, give each Indian family a decent area of land upon which it could live in civilized style, and dispose of all the balance of the land to actual settlers who would improve it and make a demand for the labor of the Indians.

Something like this seems to be President Cleveland's idea, for it is telegraphed that he has transmitted to Congress a special message and documents relating to the Round Valley reservation in California. The President also submitted a bill which he asks Congress to pass, to provide for the reduction of the Round Valley Indian reservation. The bill provides that the President be authorized and directed to cause the agricultural lands in the Round Valley Indian reservation, in the State of California, to be surveyed in ten-acre tracts and to allot the same in severalty to the Indians belonging thereon; provided, that he may cause such agricultural lands to be allotted in such quantities and to such classes as he may deem expedient for the best interest of the Indians. In addition to the agricultural lands there shall be reserved a sufficient amount of grazing and timber lands for their use. A commission shall appraise the value of the remaining lands, which shall be sold.

Of course there is another question perhaps included in the above which we do not intend to pass upon in these remarks. It is possible that, owing to representations by the Government, certain parties have acquired settlers' rights in the area and that the President's plan may mean to dispossess these and divide their holdings among the Indians. Of course we do not approve a plan which would transgress certain equities which may exist, nor do we desire to defend any claim that may be based upon illegal encroachment. All these matters should be investigated by an unbiased commission to determine what equities really exist. At the same time we approve the general idea of settling the Indians upon individual pieces of land of decent size and of breaking up the national menageries in which the aborigines are now herded and from which they go forth from time to time on their destructive errands. We have had enough experience of this kind.

STATE BOARD OF AGRICULTURE.—Some time since President Shippee of the State Board of Agriculture appointed J. M. Larue and Arthur W. Bell to expert the books of Secretary Edwin F. Smith. Having finished their work, the experts report the accounts correct and the books in excellent condition. In going over the secretary's work for seven years they found but one mistake, which amounted to 40 cents, and they compliment him as a model officer. The Governor last week appointed the following members: H. M. Larue, vice self; C. M. Chase, S. F.; Jesse D. Carr, Monterey; John Boggs, Colusa; D. Perkins, Rocklin, vice P. A. Finigan of S. F., who failed to qualify.

NEVADA LANDS.—Our sister State seems to have done a fair business during the past year in disposing of her public lands. According to the report of the Surveyor-General, there were 1306 applications to purchase State lands filed, covering 428,783.03 acres, applied for in the several counties of the State. The net cash paid into the State Treasury for 1887 was \$139,184.40.

Fly-Infested Grain.

Prof. F. M. Webster of Purdue University, La Fayette, Indiana, is special agent of the Division of Entomology of the United States Department of Agriculture, and has been giving much time to a study of insects affecting cereal crops. The Hessian fly has, therefore, naturally claimed his attention, and he has made some observations concerning the effect of the fly upon the growth of the plant, which is very interesting and may prove of considerable practical advantage to growers. As we have a small area in this State badly infested with the fly, we thought it would interest our

As they show early in the fall at the East, and get quite a growth before snowfall, they also have a visitation of the fly in the fall and badly infested grain dies during the winter. In California, as we do not get much growth until the winter rains come, the period at which the fly is at work here is later than at the East. The bunchy appearance of the plant, the absence of central stems, are, however, just what we have noticed here, and the plant holds its green, bunchy appearance until well along in the season, when, probably, being unhealthy and shallow-rooted, it early succumbs to the surface drouth and dies out.

At the East, if Prof. Webster's position be

AN EXPENSIVE SEWAGE SYSTEM FOR SAN DIEGO.—The rapidly increasing population of San Diego calls for a thorough and extensive system of sewage. Accordingly a plan has been devised, somewhat novel in character and which will cost about \$400,000. The contract has been awarded to Col. Waring. The main sewer runs a quarter of a mile into the harbor to an outlet reservoir constructed alongside the deep-ship channels. The reservoir will have an area of one acre, and cost some \$50,000. The collected sewage will fill this reservoir not more than 1½ foot deep. High tide will add 3½ feet of sea-water to the mass. The contents thus diluted will be discharged into the outgo-

Gilroy and Vicinity.

[Written for the RURAL PRESS by F. B. L.]

The city of Gilroy is situated in the southeastern and most picturesque portion of the Santa Clara valley, "the garden valley of the Pacific Coast," so famous for its beauty, health, wealth, productiveness and varied advantages as a place of residence. The engraving on this page is a faithful representation of the place. It is incorporated, has an excellent city government, about 2000 inhabitants, and all the appliances for trade, manufactures, education and social life usual to much older towns. It is connected with the metropolis of the State by



Fig. 1.—HEALTHY WHEAT PLANT.



Fig. 2.—WHEAT PLANT INFESTED BY HESSIAN FLY.

readers, especially those within that area, to be informed of Prof. Webster's observations, and, possibly, they can furnish notes from their own experience which may be of value to him.

The point of especial moment is the way in which the growth of the young plant is affected by the insect, and in this matter Prof. Webster holds different views from earlier writers on the Hessian fly, and he desires to test his observation by that of others wherever the fly works in the grain. The illustrations on this page serve to make the point clear.

Fig. 1 represents a healthy wheat plant. The leaves are of natural color, the plant is well tillered, and these tillers show a decided tendency to spread out from the center. The young, spindle-shaped leaf, not yet entirely unfolded, is always conspicuous in the center of each of the tillers. The outer, older leaves may or may not have turned yellow.

Fig. 2 represents a wheat plant affected by Hessian fly, the flaxseed or pupa being shown at *a*, where the insect is now to be found, just under the sheath of the plant. If the insect has not advanced to this stage of development, they will be of the same form, but of a whitish color.

The plant itself has not tillered, the leaves are of a darker color than those of a healthy plant, and proportionally broader. The central spindle-shaped leaf is missing and the whole plant is only a bunch of rank-growing leaves. If only a part of the plant is injured, the tiller upon which the insect is located will be like the one figured here, and the others will be as shown in the preceding illustration. In any case, the darker color of the leaf, and the absence of the central leaf, together with the bunchy appearance of the part affected, will readily distinguish a fly-infested plant from one not injured. The yellow color of some leaves is seldom observed, at this season of the year, on fly-infested plants.

The appearance described by Prof. Webster agrees with that which we have observed on fly-infested grain plants during the progress of the experiments at the State University in Berkeley, of which we have given accounts in the RURAL. The time at which this is seen at the East is different from the California period.

true, the farmer can tell in the fall whether his wheat is going to succumb to the fly as well as to wait to see it die in the winter, and can therefore earlier arrange for resowing or other use for the ground. It is possible that the same observation may be of value here as indicating that the field had better be plowed up for a summer crop. It is impossible, however, to foresee all the benefits of the observation. It is desired first to test the truth of it under all conditions.

We should like to hear from our readers who have studied the appearance of infested plants, and will transmit any observations our readers may give us to Prof. Webster that he

ing tide by automatic gates opening an hour after high tide, and closing an hour before low tide. Col. Waring will also be employed to construct similar works for Stockton and Sacramento, where the conditions are nearly identical with those at San Diego. Col. Waring will make wells in various flat parts of those cities, connecting with a deep outlet well by large siphons. It is stated that Col. Waring has employed this plan for two years successfully at Norfolk, Virginia.

CROP REPORTS.—The Statistician of the Department of Agriculture estimates the area of corn harvested at 72,000,000 acres; the prod-

the Southern Pacific railroad, and with the world at large by two lines of telegraph.

The Uvas valley, a few miles northwest of Gilroy, is becoming justly famous for its vineyards and orchards. It is well sheltered by hills, and otherwise specially adapted to this important industry. To the south and eastward adjoining the townsite lies an immense tract of the most fertile land in the State owned for the most part by Henry Miller, Esq., of the well-known firm of Miller & Lux, and devoted to stock-raising and dairying purposes.

With the varied advantages of location, soil, climate and productions which Gilroy may justly claim, the stranger is struck with surprise that a greater development has not been wrought, and that more has not been heard concerning its claims for the home-seeker.

The explanation, however, is that until recently no valid titles could be obtained. The Las Animas rancho, a Spanish grant confirmed by U. S. patent and covering 21,377 acres, has been partitioned as the law provides in such cases, and every owner is now secure in his individual allotment. Large and small tracts are advertised for sale, and good opportunities to secure choice tracts are open to purchase. The titles of other settled grants, and of the public lands, are free from cloud, and buyers can feel secure in all their investments.

The foothills west of the city have been tested and are proving to be specially adapted to fruit culture, and will doubtless in a few years be covered with vines, fruit trees and lovely homes.

Ten miles in an easterly direction is situated the settlement of San Felipe. It is a veritable garden. The farms are usually from 40 to 160 acres in size and bear unmistakable evidences of the thrift and taste of their owners. At this place is located J. D. Culp's cigar factory, from which millions of cigars have been shipped within the past few years, the tobacco having been produced in the vicinity. At this place is also located the San Felipe cheese factory, owned and managed by Mr. C. S. Putnam, who has succeeded in placing a superior brand upon the market. The yearly product of this factory is 120,000 pounds.

As to pleasure resorts, the country is abundantly supplied. Six miles south is Camp Sargent, the name by which the clubhouse and picnic-grounds connected therewith will be hereafter known. It is becoming popular as a quiet retreat. Twelve miles west are the Gilroy Hot Springs, celebrated for the curative properties



BIRD'S-EYE VIEW OF GILROY, SANTA CLARA COUNTY.

may have the benefit of them in his work.

VENUS NOT THE "STAR OF BETHLEHEM."—The planet Venus, which is now near its greatest western elongation from the sun, shines brightly every morning in the southeast for two or three hours before sunrise. It is well worth getting up in time to look at, but some people, at once ignorant and sentimental, have made themselves ridiculous by rushing into print with crude prattle about its being the "Star of Bethlehem." The like brilliant phenomenon may be witnessed regularly at intervals of between eight and nine months, although the longer night-hours near the winter solstice favor the observer more than the early dawns of the summer-time.

uct, 1,456,000,000 bushels; value, \$646,000,000. The area of wheat harvested is estimated at 37,400,000 acres; product, 456,000,000 bushels; value, \$309,000,000. The area of oats harvested was 26,000,000 acres; product, 659,000,000 bushels; value, \$200,000,000. The reports of winter wheat do not show much decrease of area. The average decline appears to be between one and two per cent. The condition is affected somewhat by the dryness of the seedbed in the districts that suffered from drought, delaying seeding, germination and growth. The average condition is .95. The condition of winter rye corresponds very closely to that of wheat.

PHILADELPHIA fears a coal famine.

which the waters possess. Within easy distance are the Madrona Soda Springs, which have also just claims on the health-seekers, while a little further to the north is the sanitarium known as Glenwillis, which is undergoing much improvement by its energetic proprietor.

Among those whom the writer was placed under special obligations during his short stay at Gilroy was F. W. Blake, Esq., editor and proprietor of the *Gilroy Advocate*, a gentleman who has labored untiringly to bring to the notice of the outside world the vast undeveloped resources of this fertile section of country.

Echoes From Oroville Fair.

[Written for the RURAL PRESS by M. C. B.]

The idea of a canvas tent for a citrus fair in the midst of winter tells its own tale in behalf of the mild and uniform climate enjoyed by the people of Butte county, and no better plan could have been adopted to dispel the erroneous notion that Oroville and its people are exposed to frost and snows. Such belief is incompatible with the products of the county, and many Eastern people who had the privilege of visiting the fair gave full vent to their agreeable disappointment, and, without further proofs, immediately made large investments in property. The oldest inhabitant of this district sees snow only on the mountains in the winter season, but he sees all along the foothills the finest specimens of oranges and other citrus fruits growing in profusion. It is to us an agreeable duty to state facts, and we should not be discharging that duty if we allowed to go uncorrected such erroneous opinions respecting the climate of Butte county.

It is too true that the people have for a long time neglected their opportunities and trifled with the advantages which nature has so freely bestowed on them, and if Mr. E. W. Fogg, the popular and energetic manager of the bank in Oroville, had not had the pluck and vigor to push the Citrus Fair onward, the lethargy in which Butte county has for years been lying would still have been unbroken. He has worked hard to accomplish the first step leading to a successful issue, and judging from the results accruing from the fair, a great future awaits this locality. Mr. Fogg has had the untiring efforts of D. K. Perkins, the farmers' friend, and with the united efforts of Messrs. Bell, Frieslebein, J. C. Gray, Major McLaughlin, J. M. Green and Major Jones, the indefatigable manager of Thermalito, the Citrus Fair has far exceeded the most sanguine expectations and won laurels for the soil and climate of Butte county.

[In the list of awards at the Citrus Fair, printed in the PRESS last week, the first paragraph came to us defective. We are now enabled to give it corrected, as follows:—EDS. PRESS.]

ORANGES.—Best individual exhibits:—1st, C. H. Wilcox; 2d, Joe Gardella; 3d, T. B. Hutchins, Central house; 4th, H. C. Bell; 5th, H. W. Skinner; 6th, Butte County Infirmary, Thermalito; 7th, Watt M. Pence, Mesilla Valley; 8th, Jas. Wheeler, Wyman's ravine; 9th, Mrs. S. S. Boynton; 10th, C. F. Lott.

The Hay-Fork Swindle.

The *Suisun Republican* publishes a reminder of the "Hay-fork Swindle," the working of which was described in the RURAL PRESS of Feb. 12, 1887. It says: About a year ago Coulter & Jones passed through our State, appointing agents to sell some patent hay-forks. Part of their plan was to have a farmer take an agency and have him sign his name twice upon some paper which the farmer supposed was an agreement to sell hay-forks, but which in a short time turns up in a third man's hands in the shape of a note for \$500.

Four men in our county were caught in the trap so skillfully laid by Coulter & Co., namely: Mr. Blair of Maine Prairie, Mr. Roberts of Elmira, Mr. Eibe of Dixon, and Mr. McDermott of Suisun. The note of Blair soon after turned up in the hands of one Bidell, whom we are told represented himself as an innocent third party and cashier of the Colusa bank. By him Mr. Blair was induced to take up the original document and execute a note in the name of Bidell for \$450, which he paid this fall. Mr. Eibe, we are told, has also settled his, while Roberts and McDermott, whose so-called notes are held by Bidell, are going to contest their payment. Already has McDermott been notified to answer to a complaint filed against him by the holder of the paper he signed for Coulter & Jones.

Yolo county was caught the same way, but the Woodland people caught Coulter & Jones and made them disgorge to save a trip to State prison. They very willingly paid up the court expenses, the lawyers' expenses, and settled with the holders of their so-called notes, after which they skipped by the light of the moon, and are now working their hay-fork business in Canada, while their paper remains here to be collected by third parties.

We hope our readers will bear in mind the injunction: Never sign any paper without reading it through and through; and never sign any paper whatever for a stranger.

THE RURAL.—A Placer county reader writes: "We all like the PACIFIC RURAL PRESS, and consider it the best agricultural paper published."

FORESTRY.

Protect the Forests!

EDITORS PRESS:—In taking a trip to Lake Tahoe and wandering day after day over land that on account of its altitude is entirely unfit for agriculture and will always be devoted to forests, the naturalist cannot help feeling sad when he sees on one side the boundless prolificacy of nature everywhere where a chance is left to her, and feels the warm sun and the balmy air, and on the other sees that man does everything to check nature in her beneficent creation.

On the long road from Rocklin, to Auburn, to Summit, to Truckee, and around the whole lake with the only exceptions of Tallac and Idlewild, is not one single acre of land which would deserve the name of forest; nothing but pasture on which a few small pines cover at the utmost a third of the ground, and perhaps valueless underbrush, chaparral and sagebrush. Almost everywhere we see that sprouting young trees have been killed by destroying fire or voracious cattle. Often for miles, as for instance between Towle's Station and Emigrant Gap, we rode over land where not only all the tender plants but even trees 50 feet high had been destroyed by a recent fire, and on the whole track not a single green leaf was left. When we travel further away from the frequented roads, high up in the Sierras, where the covetous lumberman has not come yet, we nevertheless will distinctly remark man's destructiveness. Along the recently built road from Priest's down into Yosemite valley almost every tree is burnt out. The men working at the road evidently thought it a fine joke and splendid spectacle to have such giant torches in the evening. Not seldom we saw the foot of trees five and six feet in diameter bereft of the bark, that the tree might get dry and rotten, and thus its shade not prevent the grass from growing. Trees over 200 feet long were cut down and only a very little piece of the top was used for a few shakes.

In the view of such a senseless destruction we must call out: Will then never one nation learn by the disasters of the others? If this be said of nations, what is to be said of single men? One will never miss the water until the well goes dry. Shall this most beautiful country of the earth—that is, at least, of the four parts in which I have traveled—succumb to the same sad fate as the most beautiful countries of old? Will its quick development only precede its quicker ruin?

Let us look for a moment on some of those ancient countries. The Garden of Eden, the cradle of manhood, is by a good many authors believed to have been in that most productive region between Euphrates and Tigris, where, also, the largest cities have been. Babylon and Nineveh which according to the Holy Scripture (Jonah iii: 3), were 12 miles in diameter, to-day there is one immense desert; nothing as far as eye can see but rock and sand, where in former times have been the vast forests in which Nimrod used to go hunting and Semiramis gathered the flowers for her hanging gardens.

The ancient Greeks thought the island of Cyprus the most beautiful country. There they located the birthplace of Venus; to-day a great part of the island is entirely barren; the women are prominent by their ugliness; the forests are extirpated except on the tops of the mountains. When we heard there that carob and olive groves were cut down because the Turkish Government laid taxes on these trees, we thought the Turks the grandest vandals on earth; but seeing the wanton devastation near Yosemite, we became doubtful.

Palastine was the promised land where milk and honey flowed. To-day for miles and miles there is not a tree, not a green spot, not a blade of grass. Quite natural; the cedars of Lebanon and the balsams of Gilead (a species of spruce) have disappeared; both mountain ranges are devastated. On the former we found only seven big sickly trees which since that time, probably, have fallen victims to the desire of relics by Anglo-Saxons and others.

Where in Italy was the voluptuous Capua, there are now the Pontine swamps; where the three temples of Pestum are a proof that a dense population was living around them, now only a few fever-sick buffalo-herders are to be seen. No man can stand there over night without getting the malaria, which is by far more dangerous than the Californian disease of the same name. But the wooded mountains of which we read in Livy are to-day bare of every vegetation.

Spain dates her descent from the time when Philip II had cut down the vast forests of Andalusia and Catalonia to build the grand Armada, which other fleets followed for the discovering of the new countries. But after the forests had gone, all the riches of her American colonies could not stop the decline of Spain.

We could enumerate a hundred other samples. There is, indeed, no land in the Old World which would not give proof to our theory that the prosperity of a country depends on its forests, and such proofs are not missing in America. In Mexico great villages are desolated, canals, springs and rivers are dried up. The Tarigua lake is receding every year. The Croton river does not supply as much drinking water for New York as in former years. The Hudson is less navigable than

before the Adirondacks were cut down. The freshets of the Ohio and other rivers are increasing. The droughts in the interior become longer.

That the destruction of forests is the cause of this change of climate we will prove now by natural laws. An area covered with plants will evaporate by far more than a barren area. No land is covered more, and therefore will evaporate more, than a forest. This evaporation causes the air to become cold. When now a wind from the surrounding air strikes this layer of cold air, it cannot hold as much water as before, when it was warmer, and rain must fall. These are natural laws which every one will understand who has a small idea of natural philosophy or meteorology. Thus it is proven that forests will attract rain. The rain in coming down strikes first the leaves and limbs and drops by and by to the ground; it does not come down at once in a rush, and therefore will not cause any freshets. The ground itself is covered with a layer of leaves, rotten limbs, mosses, etc., humus which will detain the water like a sponge and gradually let it sink into the ground from where it nourishes the springs which never will run dry, but always yield the moisture necessary to every growth.

Where the land to a reasonable degree is covered with forests, the conditions necessary to every growth, necessary to every life, will be fulfilled; while in a country entirely without forests no rain whatever will fall, as this is the case in the deserts of Sahara and Gobi, and in the interior of Peru, and no living being can exist for a long time. In the above-named countries, beautiful in olden times, and deserted to-day, rain now seldom falls, and it will then pour down to cause freshets, to do more harm than good.

If the Californians wish that their country shall stay as beautiful as it is, that not only they themselves but their children and children's children may enjoy this most blessed country of the earth, they must protect their forests. And so very easily this could be done, as we see on the few places where neither fire nor cattle have tampered in the last years. In Donner Lake park is a splendid grove of young pines which would delight the eye of every European forester, and in the Big Trees Grove of Calaveras innumerable young trees cover the ground, while hardly one tree can be found of the age between 20 and 200 years. For about 20 years the grove has been a national park.

With little care and a trifle of knowledge, the forests could be managed in such a way that when they are cut down there would be already by natural way a perfect forest of young trees, just as it is done in the Black Forests, where besides on account of this management, one acre will yield per annum for all time to come, more than half as much (\$1.50) as here can be realized by the sale of the land.

There is now a bill for the Protection of Forest Lands belonging to the United States, laid before Congress, according to which all Government lands not suited to agriculture shall be withdrawn from sale and entry. The Forest Commissioners shall have power to appoint forest police and guardians to mark out such timber as should properly be cut, and sell the same, and to regulate pasturage.

This is a very great and important step toward the preservation of the forests, toward the preservation of California; and every newspaper, every intelligent man should do all in their power that this bill may become a law.

Auburn, Cal.

F. CLOSS.

PUBLIC AFFAIRS.

Protective Tariff.

EDITORS PRESS:—The importance of the tariff question, as indicated in your editorial of Dec. 31, 1887, has led me to write briefly upon the industrial interests of this country as affected by the tariff on imports.

The policy of protection to American industry has been steadily maintained since 1861, and a change in that policy, which is now threatened, means a large and permanent reduction in the wages of American labor and loss of capital invested in manufacturing. The value of a protective policy to this country can be clearly demonstrated.

The census of 1860 showed the value of all property in the United States to be \$14,000,000,000, the net result of the labor and savings of our people since the settlement of the country.

The census of 1880 returned \$44,000,000,000 as the value of all the property of the nation, an increase of about 300 per cent in 20 years, during which time the business of the country was encouraged and protected by a tariff.

It is charged that the foreign commerce of the United States has declined under the influence of the tariff. This is not so. Foreign commerce, representing the exports and imports of the country, has since 1800 reached in value something like \$30,000,000,000.

The magnitude of our exports is shown by the official statement that they amounted to \$9,000,000,000 up to 1860, and since that date to the present, the sum of \$20,000,000,000, as nearly as can be obtained. All these exports were the products of American labor—evidence that the tariff does not injure our export trade.

The agricultural interests of the country have

been greatly benefited and enriched by protection. The wealth of many of the agricultural States has more than doubled since 1860, and in this respect has surpassed many manufacturing States; instance Iowa and Massachusetts.

The farmers have realized the benefits of a good home market for their products; as they have since 1860 sold five bushels of wheat at home to one exported, and 100 bushels of corn to one peck exported. This I think they will bear me testimony is a fair estimate.

As the margin of profit in foreign markets becomes less and less each year, owing to close competition, we value more and more our home market, which has grown to such vast proportions under the inspiration of a fostering government.

The growth and consumption of food products and manufactures at home give us some conception of the value and extent of the internal commerce of the United States.

These internal exchanges are estimated by the Treasury Department to be annually 20 times as great in amount as our foreign commerce.

It is into this vast and rich field of home trade, the creation and heritage of the American people, that foreign nations are making every effort to enter.

Yes! it is into this domain of internal commerce that the enemies of protection would admit without price the countries of Europe and Asia with their hoards of impoverished and cheap laborers—countries to which we would be surrendering every advantage and receiving no adequate return.

What is this but a gigantic communism placing the fortunes and lives of our people at the mercy of a foreign power, the basis of whose system is found in the cheapening of materials of manufacture and of labor?

The Congress of these United States forbid! Let the great and noble dead speak out their living and burning words in our great need of counsel and direction, as a people, in this emergency.

What have they said and written on this subject of protection? The following extracts made from their writings answer this question and form instructive reading at this time:

"I have always promoted agriculture, industry and foreign trade. Though an empire were made of adamant, free trade would grind it to powder."—NAPOLÉON BONAPARTE.

"Agriculture without a market, industry without protection, languish and decline."—ALEXANDER 2D, Emperor of Russia.

"England produces ten times as much as her consumption and her existence depends upon consumers which she seeks everywhere without herself embracing the world, but vulnerable everywhere. France has her consumers within herself and is more solid than England."—M. THIERS.

"The operation of free trade in France would ruin our fabrics and build up England's. France declines to adopt the system."—M. DE ST. CRICQ, French Minister of Commerce.

"Laws that prevent the importation of foreign luxuries and needless manufactures strengthen a nation doubly by increasing its own people and diminishing its neighbors."—BENJAMIN FRANKLIN.

"It is the interest of a community, with a view to eventual and permanent economy, to encourage the growth of manufactures; the temporary enhancement of price must always be well compensated by a permanent reduction of it to the minimum of a reasonable profit on the capital employed, which does away with everything like monopoly."—ALEXANDER HAMILTON.

"Congress has repeatedly, and not without success, directed their attention to manufactures. The object is of too much consequence not to insure a continuance of their efforts in every way which shall appear eligible. Against the insidious wiles of foreign influence, one of the most baneful foes of Republican Government, the jealousy of a free people ought to be constantly awake."—GEORGE WASHINGTON.

"The present Constitution was dictated by commercial necessity more than any other cause. The want of an efficient Government to secure the manufacturing interest and to advance our commerce was long seen by men of judgment, and pointed out by patriots, solicitous to promote our general welfare."—FISHER AMES.

"Congress should make such further alterations in the laws as will more especially protect and foster the several branches of manufacture which have been recently instituted or extended by the laudable exertions of our citizens."—JAMES MADISON.

"Our manufactures will require the systematic and fostering care of the Government; possessing as we do all the raw material, the fruit of our soil and industry, we ought not to depend in the degree we have done on supplies from other countries.

"The capital which nourishes our manufactures should be domestic, as its influence would be advantageously felt on agriculture and every branch of industry."—JAMES MONROE.

"Upon the success of our manufactures as the handmaid of agriculture and commerce depends in a great measure the independence of our country, and none can feel more sensibly than I do the necessity of encouraging them.

"Providence has filled our mountains and plains with minerals, with lead, iron and copper, and given us a climate and soil for the growing of hemp and wool; these being the great material of our national defense, ought to have extended to them adequate and fair protection, that our manufactures and laborers may be placed in a fair competition with those of Europe."—ANDREW JACKSON.

"Is the self-protecting energy of this nation so helpless and the Congress of the Union so impotent to restore the balance in favor of native industry, that all our people shall pay tribute to foreign industry and be clad in a foreign garb?

"The tariff of 1842 has wrought wonders for the purposes for which it was enacted—the procurement of an adequate revenue and of protection for the na-

tive industry and free labor of the land."—JOHN QUINCY ADAMS.

"During the war of 1812 the Government and the people had to pay extravagant prices for manufactured articles, because our own manufactures had not before that period been encouraged by proper protecting duties.

"It is a just comment upon the policy of that country which will not afford a reasonable protection to its own domestic industry and thereby gives to foreigners a decided preference in its markets."—JAMES BUCHANAN.

"Shall we make our own comforts or go without them at the will of a foreign nation?

"To be independent for the comforts of life, we must fabricate them ourselves. Manufactures are now as necessary to our independence as to our comfort."—THOMAS JEFFERSON.

"When our manufactures are grown to a certain perfection, as soon they will under the fostering care of the Government, we will no longer experience these evils, resulting from a drain of specie under a free-trade system. The farmer will find a ready market for his surplus produce, and a certain and cheap supply of all his wants."—JOHN C. CALHOUN.

"The proposition to be maintained by our adversaries is, that manufactures without protection will, in due time, spring up in the country, and sustain themselves in competition with foreign fabrics. Now I contend that this proposition is refuted by all experience, ancient and modern, in every country."—HENRY CLAY.

"The protection of American labor against the injurious competition of foreign labor, so far, at least, as respects general handicraft productions, is known historically to have been one end designed to be obtained by establishing the Constitution; and this object and the Constitutional power to accomplish it ought never to be surrendered or compromised in any degree."—DANIEL WEBSTER.

Without further argument I submit the question, confident of a just judgment.
Wrights, Santa Clara Co. W. H. AIKEN.

HORTICULTURE.

The Orange Crop of 1888.

The *Rural Californian* has been looking up the orange prospects for the coming year, and gives the following as the result of its investigations:

Orange prospects are exceedingly good this season in all parts of Southern California, and indications now point to a total shipment of from 2200 to 2500 carloads, as against 1600 carloads last season. The Mediterranean Sweets and Seedlings were both a little "off" last winter, but are making up for it in fine shape now. The Washington Navel crop will be considerably heavier than one year ago, the increase being due almost entirely to the large number of young trees just coming into bearing. Three and four years ago the planting of new groves was largely of this variety, and in the season of 1885 we planted 80,000 Washington Navel orange trees in California out of a total planting of 95,000 trees. In view of this heavy planting of a single variety it is safe to estimate that within three years more than one-half the entire crop of California oranges will be Washington Navels. It is a serious question, however, whether or not this orange can hold its present place at the head of the list. As it grows older the Washington Navel shows a decided shyness in bearing, and, after late irrigations, the sap flows so freely that the fruit in some localities splits quite badly.

A. J. Twogood of Riverside, one of the oldest and most successful orange-growers in California, was recently asked by the writer what he would plant if he owned 20 acres of improved land. His reply was: "If the land was suitable I would plant it solid to oranges. Of varieties I would plant one-half Seedlings, one-fourth Mediterranean Sweets and one-fourth Washington Navels. Were I a younger man and able to wait for the returns, I would plant the entire 20 acres to Seedling oranges." This reply is significant, coming from such authority. It may be proper to say also that Mr. Twogood's partiality for the Seedling orange is backed up by the fact that he was until recently the owner of six acres of Seedling oranges, which last spring yielded fruit worth \$7200, an average of \$1200 an acre.

Throughout the Santa Ana valley the red scale, which one year ago threatened to destroy all the orange groves, has largely disappeared and the crop will be much better than it was one year ago. The recent appearance of an unknown disease among the raisin grapevines of that valley will cause increased attention to be given to the orange culture.

In the San Gabriel valley Mr. A. V. Chapman, Col. J. R. Dobbins, Mr. L. H. Titus, and other large growers, report very fine prospects for the orange output of 1888. The trees are well loaded and the fruit is large and fine looking for this season of the year.

Ontario, Pomona and Cucamonga, all new settlements, are largely planted to budded fruit, and will make some shipments of choice oranges. The young trees in these settlements, mainly in the hands of thrifty Eastern people, have received especially good care and will reward their owners with a handsome return this season.

At Riverside, so far as we can learn from personal observations and interviews with leading growers, the crop will be the largest yet marketed. The new planting in this almost exclusive orange settlement has been very light for several years past, as compared with other colonies, principally because nearly all the available

land was planted some years ago. There are occasional new orchards put in where apricots or other deciduous fruits are being taken out, but the bulk of the increased crop will come from the advanced age of the trees planted from 5 to 10 years ago. Many thousand seedling trees were planted in Riverside along in 1879 and 1880, and these trees are just beginning to show some return, and in a few years more will yield very heavily. The Washington (Riverside) Navel crop will not much exceed that of last year. The fruit is splitting a little all over the valley. The Mediterranean Sweet crop will generally be much larger than it was one year ago. The shipments from Riverside in 1886 were a little over 500 carloads, in 1887 about 350 carloads, and for 1888 the prospect is good for about 700 carloads, though conservative men place the estimate 100 carloads lower.

The chief shipping points for oranges from Southern California are the San Gabriel valley (including the Duarte and Azusa), Riverside, and the Santa Ana valley. The orange orchards in and around Los Angeles have been mainly cut up into town lots, and the white scale is making serious inroads upon the orchards not yet subdivided. Inside of three years more there will also be very heavy shipments from Pomona, Ontario, Cucamonga, Redlands and other foothill settlements.

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Now is the time to buy. Do not waste money on poor pumps with leather valves, but buy the "CLIMAX SPRAY PUMPS," the only pump having all its parts made of non-corrosive metal, and the very best Spray Pump in the market.

Send for circulars and prices. Hose furnished to farmers at wholesale prices.
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DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending December 31, 1887, the Board of Directors of the German Savings and Loan Society has declared a dividend at the rate of four and one-half (4½) per cent per annum on term deposits, and three and three-fourths (3¾) per cent per annum on ordinary deposits, and payable on and after Tuesday, the 3d day of January, 1888. By order

GEO. LETTE, Secretary.



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The Only Safe and Unadulterated Dyes.
Send postal for Dye Book, Sample Card, directions for coloring Photos., making the finest Ink or Bluing (10 cts. a quart), etc. Sold by Druggists. Address
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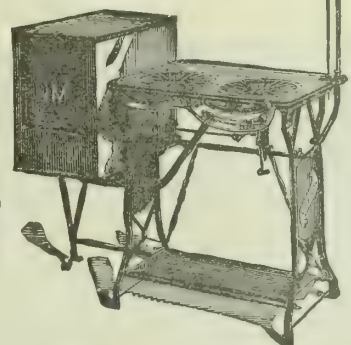
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Microscopes, Telescopes, Field & Opera Glasses, Magic Lanterns, Barometers, Thermometers, Compasses, Electric Batteries, Drawing, Mining, Surveying and other Scientific Instruments.
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IN ITS GREAT RANGE OF WORK IT STANDS WITHOUT AN EQUAL.

THE LIGHTEST RUNNING,
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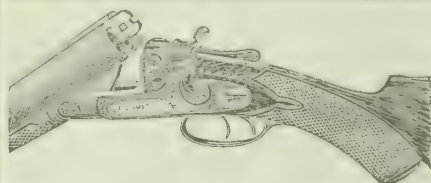
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Fine Gun work done by first-class smiths.
GEO. W. SHREVE,
525 Kearny Street, San Francisco, Cal.

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Wholly unlike artificial systems.
Any book learned in one reading.
Recommended by MARK TWAIN, RICHARD PROCTOR, the Scientist, HON. W. W. ASTOR, JUDAH P. BENJAMIN, DR. MINOR, etc. Class of 1884 Columbia Law students; two classes of students at Yale, 40 at University of Penn. Phila., 100 at Wellesley College, and thousands elsewhere at Chautauque University, etc. Prospectus free from PROF. LOISETTE, 25 Fifth Ave., N. Y.

FERTILIZERS!

Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

California Bone Meal and Fertilizer Co.,

116 CALIFORNIA ST., SAN FRANCISCO.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING JANUARY 3, 1888.

- 376,022.—GRADING SCRAPER—L. E. Ashley, Stockton, Cal.
 375,916.—CROSSCUT-SAW HANDLE—M. Bennett, Eureka, Cal.
 375,795.—DEVICE FOR OBTAINING VERTICAL LINES—J. Beyerle, Vallejo, Cal.
 375,800.—SAWMILL SET WORKS—W. A. Campbell, Portland, Ogn.
 375,801.—SAWMILL STOCK ROLLER—W. A. Campbell, Portland, Ogn.
 375,802.—SIDEHILL PLOW—Elisha Clark, Felton, Cal.
 375,817.—BED-LOUNGE—John Hoey, S. F.
 375,999.—CONCRETE PAVEMENTS—P. H. Jackson, S. F.
 375,822.—ANIMAL TRAP—B. P. Jolly, Soledad, Cal.
 375,940.—VEHICLE WHEEL—Walter Knight, San Andreas, Cal.
 375,826.—WAGON-SPRING BRACE—F. H. Mason, Saucelito, Cal.
 375,829.—PISTOL-HOLDER—R. Newman, S. F.
 375,837.—PRESSURE REGULATOR—E. A. Scott, S. F.
 375,899.—ROTARY WATER METER—S. L. Shuffleton, Eureka, Cal.
 375,779.—FIRE TRUCK AND LADDER—Smith & Mansfield, Oakland, Cal.
 376,044.—GRAIN SCALE AND REGISTER—L. Reynolds, Yreka, Cal.
 375,844.—SHOW-STAND—C. Toohey, S. F.
 375,845.—TANNING—Waar, Phillips & Kengla, Tucson, A. T.
 375,972.—DRESS CHART—Josephine S. Wilson, San Jose, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Another Dose for Cows.

EDITORS PRESS:—One of your correspondents wishes to know what to give cows when they calve. Whenever I have a cow that seems not to clean well, or that I think will not, I give half a teaspoonful of gunpowder in a bucket of bran mixed up with warm water. Sometimes I have to repeat the dose, but not often. I do not know how the gunpowder affects the cow, but never have had any trouble with a cow that I have given it to.—G., Vacaville, Jan. 8th.

Other prescriptions for the same trouble may be found on a preceding page of this issue.

CLEVELAND BAYS.—We have received a copy of an interesting catalogue of imported Cleveland Bay horses owned jointly by Seth Cook of Danville and Sherick Bros. of Springfield, Ill. The list includes eight stallions and colts and one mare, and are described to us as a fine lot of this breed, which is rather new on this coast, but is destined to be popular. The animals now under consideration may be seen at the Bay District track in this city, and should receive the attention of horse fanciers. Information concerning them may be had from Killip & Co., 24 Montgomery street, or Sam Gamble, 1307 Dolores street (at the track), or of George A. Wiley, who is the superintendent of the famous Cook stock-farm at Danville, Contra Costa county, where other fine animals, both of the horse and cattle persuasion, can be seen.

WE regret to hear of the death of Mr. George O. Wallace, a member of the firm of N. W. Ayer & Son of Philadelphia, the largest firm of advertising agents in the country. Mr. Wallace was noted among his business acquaintances for his integrity, diligence and courtesy, and his sudden death will be a loss to very many friends.

THE Salinas Index, one of our valued exchanges, has issued an extra, which contains a very full and elaborate article on Monterey county. There is a full description of the Buena Vista and Gabilan ranches which have been subdivided into small tracts, and are now offered for sale.

A CONSIDERABLE ADDITION.—The railway passenger officials are still figuring up the arrival of passengers by overland lines during the last year. The latest footing is a total of about 150,000 for the year 1887. Even larger figures are promised for the present year.

PERSONAL.—William Niles, the well-known stockman of Los Angeles, has just returned from an Eastern visit of five months' duration. He writes us that he finds on returning that he has a superior lot of young stock on hand, to which his advertisement in this issue relates.

"A MODEL NURSERY" was the fitting title of a Butte county note in the PRESS of Dec. 10th. Any one who would learn more of the fine establishment therein briefly described, can find a way to gratify his wish by turning to the advertisement of Rancho Chico nursery.

BEEHIVES IN COUNCIL.—The National Bee-Cultivators' Association is to hold its annual convention in Utica, N. Y., during the current month. New York State makes a large proportion of the honey product of the Union.

Correction.

EDITORS PRESS:—Please make the following correction in the article, "A Turkey Transaction," in the PRESS of Dec. 31st:

"There is that withholdeth more than is meet, but it tendeth to poverty," in place of "There is that which holdeth more than is sweet," etc.

A word or two of one's own writing matters little, but one dislikes to misquote Scripture. THE WRITER.

Palermo Citrus Tract.

The latest announcement of citrus-fruit property which comes to our notice lies in the famous Oroville district and is named the Palermo Citrus Tract. The location is five miles south of Oroville, and is on the Northern California railroad. There is a town-site—Palermo—in the center of the tract. The enterprise is in charge of McAfee Brothers of 10 Montgomery street and T. B. Ludlum & Co. of Oroville. An interesting descriptive circular has been issued which gives account of soils, water, etc., and price-list of town lots and fruit tracts. Those interested in such property should send for a circular.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

F. B. LOGAN—Santa Clara Co.
 JOHN G. H. LAMPADUS—San Benito Co.
 G. W. INGALLS—Arizona Territory.
 WILLIAM POOL—Fresno Co.
 WM. WILKINSON—San Joaquin and Stanislaus Co.'s.
 A. F. JEWETT—Tulare Co.
 E. H. SCHAEFFLE—Placer, Sacramento, El Dorado Co.'s.
 C. E. WILLIAMS—Yuba and Sutter Co.'s.
 R. G. HUSTON—Montana Territory.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

BISULPHIDE FOR SQUIRRELS.—Mr. Wheeler informs us that he is again in the market with his preparation. The stock prepared for last year's trade proved insufficient to fill the increasing demand, and the public were deprived of this remedy for a good part of the season. The factory is now again running night and day, and it is hoped there will be enough to go around. Be it known that this preparation is a liquid made expressly for destroying rodents and other vermin. It is of unvarying strength, and evaporates rapidly when exposed. When applied, it fills the burrow with its vapor and thereby kills every occupant of the hole without injuring anything outside. The animal cannot get away, but dies in the hole and never becomes offensive. It is safe to handle or have about, and simple to apply. It has no effect on the operator, and is not poisonous nor injurious to the skin or clothes. These qualities, together with the improved methods of keeping and applying the same, make it particularly valuable at this season of the year.

Cottony Cushion Scale.

At last the remedy for this pest has been found. About five weeks ago the orange orchard of Mr. Frank M. Pixley at Corte Madera (badly infested with cottony cushion scale) was treated with Ongerth's Liquid Tree Protector according to direction. The insects and all eggs are killed, the trees are now free from this pest and also from black smut, and show increased healthy growth. As Ongerth's Liquid Tree Protector does not contain any poisonous, caustic, or corrosive substance it can be handled without any danger.—From Argonaut, Dec. 31, 1887. For sale by Woodin & Little, 509 and 511 Market street, San Francisco.

Buena Vista Rancho.

This fertile tract of land, containing 7725 acres, has been platted into 60 farms suitable for mixed farming and fruit growing. It is four miles from Salinas City, Monterey County, and will be sold at low prices and liberal terms. Address, J. C. Hoag, 312 Van Ness avenue, San Francisco, or Tyler Beach, San Jose, Cal.

Consumption Surely Cured.

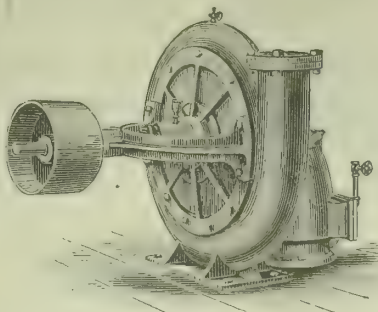
To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,
 T. A. SLOCUM, M. C., 181 Pearl St., New York.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., room 3.

PLOWING is now in order, and the farmer who needs a gang-plow will be interested in what the Bull & Grant F. I. Co. have to say in their advertisement on another page of this paper.

PENNSYLVANIA OIL THE BEST.—Analysis and practical use have proven that all the American petroleum oils are much superior to any that are found in either Europe or Asia.



Jackson Centrifugal Pumps.

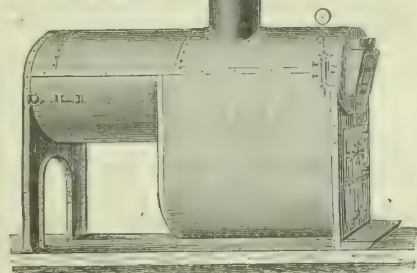
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Automatic Expansion SELF-OILING ENGINES.

Made in ten sizes, from two to sixty-horse power, and carried in stock for prompt delivery

"ECONOMY" PORTABLE BOILERS.

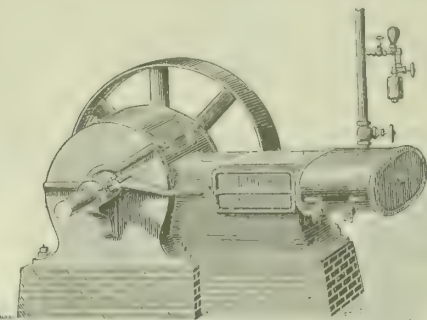
MOUNTED ON SKIDS.
2½ to 20 H. P.



BYRON JACKSON,

625 Sixth St., San Francisco, Cal.

For quantities of water not less than 100 gallons per minute, and for lifts not exceeding 100 feet, there is no better pump than that illustrated in the annexed engraving. It is very simple, durable, and economical. I make them in sizes from 2-inch, 100 gallons per minute, to 24-inch, with a capacity of 14,000 gallons per minute, and am prepared to build larger sizes to order. They must be set within 20 feet of the water; will draw it that far and force it up 90 feet. They are very satisfactory in wells not over 100 feet deep.



COMPLETE Power and Pumping PLANTS

A SPECIALTY.

ADDRESS:

BYRON JACKSON, 625 SIXTH ST., San Francisco.



Now is the Time to Apply WHEELER'S CARBON BISULPHIDE.

REDUCED PRICES CONTINUE.

READ WHAT YOUR NEIGHBOR SAYS ABOUT IT.

It is thorough in its work and is not dangerous to anything but the vermin it is intended to destroy, and it will do all you claim for it as a rodent poison.

L. L. ROBINSON,
 Los Medanos, Contra Costa Co.

Your Carbon Bisulphide has been a perfect success, and it is the only poison I have ever used that was.

GEORGE WEST, Stockton.

I have used it with unflinching success, the holes do fored have never since been reopened.

JOHN T. DOYLE, Menlo Park.

It is a dead sure thing, and any one who will give it a trial, will never again fool away his time with common preparations of strychnine, phosphorus, etc.

H. W. CRABB, Oakville, Napa Co.

It is the most economical and efficient agent yet offered to the public.

H. G. ELLSWORTH,
 Niles, Alameda Co.

I used it and not a squirrel escaped.

R. T. WALKER,
 Paso Robles, S. L. Obispo Co.

Sold by the Trade and by the manufacturer,

J. H. WHEELER, 204 Montgomery St., S. F.

As a means of killing squirrels, gophers, etc., it is unquestionably the best now in use, and I believe will be universally adopted.

J. DE BARTH SHORB,
 San Gabriel, Los Angeles Co.

I find it certain death and never had occasion to apply it a second time.

JAMES K. VERNON,
 San Luis Obispo.

It is the cheapest and most effective agent that I have ever used in the destruction of squirrels and gophers.

W. S. MANLOVE,
 Brighton, Sac'to Co.

I know of nothing equal to it.

D. C. TWOGOOD, Riverside.

Not one hole has been reopened, and I feel disposed to bless Prof. Higard and Mr. Wheeler.

EDW. BERWICK,
 in PACIFIC RURAL PRESS.

Nothing so cheap and effective as Bisulphide.

CHARLES S. COUSIN,
 Pinole, Contra Costa Co.



Headquarters for all Varieties of FANCY CHICKENS, DUCKS, TURKEYS, GEESE, PEACOCKS, Etc.

EGGS FOR HATCHING

Publisher of "Niles' Pacific Coast Poultry and Stock Book," a new book on subjects connected with successful poultry and stock raising on the Pacific Coast. Price, 50 cents, post-paid. Inclose stamp for information.

ALSO BREEDER OF

Jorsey & Holstein Cattle, and Hogs.
 Address, WILLIAM NILES, Los Angeles, Cal.



Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be purebred, reared and average breeders. Address, Geo. A. Wiley, Cook Farm, Contra Costa Co., Cal.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

JERSEYS—THE BEST HERD—All A. J. C. C. registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands, Angles and Case Strains. Punched for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 18 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Pages Station, S. F. & N. P. R. P. O., Penn's Grove, Sonoma Co., Cal. Willard Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

POULTRY.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, Lt. Brahmas, Houdans. Eggs, \$2.

H. J. GODFREY, Box 185, San Leandro, Cal. Thoroughbred Plymouth Rocks. Eggs, \$2 per 13.

T. D. MORRIS, Sonoma, Cal. Toulouse and Embden Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

O. J. ALBEE, Lawrence, Cal., breeder and importer.

D. H. EVERETT, 1616 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

E. C. CLAPP, South Pasadena, Cal. Light Brahmas (Williams-Foot stock), Plymouth Rocks (Kieffer-Conger stock). Fowls and Eggs in season. No circulars; write for wants.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

JAS. T. BROWN, 18 Georgia St., Los Angeles, Cal. Breeder of Thoroughbred Poultry of the leading varieties. Send for circular and price list.

THOS. WAITE, Perkins, Sacramento Co., importer & breeder of thoroughbred fowls of all leading varieties.

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KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine. High graded rams for sale.

E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

F. BULLARD, Woodland, Cal., importer and breeder of Spanish Merino Sheep. Premium band of the State Choice bucks and ewes for sale.

J. B. HOYT, Bird's Landing, Cal., importer and breeder of Shropshire Sheep. Also breeds cross-bred merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down of Long John Wentworth herd for sale.

SWINE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

L. L. DICKINSON, Central Point, Merced Co., Cal., breeder of thoroughbred Essex Hogs. Pigs now ready for sale. Prices reasonable.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal., breeder of Thoroughbred Berkshire and Essex Hogs.

BADEN FARM HERD Of Short Horn Cattle and Dairy Cows.

Catalogues and Prices on application to

ROBERT ASHBURNER,
Baden Station, - San Mateo Co., Cal.

HOLSTEIN-FRIESIAN BULLS.



Not the \$50 Kind—We do not breed them.

NOR CAN BREEDERS AFFORD TO USE THEM

On animals of High Breeding of great Individual Merit, and backed by pedigrees based on actual performance of ancestry at the pail and churn. We acknowledge no competition. Write for our catalogue or come and see and judge for yourself as to the truth of our assertion. Mention the Rural Press.

SMITHS, POWELL & LAMB, Syracuse, N. Y.

CHAMPION GOLD MEDAL STUD 300 CLEVELAND BAYS AND ENGLISH SHIRES.

Our Stallions, mostly imported as Yearlings, are grown on our own farms, and thoroughly acclimated, insuring the best results in the Stud from the start.

HOLSTEIN-FRIESIANS. Being crowded for room, we will make TO REDUCE OUR HERD OF 150 CATTLE. EXCEPTIONALLY LOW PRICES. A grand opportunity to secure foundation Stock at a low figure. Send for Illustrated Descriptive Pamphlet, and mention this paper.

GEO. E. BROWN & CO., Aurora, Kane Co., Ill.



THE HOME and HEADQUARTERS

FOR ALL KINDS OF

BRITISH HORSES.

Royal Society Winners in Each Breed.

GALBRAITH BROTHERS,

Of Janesville, Wisconsin, have imported during the present season over 200 STALLIONS, including

Clydesdale, English Shire, Suffolk Punch, Hackney, Cleveland Bay, and Yorkshire Coach Horses.

More prize winning, high-class stock, imported by us than any three firms in America. Superior horses, fashionable pedigrees and all guaranteed good breeders. Prices and terms to suit everybody. Visitors cordially invited.

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OAKLAND POULTRY YARDS,

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JOHN McFARLING,

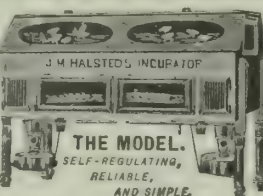
Importer and Breeder of



Langshans, Plymouth Rocks,

Brown Leghorns, Pekin Bantams, Light Brahmas, Partridge Cochins, Buff Cochins, Registered Berkshire Pigs. Also one pen of Langshans direct from China.

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Large lot of young birds ready for sale; send for circulars.



The Halsted Incubator Co. 1312 Myrtle St., Oakland, Cal. Price from \$20 up. Model Brooder from \$5 up. Thoroughbred Poultry and Eggs. Send for new Circulars containing much valuable information.



THE IMPROVED EGG FOOD.

Has for more than ten years been the "Standard Poultry preparation." It cures every disease and makes hens lay at all seasons of the year. Everybody knows it! Everybody uses it! Ask for it. B. F. WELLINGTON, Proprietor, also Dealer in Seeds of every variety, 425 Washington St., San Francisco.



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A MAGIC CURE

Rheumatism, Neuralgia, Pneumonia, Paralysis, Asthma, Sciatica, Gout, Lumbago and Deafness.

Everybody should have it. G. G. BURNETT, Agt. 327 Montgomery St., S. F. Price, \$1.00. Sold by all Druggists. Call and see.

DR. CHAS. ROWELL, Office, 426 Kearny St., San Francisco.



Revolvers, Rifles, Etc.

Percheron Horses,

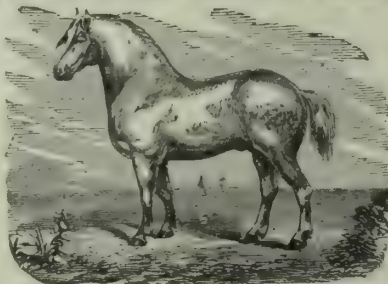
SACKRIDER & CHISHOLM,

Number 370 Eleventh St. - OAKLAND, CAL.



We have a choice collection of imported Registered Stallions on hand and for sale, unsurpassed for quality, breeding and prices. Call and see them, or write for further information.

NEW IMPORTATION



OUR IMPORTATION OF 1887 HAS JUST ARRIVED from Europe, where H. Wilsey, assisted by one of the firm who resides there, selected the stallions from the choicest strains of Europe, comprising

English Shire,
Suffolk Punch,
Normans and
Percherons,

All of dark colors, from one to four years old, and each pedigreed in their own country.

We will sell our stallions cheaper than the same class can be bought anywhere else in the U. S. We import to sell. Call and examine our stock.

Send for Catalogue.

H. WILSEY & CO.,
PETALUMA, CAL.

IMPORTANT!

To Breeders of All-work Horses.
FOR SALE!

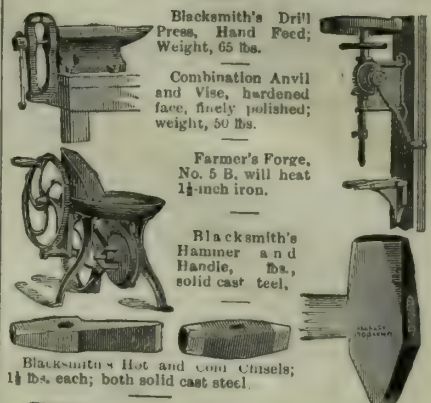
A twenty-months-old Stallion Colt; weighs 1300 pounds; color, beautiful steel gray; perfectly sound; broken to drive single and double, and for style, considering weight, size and age, perhaps cannot be excelled in the State. Is three-fourths Norman and one-fourth Belmont. For further particulars apply to

G. J. VANDERVOORT,
Sunol, Cal.

THE SCIENTIFIC KIT OF TOOLS

—FOR—

Farmers, Dairymen, Stockmen & Machinists



Blacksmith's Drill Press, Hand Feed; Weight, 65 lbs.

Combination Anvil and Vise, hardened face, finely polished; weight, 50 lbs.

Farmer's Forge, No. 5 B, will heat 1 1/2-inch iron.

Blacksmith's Hammer and Handle, 15 lb., solid cast steel.

Blacksmith's Hot and Cold Chisels; 1 1/2 lbs. each; both solid cast steel.

Blacksmith's Tongs, Wrought Iron, 18 inches.

Screw Plates, 3 Taps, 3 Set Dies, cut 1/2, 3/4 and 1 inch.

Farrier's Knife.

Farrier's Pincers, Cast Steel; 12-inch.

Shoeing Hammer and Handle; weight, 9 oz.

EVERY TOOL GUARANTEED.

And we offer this complete

OUTFIT FOR ONLY \$25 00

Which is hardly half the regular prices, and none can afford to be without this set. Orders by mail promptly filled. Address,

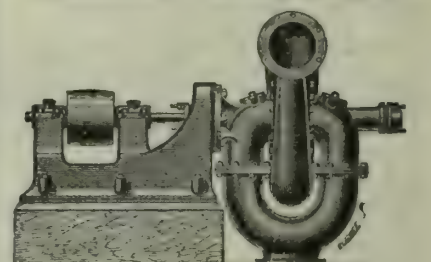
G. G. WICKSON & CO.,
Nos. 3 and 5 Front St., San Francisco

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WEBBER'S CELEBRATED



IRRIGATING PUMPS.

WE ALSO CARRY IN STOCK THE LARGEST LINE OF

MACHINERY

In the UNITED STATES,
Consisting of Wood and Iron Working Machinery. Pumps of every description.

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A SPECIALTY.



"Walnut Grove"

Registered and Thoroughbred. **POLAND-CHINA HERD**

My herd consists of the best strains that can be found. Stock all recorded in A. P. C. R. I have a fine lot of spring, summer and fall pigs, also a few choice yearling sows, for sale. Prices to suit the times.

J. MELVIN, Davisville, Cal.

THE DOG In health, habits and disease. All breeds and treatment; 50 cuts; 25c. This office.

GRANGERS' BANK
OF CALIFORNIA.
SAN FRANCISCO, CAL.
Authorized Capital, - \$1,000,000
In 10,000 Shares of \$100 each.
Capital Paid up in Gold Coin, \$624,160.
Reserved Fund, \$26,500.
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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up, and statements of accounts rendered every month.
LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.
DEPOSITS received.
CERTIFICATES OF DEPOSIT issued payable on demand. BILLS OF EXCHANGE of the Atlantic States bought and sold.
ALBERT MONTPELLIER, Cashier and Manager.
San Francisco, July 1, 1887.

HORTON & KENNEDY'S
FAMOUS
ENTERPRISE
Self-Regulating
WINDMILL
Is recognized as the
BEST.

Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbit boxes.

Positively Self-Regulating,

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order, as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES (as always before),
LIVERMORE, ALAMEDA CO., CAL.
San Francisco Agency, JAMES LINFORTH
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LIGHTNING WELL SINKING MACHINERY. Our Artisan Well Encyclopedia contains near 700 engravings, illustrating and describing all the practical tools and appliances used in the art of well sinking; diamond prospecting machinery, windmills, artesian engines, pumps, etc. Edited by the "American Well Works," the largest manufacturers in the world of this class of machinery. We will send this book to any party on receipt of 25 cents for mailing. Expert well drillers and agents wanted. Address, **The American Well Works, Aurora, Ill., U. S. A.**

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AGRICULTURAL WORKS,
Crockett, Contra Costa Co., Cal.
Stationary Engines and Boilers.
Portable Straw-Burning Boilers & Engines.
IRON AND BRASS CASTINGS.
Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,
including Grape Crushers and Stemmers, Elevators, Wine Presses and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.

HORSE POWERS, WINDMILLS, TANKS
and all kinds of Pumping Machinery built to order. Awarded Diploma for Windmills at Mechanics' Fair, 1885. Windmills from \$65. Horse Powers from \$50. **F. W. KROGH & CO., 51 Beale Street, San Francisco.**

MISSION ROCK DOCK
AND
GRAIN WAREHOUSE,
SAN FRANCISCO, CAL.
75,000 TONS CAPACITY. 75,000
Storage at Lowest Rates.
CHAS. H. SINCLAIR, Supt.
Cal. Dry Dock Co., props. Office, 318 Cal. St. room 8.

ONE May 10 U. S. Home Cards, One Pack of Post Cards, One Pack of Union Cards, One Pack of the Light Cards, The Myra Cards, with which you can tell any person's age, and large sample book of Hildegarde Cards. All for only a 2-cent stamp. **Deane Card Co., Omaha, Neb.**

Farmers and Fruit-Growers, Attention!

To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

FERTILIZE! FERTILIZE! NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.
Dr. J. Koebe—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
BERKELEY, Nov. 20, 1886.

Dr. J. Koebe, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,
E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

FOR SALE IN LOTS TO SUIT,

On board cars at Sbranto, Station of the C. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the **MEXICAN PHOSPHATE & SULPHUR CO., H. DUTARD, President, room 7, Safe Deposit Building, or**

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager

Booth's Sure Death Squirrel Poison

For Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and Farmers wherever used.

The Cheapest and Best.

Put up in 1-pound, 5-pound, and 5-gallon Tins.

Every Can Warranted.

This Poison has been on the market less than two years, yet in this short time it has gained a reputation of "Sure Death," equaled by none. By its merits alone, with very little advertising, it is now used extensively all over the Pacific Coast, as well as in Australia and New Zealand.

SEND FOR TESTIMONIALS.

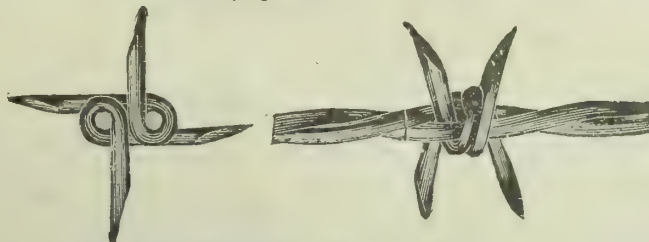
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BOOTH & LATIMER, San Luis Obispo, Cal.

Special Terms on Quantities in Bulk.

GALVANIZED FLAT RIBBON FENCING, BARBED.

PRICE, 4½ cents F. O. B. CARS.



GALVANIZED OR PAINTED.

2 or 4 POINT CACTUS BARB WIRE. TWISTED RIBBON FENCING.

Special prices quoted on application for lots for delivery at interior points.

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S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and from the House.

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Commission Merchants.

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Commission Merchants

—AND DEALERS IN—

CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,
Grain, Wool, Hides, Beans and Potatoes.
Advances made on Consignments.

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(P. O. Box 1936.)

Consignments Solicited.

ALLISON, GRAY & CO.

SUCCESSORS TO

LITTLEFIELD, ALLISON & CO.,

501, 503, 505, 507 and 509 Front Street
and 300 Washington St., S. F.

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GREEN and DRIED FRUITS.

Poultry, Eggs, Game, Grain, Produce and Wool.

MOORE, FERGUSON & CO.,
WOOL, GRAIN, FLOUR

—AND—

General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange

Personal attention given to Sales and Liberal Advances made on Consignments at low rates of interest.

GEO. MORROW. [Established 1854.] GEO. P. MORROW

GEORGE MORROW & CO.,

HAY and GRAIN
COMMISSION MERCHANTS,
39 Clay Street and 28 Commercial Street
SAN FRANCISCO, CAL.

SHIPPING ORDERS A SPECIALTY.

O. L. BENTON & CO.,
Commission Merchants,

Wholesale and Retail Dealers in
Poultry and Wild Game, 65, 66, 67 California
Market, S. F. All orders attended to at the shortest notice. Goods delivered Free of Charge to any part of the city.

WETMORE BROTHERS,
Commission Merchants,

Green and Dried Fruit, Produce, Eggs, Etc.
Consignments solicited. 413, 415 & 417 Washington St.,
San Francisco.

EVELETH & NASH,
COMMISSION MERCHANTS

And Dealers in Fruit, Produce, Poultry, Game, Eggs,
Hides, Fats, Tallow, etc., 422 Front St., and 221, 223
225 and 227 Washington St., San Francisco.

J. W. WOLF, RALPH BROWN, W. H. WOLF.
WOLF, BROWN & CO.,
General Commission Merchants
And dealers in California and Oregon Produce,
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P. STEINHAGEN & CO.,
Fruit and General Commission Merchants
BRICK STORES:
408 & 410 Davis St., San Francisco

WITTLAND & FREDRICKSON,
Commission Merchants.
All Kinds of Green and Dried Fruits.
CONSIGNMENTS SOLICITED. 324 Davis St., S. F.

AMERICAN EXCHANGE
HOTEL,

319 & 321 Sansome St., San Francisco
One door from Bank of California.

The above well-known hotel offers superior accommodations to parties visiting the city.
The table is kept at top grade and the prices are within the reach of all.

RATES—\$1.00; \$1.25 and \$1.50 per day.

Free Coach to and from the Hotel.

CHAS. & WM. MONTGOMERY, Prop'rs

Italian Sheep Wash,
EXTRACT OF TOBACCO.
Free from Poison.

Cures thoroughly the SCAB OF THE SHEEP. The BEST remedy known. Costs less than 1 cent per head for dipping. Reliable testimonials at our office. For particulars apply to
CHAS. DUSENBERG & CO., Sole Agents,
No. 314 Sacramento St., San Francisco.

SAN FRANCISCO, Jan. 11, 1888.

WHEAT—More vessels were taken the past week than any one week this season, and at rates showing a lower range. Buyers combining have the advantage of holders forced to sell. At the close, holders are firmer. Liverpool quotations were lower on Monday and yesterday, but the decline in price was not equal to the decline in charters for vessels; however, buyers used it so as to get holders to

Market Information.

Corn is very strong, with choice grades stronger, under a fair demand and limited offerings. The

In wools the market is very dull for the coarser grades and defective clips, but fine, lively and strong stapled wools are wanted at good prices. The change in woolen goods fashion has depressed some kinds and advanced others, particularly the fine grades.

San Francisco, Jan. 11, 1888.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Jan. 11, 1888.

do choice.....	1 50	@	2 50	do Pumpkins, p. doz	—	@	—
do Bartlett, bx	—	@	—	do Squash, Marrow	—	@	—
Persimmons,	—	@	—	do lat. doz.....	10 00	@	13 00
Jap, bx.....	—	@	—	do Summer bx	—	@	—
Pineapples doz.	2 00	@	4 50	do String beans lb.	—	@	—

Plums lb.....	— @ —	Tomatoes box.....	— @ —
Pomegranates, b	— @ —	do choice.....	— @ —
Prunes lb.....	— @ —	Turnips cbl.....	75 @ 1 25
Quinces bx.....	— @ —	Beets, sk.....	75 @ 1 00
Raspberries ch.....	— @ —	Cabbage, 100 lbs. 1	00 @ —
Strawberries ch.....	— @ —	Carrots, sk.....	35 @ 40
Watermelons, 100.....	— @ —	Eggplant, 5 bx.....	— @ —
DRIED FRUIT			
Apples, sliced, lb	4 @ 5	Green Corn, cr.....	— @ —
do evaporated	9 @ 10	do sweet cr.....	— @ —
do quartered.....	12 @ 13	do large box.....	— @ —
Apricots.....	8 1/2 @ 10 1/2	Green Peas, lb.....	— @ 1
do evaporated.....	14 @ 16	Sweet Peas lb.....	— @ —
Blackberries.....	12 1/2 @ 15	Lettuce, doz.....	— @ —
Chiron.....	18 @ 25	Lima Beans lb.....	— @ —
Dates.....	9 @ 10	Mushrooms, lb.....	30 @ 40
Figs, pressed.....	5 @ 6	Rhubarb bx.....	— @ —

STEPS have been taken to prevent the importation of diseased pork from Denmark into this country.

IMPORTED STALLIONS!
DIRECT FROM
England.

Cleveland Bays
FOR BREEDING
CARRIAGE and COACH HORSES.

Seth Cook, Esq., Cook Stock Farm, Danville, Contra Costa Co., Cal., and
Shericker Bros., Springfield, Ill.

For prices and catalogues apply to or address GEO. A. WILEY, Cook Stock Farm, Danville, Cal., SAMUEL GAMBLE, 1307 Dolores street, or Bay District Track, or to

KILLIP & CO., Live Stock Auctioneers,
22 Montgomery St., S. F.

RANCHO CHICO NURSERY.

Large and Select Stock of
Fruit, Shade & Ornamental TREES,
Grown Without Irrigation, Clean, Well-Rooted and Free from Insect Pests.

Full Line of Choice Grapevines.

Stock of French Prunes and Apricots exhausted.

Catalogue and price list sent on application.

JOHN BIDWELL, Proprietor,
Chico, Cal.



H.H.H. HORSE LINIMENT.
THE H. H. H. Horse Liniment puts new life into the Antiquated Horse! For the last 14 years the H. H. H. Horse Liniment has been the leading remedy among Farmers and Stockmen for the cure of Sprains, Bruises, Stiff Joints, Spavins, Windgalls, Sore Shoulders, etc., and for Family Use is without an equal for Rheumatism, Neuralgia, Aches, Pains, Bruises, Cuts and Sprains of all characters. The H. H. H. Liniment has many imitations, and we caution the Public to see that the Trade Mark "H. H. H." is on every Bottle before purchasing. For sale everywhere for 50 cents and \$1.00 per Bottle.

For Sale by all druggists.
To Dairymen, Fruit-Growers and Farmers!
SITUATION WANTED.

An experienced man, with wife, wants a situation. Understands Dairying, Irrigating, and General Farming. Can give the best of references. Address, H. B., Box 361, San Francisco.

I CURE FITS!
When I say cure I do not mean merely to stop them for a time and then have them return again. I mean a radical cure. I have made the disease of FITS, EPILEPSY or FALLING SICKNESS a life-long study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infallible remedy. Give Express and Post Office.
H. G. ROOT, M. C., 183 Pearl St., New York.

This paper is printed with Ink Manufactured by Charles Eneu Johnson & Co., 500 South 10th St., Philadelphia. Branch Offices—47 Rose St., New York, and 40 La Salle St., Chicago. Agent for the Pacific Coast—**Joseph E. Dorsey, 529 Commercial St., S. F.**

GOULD'S SPRAY PUMP



(Copyrighted by the Gould's Mfg. Co.)

With Bamboo Extension all fitted up, COMPLETE WITH HOSE, BARREL and SPRAY NOZZLE.

This cut shows in faithful operation our Gould's Spray Pump; they are utilized for spraying Fruit Trees, Orange Groves, Vines, and in fact, all Trees or Shrubbery infested with the destructive insects which infest and do so much injury in Orchards, Vineyards, Orange Groves, etc. They are made entirely of brass, with the exception of frame and handle, and are strong and heavy; the valves, being made entirely of metal, will not be affected by the corrosive solutions such as Caustic Soda, Acids, Lye, or any other solution that may be used to kill the destructive insect.

Our Bamboo Extension is an admirable invention; the operator of the Pump, by the use of this extension, can get to all parts of the tree while on the ground, also saving himself from getting his hands and face burnt from the solution. As a rule, the man who does the driving of the team does the pumping, and the party who has charge of the Bamboo Extension does the spraying. We can fit up these pumps so you are capable of running two Extensions or Sprays at one time, each man taking a separate row of trees. Our Spray Nozzles throw the Spray out on the tree in a very fine mist that allows the solution to settle on the upper and lower sides of the leaves and branches; by the use of a Spray Tip (in fact it is the only way to put on the solution) fully one-half or two-thirds of the solution is saved. The Imperial Nozzle seems to be the favorite. These pumps have been adopted and recommended by the State Horticultural Society. We have over 750 in use in California.

NOTICE.—ONGERTH'S LIQUID TREE PROTECTOR is the best Spray for killing Red Scale, Black Scale, White Cushion Cottony Scale, San Jose Scale, or any other insect.

Send for Prices and Complete Circular of Spraying Outfit.

WOODIN & LITTLE,

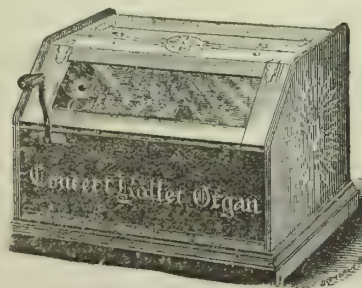
509 & 511 Market Street,

San Francisco, Cal.



PERCHERON HORSES. FRENCH COACH HORSES.

More Imported and Bred than by any other Eight Establishments.
511 PURE-BREDS Now Actually on Hand.
Experience and Facilities Combined for Furnishing Best Stock of Both Breeds at Reasonable Prices.
Separate Catalogues for each breed, with history of same. Say which is wanted. Address
M. W. DUNHAM, WAYNE, DU PAGE CO., ILLINOIS.



HAMMOND'S MUSIC STORE,

2513 MISSION ST., SAN FRANCISCO.
Dealers in Pianos and Organs, Musical Merchandise,
Roller Organs,

The musical marvels. Prices, \$7, \$12, \$15. They perform a choice selection of over 200 tunes by rollers similar to that of a music box. No paper used to produce this music, new tunes being constantly added.
They play the latest music in tones so full and sweet. For the rollers are all perfect and the parts are complete. For church or social meeting, for concert and for dances, Operettas, waltzes, jigs, hornpipes, gay life quadrille lancers. For dances and where musicians would have to be engaged, they will save their cost in one night. Circulars free on application.



Warranted Seed.

I have founded my business on the belief that the public are anxious to get their seed directly from the grower. Raising a large proportion of my seed enables me to warrant its freshness and purity, as see my Vegetable and Flower Seed Catalogue for 1888, FREE for every son and daughter of Adam. It is liberally illustrated with engravings made directly from photographs of vegetables grown on my seed farms. Besides an immense variety of standard seed, you will find in it some valuable new vegetables not found in any other catalogue. As the original introducer of the Eclipse Beet, Burbank and Early Ohio Potatoes, Hubbard Squash, Deephead Cabbage, Cory Corn, and a score of other valuable vegetables, I invite the patronage of the public.
JAMES J. H. GREGORY, Marblehead, Mass.

DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending December 31, 1887, the Board of Directors of the German Savings and Loan Society has declared a dividend at the rate of four and one-half (4 1/2) per cent per annum on term deposits, and three and three-fourths (3 3/4) per cent per annum on ordinary deposits, and payable on and after Tuesday, the 3d day of January, 1888. By order
GEO. LETTE, Secretary.

HEALD'S BUSINESS COLLEGE,
24 Post St. S. F.
Send for Circular.
Shorthand, Penmanship, Typewriting, Book-keeping.

WINCHESTER HOUSE,

44 Third Street, San Francisco, Cal.

This Fire-proof Brick Building is centrally located, in the healthiest part of the city, only a half block from the Grand and Palace Hotels, and close to all Steamboat and Railroad Offices.

Laundry Free for the use of Families
HOT AND COLD BATHS FREE.

Terms, Board and Room, \$1.00 per Day
And upward.
ROOMS WITH OR WITHOUT BOARD.

FREE COACH TO THE HOUSE.
J. FOOLEY.

Preliminary Announcement.

AUCTION SALE

Standard Bred Trotting Stallions,
BROOD MARES,

Colts & Fillies of Highest Type!
TROTTER AND ROADSTER GELDINGS.

Cleveland Bays, Saddle and Work Horses!
Property of **SETH COOK, Esq.,**
Cook Farm, Danville, Contra Costa Co.,
TO BE SOLD AT

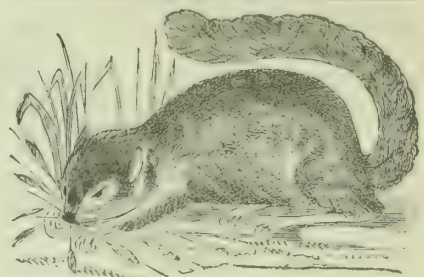
BAY DISTRICT TRACK, San Fra'co

AT 10 A. M. SHARP

THURSDAY, February 16th.

Catalogues, giving full pedigrees and descriptions, ready Saturday next, 14th inst.

KILLIP & CO., Auctioneers.



STRYCHNINE! STRYCHNINE!

Farmers who want the PUREST and BEST Strychnine, SURE TO KILL Ground Squirrels, Gophers, Mice and other animals which destroy the crops, should specify "MALLINCKRODT'S ST. LOUIS" STRYCHNINE, manufactured by

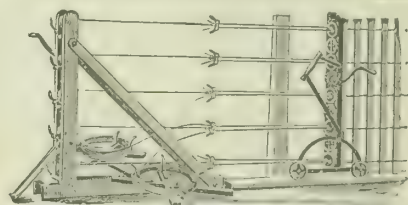
Mallinckrodt's Chemical Works,

ST. LOUIS and NEW YORK,

—AND—

SOLD BY ALL DEALERS.

Insist upon having our brand, and allow no substitution of other makes. See that our cap and label is on the bottles.



The LITTLE GIANT.

The greatest fence loom on earth. Fully covered by patents. A sure impediment to the rabbit. Only weighs 30 pounds. Can be operated by a child as well as a man. You are not compelled to pull a cumbersome track over the rough ground. All that is needed is a common board laid upon the ground. Estimates for material made when wanted. Correspondence solicited with hardware men generally. Price, \$40.

THOMAS D. POOLE,
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French Prunes for Sale.

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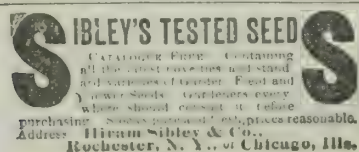
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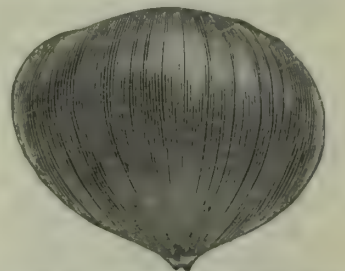
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From \$150 to \$300 an Acre,
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Reference, Riverside Banking Company.
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5000 Bartlett Pear Trees, one and two years old, for sale at bed-rock prices; special rates to dealers.
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UNFERMENTED WINE.
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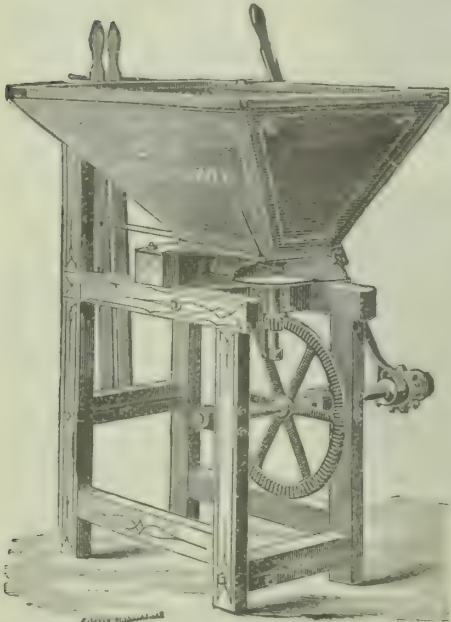
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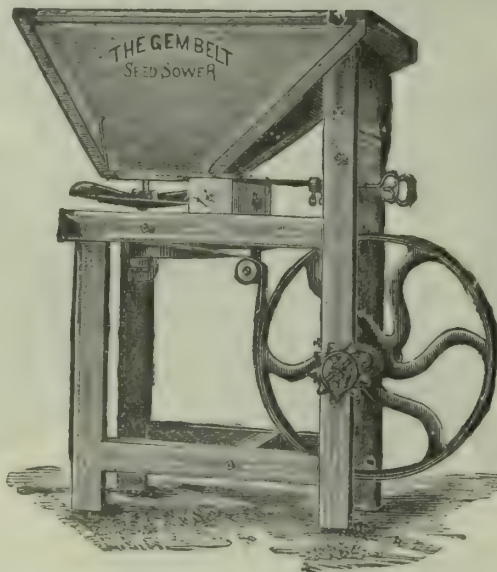
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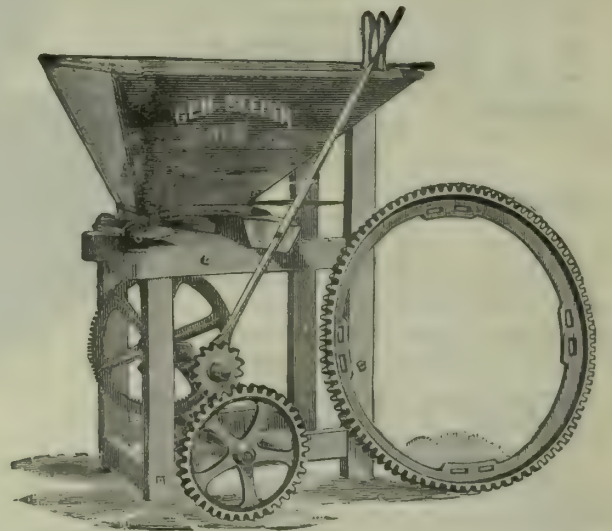
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This Machine is run with a Chain and Bevel Gear. It is the one we have sold for years, and has given the best satisfaction of any broadcast seeder yet invented.



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Runs with Chain and Belt Gear. The advantages gained on the bevel gear are smoothness of movement, noiseless while running, durability of the fast running parts, and the evenness with which it sows the grain.



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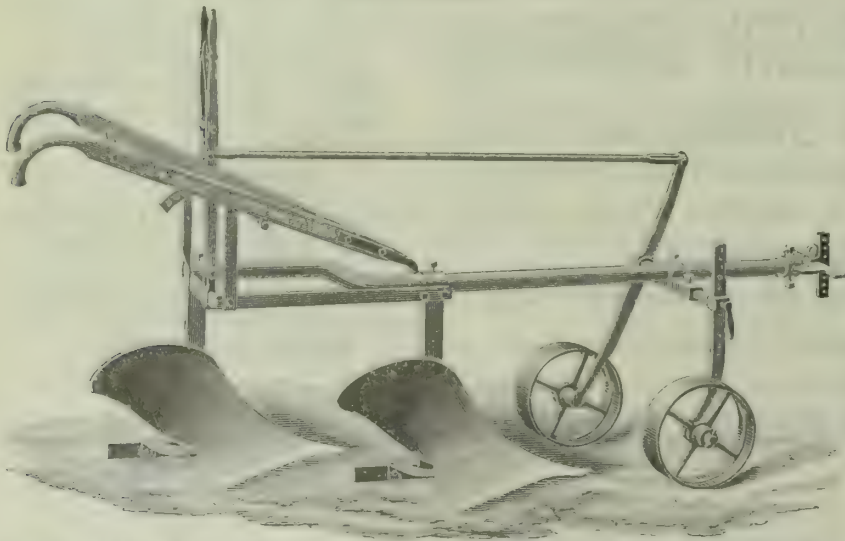
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We have manufactured the GEM SEEDERS for a number of years, and they have given better satisfaction than any other Broadcast Seeder in the market. They throw the seed horizontally instead of vertically (as in all old-style Seeders), and thus save a large portion of the grain. Where sold they have never failed to give satisfaction. ARMSTRONG'S PATENT FORCE FEED is attached again this year, and is considered by those who have used it, a great improvement.

THE GENUINE GEM SEEDERS are manufactured exclusively for us at Benicia. SEE THAT OUR NAME IS ON THEM.

Vineyardists, Orchardists & Farmers! TAKE NOTICE!

—OF THE—



J.A. BILZ 2-Horse Gang & 1-Horse Plow

Which the Cuts Represent. Patented October 19, 1886.

These Plows have been in market for the past two seasons, and those that use them would not do without them at any price. All claim to save from \$2 to \$2.50 per day over any other plow. Not only for orchards and vineyards, but also for field plowing, where a two-horse single plow is used.

The Plow is 18 inches, weighs 160 pounds, and two horses will pull it as easily as a 12-inch plow, and does better work than a single plow. No trees are barked and sticks in vineyards pulled over where my Patent Double-trees and Single-trees are used.

I ALSO MANUFACTURE ALL STYLES OF
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Soil in Splendid Condition for Crops.

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WE HAVE DECIDED TO

REDUCE THE PRICE

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FARMERS' FRIEND

3-PLOW GANG

From \$60 to \$31.50.

TERMS CASH.

This offer to hold good for 30 days.

The Farmers' Friend 3 ten-inch Gang will do more work, and do it better, with less labor and horse-flesh, than any other Gang Plow.

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TWENTY-PAGE EDITION.

Vol. XXXV.—No. 3.

SAN FRANCISCO, SATURDAY, JANUARY 21, 1888.

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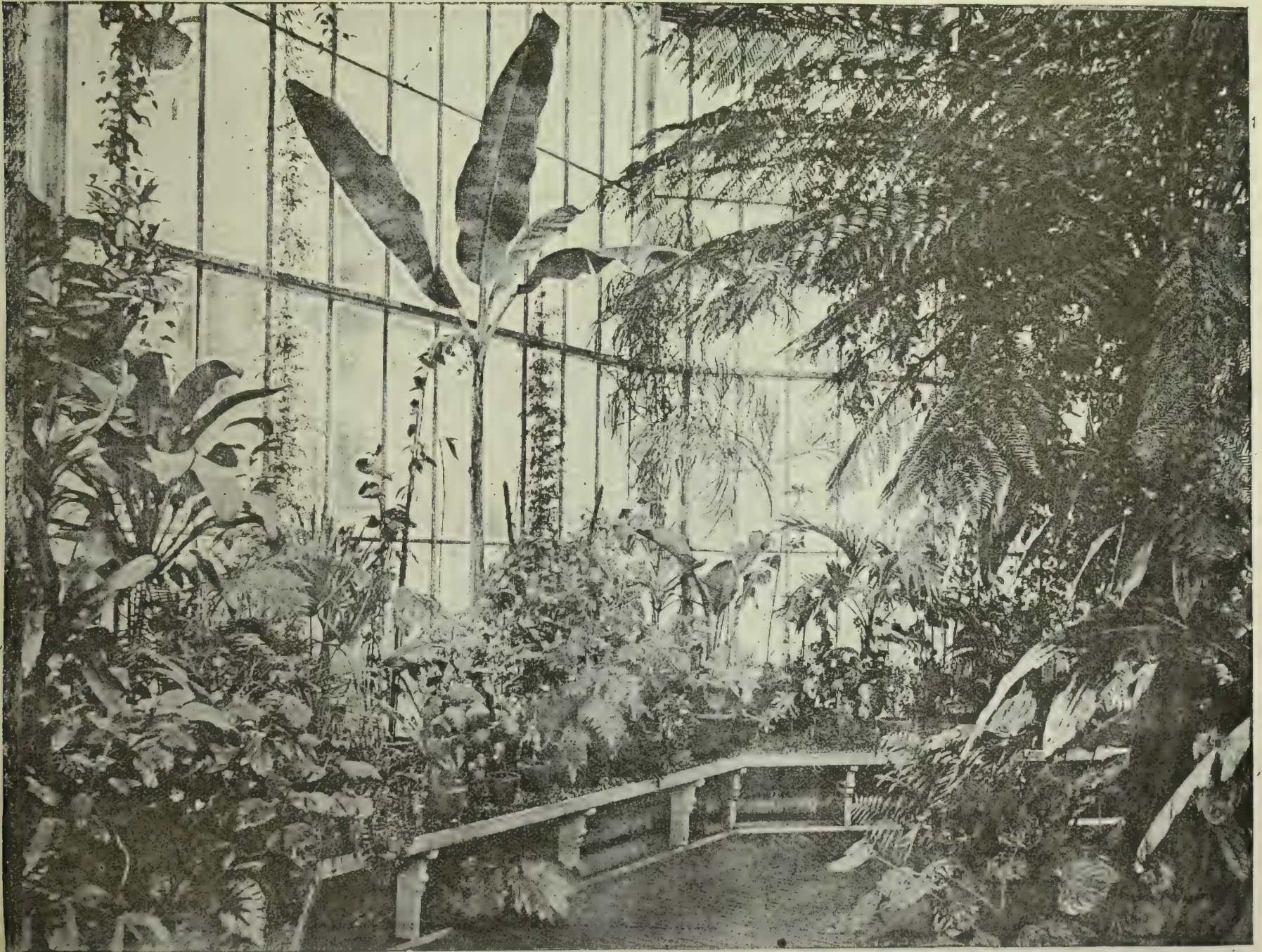
The Golden Gate Conservatory.

An object of especial interest, no doubt, to visiting horticulturists will be the conservatory in Golden Gate park, the great recreation resort of San Francisco. The park in all its ap-

of the wings of the conservatory, and is but an exponent of the contents of the building. The structure in itself is interesting. It is favorably situated on a commanding site between the main drive and the north ridge road. The building is about 250 feet in length, covering

fountain set in the center of all. On the right of the rotunda is the orchid-house, an arched room 35x50 feet. There are many rare and beautiful varieties of this strange family to be found here. The space not being entirely taken up by the orchids, an infinite variety of

potting-room, 30 by 30 feet. A heating apparatus supplies the requisite warmth to all the chambers, and an admirable system of ventilation enables the keeper in charge to preserve at all times an equable temperature. Thirty-five tons of glass and over three tons of



A VIEW IN THE CONSERVATORY AT GOLDEN GATE PARK, SAN FRANCISCO—A TROPICAL CORNER.

pointments is very creditable to far Western enterprise and public spirit, and its growths will afford the visiting experts good opportunity for study of tree, shrub and flower, many of which may be new to them, for, in our planting, we draw much from Australia and the Orient, and can show open-air growths which are not at all possible at the East. The general landscape features of the park, the bedding, the drives, the children's playground and many other features, may interest and please the visitor, and afford open-air scenes in January quite unwonted to their eyes.

Our engraving gives a glimpse at one corner

an area of about 15,000 square feet, and a few years ago, at least, was exceeded in size only by the Government conservatory at Washington. It is oriental in style, graceful in outline, and highly ornamental. The main entrance, or reception-room, is 23 feet square, substantially furnished, and ornamented with a fountain in the center. From this room the visitor enters the rotunda—a circular room, 56 feet in diameter and about the same number of feet in height. An octagonal space in the center of the rotunda is occupied by several varieties of rare tropical plants; and the dryness of the atmosphere is relieved by the spray from a

other fascinating flowers have been introduced. The arched room on the extreme right of the building is set apart for the cultivation of the larger and rarer aquatic plants. A circular pond, 28 feet in diameter, has been constructed here, with the necessary heating apparatus, for the Victoria Regia and other water lilies.

On the left of the rotunda is another arched room, 35x50 feet, and at the end another transverse room, giving a symmetrical balance to the design as seen from the front.

In the rear of the building are two propagating pits, 50 feet long by 12 feet wide; a growing-house, 75 feet long by 25 feet wide, and a

putty were used in the construction of the conservatory.

Although but young, the conservatory has a history. Just five years ago this month the building took fire in the center and the central erection, the palmhouse, was destroyed. It was restored through the liberality of Charles Crocker. Considerable interior improvements have been recently made, and the collections of desirable plants have grown by contribution from all parts of the world.

Scotch cattle were the finest presented in the recent Christmas market at London, England.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

A Visit to Phoenix, A. T.

EDITORS PRESS:—Within the last few weeks I have visited portions of Arizona, Phoenix and the Salt River Valley.

I had not been in Phoenix in ten months, and was amazed to see the advancement it had made. Commodious brick blocks for mercantile and business purposes, a large opera-house, many fine residences, and buildings now in progress for an elegant city hall, for the First Presbyterian church, a temperance temple and many other indications, are among the evidences of thrift seen in every direction. Street railroads are now in operation through the entire body of the city, about two and a half miles in length, and others will be running so as to enlarge the mileage to double its present extent within a few months.

The lands of the valley are rapidly passing into the hands of those who design to occupy and cultivate them. Planting is going on with great rapidity, and is accomplished with a facility I have not elsewhere seen. I carefully examined a quarter-section, a little distance from the city, which had been cleared and fitted for planting at an expense of only \$1 per acre. There is a descent from the north-east to the southwest, very slight, yet sufficient for water to flow to the west or south. The surface is so smooth and regular that not a spoonful of earth needs to be removed in order for water to follow a common plow over every part of it.

The soil is so light and friable that no preparation for planting vines is necessary, except to run a single furrow with a common plow where the row of plants is desired. The water is then let in at the head of the furrow, either on the north or east side, and as the cuttings are put into the bottom, the water follows the planting, packing the soil around the cuttings. No plowing, harrowing or cultivating is required until weeds appear. This quarter-section of land can be planted with raisin grape-cuttings, and all necessary care bestowed upon them for 12 months, at an expense not exceeding \$6 per acre, so a man of intelligence and experience in the business tells me. This is a fair sample of what is being done with many thousands of acres within a few miles of the city of Phoenix.

Schools, churches and associations for moral and social improvement are being organized and sustained with a degree of enterprise quite uncommon in a new town.

Another feature that strikes me with great interest is that the general characteristics of the people of Phoenix and vicinity, for probity and virtue and the higher orders of civilization and enlightened society, surpass in development those of any other frontier town of similar age and circumstances I have ever been acquainted with. I was especially impressed with the desirableness of the valley and town, as a home for those who, with small (or large) means, desire to secure the advantages of real estate appreciation (to be found in fullest extent only on the frontier) and as a home, in which to enjoy life and rear families. I found all classes of business prosperous, also specimens of the productions of the soil, during the last year, that were more than equal to my most sanguine expectations.

But as I am expecting to write something further in the early future, I will for the present cease.
O. C. WHEELER,
No. 1635 Grove St., Oakland.

In the Sonoma Redwoods.

EDITORS PRESS:—I have had the pleasure of reading your valuable paper for the past year, and I feel thankful to the RURAL PRESS for the active part it has taken in aiding and encouraging the fruit-growers and farmers. It is their friend and guide. And I am sure that every one who has read its columns the past year will agree with me that its labor has not been in vain. The fruit interests of California are indeed enormous, to say the least, and scattered over an extensive field, with every variety of soil and climate. And when we add to this the many blights and pests that infect it, what a problem the fruit-raiser has to work out to know just where to locate to obtain the best results. But when he has a paper printed right in the State, which gives the advice and experience of farmers in different localities, many of the things that seemed impossibilities melt away.

I have been located in the northern part of Sonoma county for the past eight years, in what is known as the great redwood belt. This locality is situated about eight miles from the coast. Its surface is broken or hilly, lying as it does in the Coast Range. The altitude is 1500 feet above the sea. The climate is mild during the entire year. Fruits of all kinds do exceedingly well here, and especially grapes and apples. The soil is rich and productive; having a subsoil of clay, it holds the moisture well. This locality, like many others in this vast State, has no railroad, and it is not likely its fruit interest will be developed to any great extent till it has.

The farmers here pay most of their attention to raising stock, principally sheep, and it is a

fine-paying business, as this mountain range is very healthy and the sheep produce an extra quality of wool. Taking all in all, the northern part of Sonoma county is one of the most inviting parts of the State, and its farmers are a thrifty, happy class of people. That legal document called a mortgage, that has made Christmas a blue day in many a household, is a thing very seldom met with in these parts.

If you are looking for health, you need not travel any farther. I have known two doctors who have left us because there is too much health to suit them. As for nature in all its loveliness, one never tires of it. The grand old redwoods with their evergreen boughs and towering heads; the living mountains of nature. Truly they are wonderful. Then the cool mountain streams with their sparkling waters, where glide the silvery trout, and, if you are a lover of this sport, you can pass a day now and then very pleasantly angling for these speckled beauties.

I might go on writing for pages of the many interests of the redwood country, but, like many writers for newspapers, I fear the waste-basket, *Fisherman's Bay.* G. S. F.

PUBLIC AFFAIRS.

The Tariff and Our Industries.

EDITORS PRESS:—In your issue of December 31st you call your readers' attention to the tariff question, not with a view to discussing on general or theoretical grounds, but simply how the principle of removing the duties from wool and fruit might affect those industries in California.

I agree with you that to enter upon a general discussion of the various questions involved in a revision of the tariff laws of the United States is foreign to the purview of the RURAL PRESS. Still, as the National Wool-Growers' Association seems to be up and doing all possible not only to have the present tariff on wool continued, but increased, I have a few queries to put to wool-growers.

The tariff of 1847, which continued without any essential change to 1867, rated wool at 30 per cent *ad valorem* as valued at the port of exportation. This tariff, be it remembered, was a so-called Democratic measure and framed for revenue, and was supposed to give protection only incidentally to domestic industries.

Under this tariff the wool-growers of the United States gradually increased the number of their sheep till in 1867 Ohio had 7,159,177; Michigan, 3,473,075; Pennsylvania, 3,230,440; New York, 5,117,148; Indiana, 2,783,367; Illinois, 2,446,481; Wisconsin, 1,260,000; Iowa, 1,950,752. The total number of sheep in all these States in 1866 was 26,829,815 head, and in 1867, 29,879,222 head.

In 1867 Congress enacted a new wool tariff increasing the duties on fine wools 30 per cent, or a total duty of 60 per cent.

This tariff rate continued to 1871, when it was reduced to 55 per cent, and so continued to 1883, when the tariff was further reduced to 50 per cent.

Yet under all these protective tariffs, how is it that in the above mentioned States the number of sheep has been reduced to less than half the number that existed in 1867 under the low wool tariff of 30 per cent? In 1878 these States had only 12,893,600 head; in 1879, 13,527,500 head; in 1880, 14,122,778 head; in 1882, 14,761,150 head. Texas in 1867 had 9,401,195 head; in 1882, 6,850,000.

From the above statistics it would seem the wool industry was never so prosperous as under the low 30 per cent tariff of 1847. Will the National Wool-Growers' Association rise and explain?

Again, let us look at the prices obtained under these several tariffs. Under the tariff of 1847, the lowest price for fine wool was in 1849, 39 cents per pound. The highest was in 1853, 59 cents per pound. Under the high protective tariff of 1867, the lowest price for wool was in 1868. The price was 42 cents per pound; the highest price was in 1871, namely, 58 cents per pound. From these statistics where is the corresponding relation between high and low tariffs and prices? Will the advocates of a protective tariff point it out?

It is claimed by the friends of wool protection that the free importation of wool will ruin the sheep industry in the United States, and those now engaged in the business must resort to other pursuits. If this should be so in fact, it would be only the large flock-masters in the Territories and in California, and their numbers are few. The small farmers of the Middle and Western States will continue to grow their small flocks as a necessary portion of their farm stock. But the woolen factories would continue to run all the same. If the home supply should fall short of the demand, they would import; and for raw wools they would swap cloths, and thus trade would be stimulated to the mutual benefit of all.

Now as regarding the fruit industries of California, you intimate in your article that free trade in these industries, in your opinion, would destroy them, now in their infancy. I hardly think so. Our fruits in various prepared forms are now seeking markets in the various parts of the world, but if we refuse to trade on equal terms, we cannot expect ever to get up much of a trade. Commerce is simply the exchange of the commodities of one country for those of another. Now if we as fruit-growers insist on maintaining and even building higher a wall of

exclusion, shutting out fruit importations, we will surely be met by similar walls of exclusion in those countries we may propose to trade with. Now I submit, is such a policy a sound one? The consumers of every country far exceed the producers. By restrictive imports we put the products of a country beyond the reach of many, and thereby lessen consumption, and, as I think, in the main to the injury of the producer himself. Suppose the United States should enact a general non-intercourse law, would such a law be beneficial to the fruit-growers of California as a whole? No sensible, intelligent man would say it would. Well, if total non-intercourse would be in the highest degree unwise, partial restriction is, I think, unwise in degree. As a California fruit-grower I have no fear of being driven out of the business by the so-called pauper-labor products of other countries.

Let the people of the United States adopt a liberal commercial policy toward the people of other powers and we will find a world's market for our fruits with profit to ourselves.

Haywards, Cal.

W. C. BLACKWOOD.

The Tariff Question.

EDITORS PRESS:—Under cover of a message to Congress the President has addressed an open letter to American farmers. He suggests to us the propriety of ruminating over the free-trade question. It's a mental cud that will bear much mastication before it can be thoroughly digested and receive its final solution. In its present state it is not very attractive intellectual diet. It is a mass of crude theories, dubious figures and knotty points, of which politicians seize such a handful as will suit their turn and dish them up with all possible party spice and seasoning to suit the palates of their audience.

I think a reversion to first principles always simplifies matters. The continuity of law is one of these first principles. Now we all concur in a belief that one of the best laws by which to regulate our private lives is what we call the "Golden Rule." Continuity of law demands that the Golden Rule be applied to national as well as individual affairs. Let us apply it! California is a producer of cheap food. Her superabundance annually increases. Her wheat and honey, her fruits and wine, cry out for consumers: "Liverpool to the rescue!" And to our comfort and gratification the swelling stream of gold rolls back to the Golden Gate. Almost free of import, England admits our produce and her toiling millions are fed. Naturally she asks in return that her products be similarly favored in our markets. Let the Golden Rule be applied! If not, say out boldly that national selfishness is a virtue and private selfishness is a vice.

There is a great deal too much affectation of mystery about politics; too much diplomacy and chicanery masquerading as statesmanship. Look at the antiquated nonsense being perpetuated in this new world of America? Here is an immense area peopled by a homogeneous race, mainly attached to identical laws, habits and customs! And how the gods must laugh to see them drawing an arbitrary imaginary line across their country, setting up custom-houses and marching regiments of revenue officers each side the boundary to prevent Canuck and Yankee from a free trade!

And it is all in the interest of our cherished laborers! How careful we are of their welfare! The world has got too small for such fictitious coddling of any class. Granting wages are higher here at present than elsewhere, what results? The depopulation of Ireland! Instead of feeding foreign populations in their own lands with Californian produce, they are fed here as American immigrants. Is this heavy immigration desirable? If so, continue the system of protection. "Where-so-ever the carcass is, there will the eagles be gathered together."

The President's open letter selects wool as its main illustration. Having watched the market for many years, I know that something besides tariff causes the greatest market fluctuations. Price for ordinary grades has ranged from 45 cents to 11 cents per pound. I should like to see this farmer's question fully discussed apart from its present political bearings. In fact, I hardly regard it as a fair party issue. Rouse up, RURAL readers! EDWD. BERWICK.
Carmel Valley, Jan. 5, 1888.

[With the tariff as a question of party politics, we have nothing to do; as a matter of general theory, on the lines of political economists and the universal brotherhood idea, we wish to have just as little as possible; as affecting the industries, and consequently the livelihood and prosperity of our readers on this coast, it is a topic appropriate for our columns.]

Wool-Growers' Meeting.

As announced by the newspapers of Ukiah, the wool-growers and farmers of Mendocino county met at the Court-house Saturday evening, 7th, to consider the policy of the Administration, as expressed in the message of the President to Congress. The meeting, says the Ukiah Press, was attended by a large number of those interested in the wool and other industries common to Mendocino county, and was unanimous in its denunciation of anything

looking toward a free-trade policy. Able speeches were made by the Hon. R. McGarvey and Hon. Whit Henley in support of the resolutions adopted, which are as follows:

WHEREAS, The production of wool is a large and important industry in California and throughout a large part of the United States, rendering productive and remunerative a vast area of land that would otherwise be almost worthless; and

Whereas, A removal of the tariff on imported wools would be destructive to this interest, and any reduction of the same would seriously cripple it; be it therefore

Resolved, That we enter our earnest protest against any reduction of the present tariff on imported wools.

Resolved, That the removal of the duty on the raw material, and the retention of the same on woolen manufactures, would in no way benefit consumers and would be but an unjust and unwarranted discrimination against the producers and in favor of the manufacturers of wool.

Resolved, That we appeal to Congress to neither remove nor reduce the present tariff on imported wools, and we hereby petition our Senators and advise our Representatives to use every lawful effort to this end.

Resolved, That we heartily indorse the views set forth by the National Wool-Growers' Association, and extend to them our hearty co-operation in protecting the wool industries.

Resolved, That we forward to our Senators and Representatives at Washington and to the National Wool-Growers' Association a copy each of these resolutions.

WM. FORD,

Chairman of Committee.

THE STOCK YARD.

Treatment for Cows at Calving.

EDITORS PRESS:—As you ask for information as to what is good to assist cows in getting rid of the afterbirth, I will give you my plan, which I never knew to fail. Take one-half pint (or more) of whole flaxseed, and boil it well in one-half gallon or more of water, according to quantity of seed, stirring all the while to prevent scorching. Then take a quantity of bran in a bucket and pour sufficient boiling water on it to scald it well, making a thick batter; then add the flaxseed and stir well, and while lukewarm give to the cow.

In the winter season this mash should be given once or twice a day for two or three days before calving; also a few times after, as it is very soothing. In case they retain the afterbirth a few hours after the calf is born, give the above mash with one-half teaspoonful Epsom salts dissolved in warm water added; mix well.

A cow not used to eating slop may refuse to eat it; if so, throw a little dry bran on top and a very little fine salt on that. The reason I say whole flaxseed is because I could never boil ground flaxseed sufficient to make a good mucilage.

E. E. K.

Tualumne Co.

The Dehorning Doctrine.

EDITORS PRESS:—The article on dehorning cattle in your issue of Dec. 31st gives, I should say, all the arguments that can be adduced in favor of the practice, and while some of them are good, others run contrary to my experience. The argument in favor of the saving in shed-room is probably correct, although perhaps not to the extent claimed. I cannot see where the saving of one-fourth the feed, especially in this climate, can be, neither the saving of manure. I will concede that where cows are stabled to be milked and fed they may be handled a little more easily, but if confined in stanchions or any other way they are more liable to get loose if the horns are off.

Your correspondent's description of the horn-capers in corral at milking-time is graphic; no doubt he has a lively lot of cows.

Now as to the effect of cutting off the horns. I have always practiced cutting the tips off the horns of cows that were quarrelsome, and I never thought that it made a difference in their dispositions. They make other cows stand aside all the same, but cannot do the same mischief as easily.

Your correspondent seems to indorse Mr. Haaf's work on dehorning, giving several extracts by way of argument. One is: Cut the horns off from cattle and you save nearly all loss of calves by abortion. Mr. Haaf's idea as to the cause of abortion, I think, be new to many. No doubt wounds or bruises are the cause in some cases, but I am at fault if they are the main cause. I have lost calves by abortion, but have generally found the cause to be something beside a bruise. Think I would have lost one this winter had I not used preventive measures.

Judging of Mr. Haaf's work by the extracts given, I should say that a strong vein of exaggeration runs through it. As I look at it, carelessness is the cause of nearly all the loss of cattle by horns, nor do I think the loss is as large as Mr. Haaf makes it or your correspondent seems to think it is, and for this reason, Mr. Steele says: Nearly every farmer loses cattle right along by horns. I have been engaged in raising cattle and horses nearly all my life and think I lose an average with other farmers from other causes but never lost one by horns. So it seems to me that mine might be a typical case.

I recollect of three bulls that did damage

with their horns, but in all cases the owners had warning enough of trouble to come and the bulls should have been taken care of. In those three cases horses were the victims. Dehorning those bulls would have saved the horses. Whether the bulls would have been safe at large is a question, for a bull that would gore a horse is liable to attack a man, and it is best to have him confined.

As a breeder of cattle I care not a pin for horns save as they are indicative of the breeding of the animal. If Mr. Haaf has a patent on his tools and can get them introduced so that they are generally used, he can perhaps make as large a fortune as those other men mentioned, even rival a Cæsus.

Whether dehorning will ever become popular enough to cause an indiscriminate mutilation of our cattle, time alone can tell. For the present I consider many of the positions taken not proven.

J. A. BREWER.

Centerville, Cal.

HORTICULTURE.

Cling Peaches vs. Free.

EDITORS PRESS:—In the planting of peaches, both for shipping and drying, many seem to lose sight of the great advantages the cling peach has over the freestone.

In the shipments East last year the cling peach brought the highest price in market, which, on account of its good keeping qualities, arrived at its destination in good condition. As a drying peach the cling, because of its keeping in good condition when ripe on the tree, gives time to handle, and, the flesh being firmer, does not lose so much in drying.

With the pitters now in use, the cling is as easily handled as the free, and holds better on the fork to pare. In paring the peach to dry there is not so much loss in weight as many suppose. It does not require so much drying as the unpared, and when so pared and evaporated brings double the price in market.

Many varieties of yellow clings are sold under the name of the Orange and Lemon Cling, both in the local and in the Eastern markets. A number of the California seedlings sold as such are superior to either and to many other of the old standard varieties, which are the following, viz: Edwards' Cling, called also the California Cling, Day's Yellow Cling, Tuscan Cling, Albright Cling, Sellers' Cling, French Cling, McDavit's Cling, all fine yellow peaches of first quality. Mr. McDavit of Placer county had in his crop of that name, in 1886, six peaches that weighed nine pounds. George's Late Cling and Winters Cling are both superior white peaches, ripening in September, and both good shippers. The Winters Cling is a favorite canning peach. I refer to nurserymen's catalogue for description of varieties named.

ISAAC BIRD.

Sacramento.

There are many others which might be mentioned. Who will write about them?

Cider-Making at the East.

[Written for the RURAL PRESS by M. A. S.]

The making of cider in the olden times was done at small cider-mills, usually a rough, cheap affair, owned by some well-to-do farmer who made cider for his neighbors at very low price per barrel, or else a certain share of the cider made. The farmers drew their apples and empty barrels to the cider-mill, very likely assisted in making the cider, and carried home their barrels of sweet cider, and it was often sold as low as \$1 per barrel where the purchaser furnished his own barrel.

The barrels of sweet cider were rolled into the cellar on to a low platform and fermentation was soon over, and the bungs fastened and a wooden faucet inserted in one end of the barrel.

Some put in a cupful of mustard seed into each barrel of cider before fermentation was fairly over, and other devices were used to prevent the cider from becoming what was called "hard cider," that if drank of freely was apt to affect locomotion, or loosen the tongue.

Cider-making in New York and some other States has been gaining in importance of late years, as wine-making has in California.

As good apples as are grown in the United States are raised in the lake counties of New York, although some other States claim to have as good. The soil is fertile, the cold north winds are modified and warmed by their passage over the great bodies of water, so that they do not chill or stunt the fruit.

Cider-making is now carried on in a different manner and on a larger scale. The grinding of the apples is done by steam-power, and the presses are operated by the same power.

Cider is no longer allowed to grow hard in barrels, but is a refined liquid which can be used at any time of the year and is bottled.

The apple juice is refined by filtering it through a peculiar sand which is found in Somerset county, Massachusetts. The sand is very fine and contains no iron, but has a considerable percentage of mica in its body. This seems to gather all the impurities of the apple juice, and allows the cider to pass out with the flavor and strength retained; and with the decomposing element so modified that the

juice is clear and sparkling without being insipid.

The largest cider-manufacturing and storage firm in the world is near this sand-bank.

Last year it turned out 40,000 barrels and this year 50,000 barrels will be made there.

There are other large manufactories in Massachusetts and New York. The main railway lines through the State are busy sending trainloads of apples to the several mills. The Interstate Commerce Act handicaps the manufacturers and refiners in Western New York, as it enhances by about 40 per cent the cost of the Somerset sand when transported to even that distance; but such is the demand for cider that all firms engaged in this industry are trying to increase their output.

The export trade to England is very large, and American cider is driving the English from the market wherever they come in competition.

About 35,000 barrels of cider were shipped from the Atlantic ports to Liverpool and London last year.

The cider is sold there the same as in this country, in bottles or drawn from the tap, and the trade has increased wonderfully within the last five years.

The cost of cider juice now in New York is ten cents per gallon; that of refined cider is four or five cents more. The quality of the cider this year will be superior to that of last year, for the apples, although a short crop, are of better quality.

New York has had the largest crop. In those counties that lie along the southern border of Lake Ontario the yield is the heaviest. The Chenango valley, which was formerly a great apple-bearing section, has not had a heavy yield for four seasons; but in the apple orchards of that locality little or no attention is paid to fighting insect pests, and during my last visit in Chenango county a perfect apple was a rarity. Few new trees were being planted; the old trees were mossy and limbs breaking off. Signs of decay and neglect were the rule rather than the exception. The orchards looked as if let to grow unpruned, year after year trusting to Providence to care for them.

Packing Citrus Fruits.

At a meeting of the Fruit-Packers of Southern California, held in Riverside on Dec. 28th, the following rules were adopted and the packers, whose names are attached, pledged themselves to abide by same for the present season.

The subject of prices was not touched upon:

1. In buying oranges or lemons delivered at our several packing-houses, we shall in all and every case insist on such fruit being stem-cut, stems to be cut close to the fruit. All oranges pulled from the trees without being clipped to be classed as culls and weighed back to the grower or sold for his account.

2. The weight of a box of loose Navel or Paper Rind St. Michael oranges to be 70 pounds net merchantable fruit. The weight of all other varieties of oranges to be 65 pounds net merchantable fruit.

The weight of a box of loose green or cured lemons to be 70 pounds net merchantable fruit.

3. The merchantable sizes in Navels to be 176 size to the standard box, and all larger oranges. The merchantable sizes in the Paper Rind St. Michaels to be 250 size and all larger oranges. The merchantable sizes of all other varieties of oranges to be 128 to 226, inclusive. The unmerchantable sizes of Navels or Paper Rind St. Michaels to be classed with Seedling oranges of same sizes, and bought at the same price as Seedlings of such sizes. The unmerchantable sizes of all other varieties of oranges except Navel or Paper Rind St. Michaels to be paid for at the rate of one-third less than the price paid for the merchantable sizes of such varieties.

The merchantable sizes in green lemons to be 200 to 250 to the standard box, and of cured lemons 250 to 350 to the box, all other sizes to be classed as unmerchantable and weighed back to the grower or sold for his account.

4. All windfalls, thorned or limb-scratched, bruised, frosted, pulled, buttoned or otherwise injured oranges to be classed in all cases as culls and weighed back to the grower or sold for his account.

Germain Fruit Co., Griffin, S. Kelley, Earl Fruit Co., A. J. & D. C. Twogood, C. J. Shepard, Thacker Bros. & Mann, W. R. Strong & Co., Riverside Fruit Co., Boyd & Devine, Geo. W. Meade & Co.

Fruit-Growers' Memorial.

The following memorial, adopted by the California State Horticultural Society, has been transmitted to Congress:

WHEREAS, It is currently reported that Congress will be urged to remove the existing import duties from certain articles of foreign production and manufacture; and

Whereas, We fear that the list of such articles may include products which are at the basis of the new industrial life of California and upon which her future prosperity rests; therefore, be it

Resolved, That the State Horticultural Society of California humbly prays that the Congress of the United States will refuse to remove existing duties from foreign fruit and fruit products of all kinds, and in support of this petition begs leave to submit the following statement of facts, to wit:

First—Incited by hope of profit and with ambition

to retain within our own borders the millions of dollars annually paid to foreign producers of fruit and fruit products, the fruit-growers of California have invested millions in developing irrigation facilities, in planting orchards and vineyards and in devising and constructing appliances for presenting the products thereof in marketable form.

Second—Encouraged by the import duties which have long prevailed, our growers have labored for years in securing the most suitable varieties of fruits and in experiments to ascertain the modes of cultivation and methods of preservation which would yield success under the novel conditions of California soils and climates.

Third—This effort has attained such measure of success in spite of the vastly higher wages paid in this country that the products have reached an annual valuation of \$25,000,000, and have shown a quality which is pronounced by experts to be in many cases equal to the imported articles, and are supplanting the latter in the markets of the country.

Fourth—Though these be facts, the development of California, and probably some adjacent parts of the Pacific Coast, in the line of productions mentioned, is but just beginning, and should favoring conditions continue, the industries involved will give profitable employment for the surplus energy and capital of the older States, and at the same time add incalculably to the national wealth and the popular comfort and prosperity.

Fifth—It is beyond question that the admission, duty-free, of foreign competing products would not only arrest the growth now in progress, and preclude the development now anticipated, but would bring actual hardship to our whole local population, for these great industries afford livelihood not only to the thousands of small holders directly engaged in them, but to all arts, handicrafts, producing, manufacturing and mercantile interests which minister thereto.

Sixth—California and the Pacific Coast possess vast area upon which the raisin and other products of the grape, the prune, fig, date, olive, orange, lemon, almond, walnut and other products, which are not staple foods but luxuries, may be produced in quantities to supply the entire demand of the United States and adjacent countries, and, as a matter of fact, is so increasing in quantity and improving in quality, under the fostering influence of the low revenue duties now levied, that it will be able in a few years to supplant all foreign importations with better products and finally render them cheaper to consumers than they can be made with free goods and the extinction of our industries.

Resolved, That it is because of these most important considerations, and many more of equal weight which might be cited, that our organization, representing producers in these interests, humbly prays the Congress of the United States that naught be done to unsettle or endanger the success of these industries, and that the honorable Senators and Representatives in Congress from the Pacific Coast be individually informed of our action and earnestly besought to do all in their power to promote the views herein set forth.

EDWIN KIMBALL,
EUGENE W. HILGARD,
EDWARD J. WICKSON,
Committee.

ENTOMOLOGICAL.

Cabbage Lice.

EDITORS PRESS:—In a recent number of the PRESS Mr. Berwick asks for information about cabbage lice and the best methods to use for destroying them.

Here in Southern California but little cabbage is grown except by the Chinese market-gardens, and I have never known it to become very seriously infested with lice, doubtless owing to the attacks of internal parasites. Of these I have reared two different species, both of which are also known to attack it in the East. The most common of these is a slender-bodied ichneumon fly known as *Trionyx rapæ*; the other has a much thicker, almost spherical body, and is evidently the species described many years ago as *Allotria tritici* by Dr. Fitch, and more recently as *Allotria brassicae* by Mr. Ashmead of Florida, who also bred it from a cabbage louse.

The habits of these two parasites are interesting, although widely different. When the slender-bodied *Trionyx* wishes to deposit an egg in one of the lice she walks up to it, touches it several times with her antennæ, as if ascertaining whether or not he already contains a parasite, and after satisfying herself that he does not, she brings her abdomen beneath the rest of her body and thrusting it out in front of her, strikes the louse with her sharp, sting-like ovipositor, at the same time depositing an egg in the puncture thus made. All this requires but an instant of time, the motions of her abdomen being so rapid that the eye is scarcely able to follow it. The eggs are consigned alike to the smallest as well as to the largest lice, and the parasitized lice finally swell up to an unnatural size and become quite hard. When ready to escape, the adult *Trionyx* gnaws a circular hole through the back of the now dead louse.

The *Allotria* is much more sluggish in her movements; mounting upon the back of her victim, she leisurely pushes her ovipositor into his back and deposits an egg, the louse in the meantime moving uneasily about, as if desirous of getting rid of his unwelcome guest.

Among remedies, perhaps the most effective and easiest of application is a solution of tobacco soap and water, in the proportion of one pound of the soap to 10 or 12 gallons of water. This soap, which I have used with very good success against the cottony cushion scale, is manufactured by the Rose Manufacturing Co. of New York; it should first be dissolved in hot water and afterward diluted with cold water. Prof.

Riley's kerosene emulsion has also been used very successfully against these lice; it is made by dissolving half a pound of hard soap in one gallon of water and adding it very hot to two gallons of the best grade of kerosene oil, after which the mixture should be violently agitated by being forced through a spraying-pump back into the vessel again, continuing this until a thick, creamy emulsion is formed, which may be diluted with water to almost any extent. For cabbage lice, use one part of this emulsion to about 12 parts of water.

Los Angeles, Cal. D. W. COQUILLETT.

The Woolly Aphis.

EDITORS PRESS:—I wish to tell what I have learned about this pest. I am satisfied that the winged form flies into adjoining orchards; lays their eggs. When the young hatch and have grown to their full size, they leave their wool in their nest and commence crawling and continue so to do until their wings are full size. At this state they are brown. In five or six days they turn amber color, and then they are ready to deposit their eggs again. I think they deposit on twigs and roots as well as branches. I have seen them in February depositing their eggs where the limbs have been cut off. They work similar to the phylloxera on grapes.

They can be kept in check by spraying the trees with soap in May of each year. The way I do it is to use the "Petaluma Tree wash." I use one can of this soap, 45 pounds, to 250 gallons of water. Use it hot.

This wash is composed of caustic soda, concentrated lye, lime, sulphur, carbolic acid, tobacco and grease or oil of any kind. The sulphur is well dissolved so as not to leave a grain of it to be seen.

Some people think that they can make soap as well as a soapmaker. I for one prefer to have mine made by some one who can buy the material cheaper than I can, and one who has the conveniences and knowledge.

This wash forms a coating that covers the trees completely, and I will defy a bug of any kind to live after hatching out, or an egg laid on a tree coated with this wash to hatch, or live. It is true that they may be sheltered under the bark, so that they may live there. Besides its insecticide properties I consider that this wash is worth all it costs for a fertilizer. At any rate, it has proved a grand success with me.

As for the application of the wash, I will say that if water is handy to the orchard, three men can put on from eight to ten 60 gallon casks per day. It will go a long way in small trees, but large ones will take from two to three gallons per tree. If people would use this wash, or some other as good, and be thorough about it, there would be less fear of the bugs running us out of our orchards.

I would like to know why it is that I cannot see any beneficial results from lime or ashes put around the tree. I have some trees that I have put ashes round for five years and the fruit is no better than those adjoining that had nothing.

Petaluma, Cal. A. CADWELL.

Insects in Ventura County.

The following is the report from Ventura county to the State Board of Horticulture:

We have found so little to do in Ventura county the past year that we have almost fallen into desuetude. The county, so far as we know, is still free from the more injurious insects, having no white scale, red scale, San Jose scale nor codlin moth.

When the Ventura division of the S. P. railway was opened for travel, the train fruit-boy was found to be selling infected fruit, but upon the request to the railroad authorities that such danger to the county should be prevented, they at once kindly put a stop to it.

In a few instances during the past year oranges and lemons from Los Angeles, covered with the red scale, have been found offered for sale, but by action of the Commissioners they were returned or destroyed.

In one orchard the San Jose scale was found, but the owner made effective work by destroying the trees.

The fruit crop of the county has been a very large one this year. Many carloads of apricots were shipped out of the county for want of a canning establishment or more driers. There are few citrus orchards in the county, but the crop is larger than ever before and is looking well.

NATHAN W. BLANCHARD,
Sec. County Board of Hort. Com'rs.

THE coal famine in the Puget Sound district still continues. Only one company now sells to local customers, the others having orders to ship all that is mined to San Francisco. The people are, therefore, laying in stocks of cordwood and bark. Six dollars and fifty cents per ton is the price now asked in the local market, a figure never before reached.

THE San Bernardino Board of Trustees has accepted plans for a sewerage system for the entire city. The cost is nearly \$132,000. Waste land will be secured for a sewerage farm, in which the sewer system will empty, and the material be used as a fertilizer.

THE building for the Ramona Indian Girls' School at Santa Fe, N. M., commemorating Helen Hunt Jackson, will cost \$30,000.

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

When Women Vote.

When woman suffrage comes, no doubt 'Twill be a good deal talked about. But let us see what it will do, If 'tis approved, for me and you. And first, 'twill vote the "Rummies" down, And drive bad whisky out of town. Next, the tax-payers, each and all, Will vote the taxes, large or small. Once more—for I must needs be brief—'Twill be a very great relief On each election day to find Good order and fair play combined; Rudeness suppressed, profaneness checked, And "Roughs" restrained by self-respect; The day all used in lawful strife By everybody—and his wife.

—Rutland Herald.

Grange Installations.

Reports are coming in from various quarters of good times had at the installation of Grange officers for 1888.

Alhambra's officers were duly installed on the 7th by District Lecturer Loucks. Sister Lander, the Worthy Lecturer, though unable to be present, was reported on the hopeful way to recovery.

Eden and Temescal kept up their pleasant custom of having a joint installation, meeting at Haywards for that purpose on the 14th. Despite the bitter cold weather, a goodly number came from Oakland and four or five from Danville, while the members of Eden, especially the younger folk, were out in force, and entertained their guests right royally with Harvest Feast, music and literary exercises. W. P. M. Coulter was down from Santa Rosa to conduct the ceremonies, and also spoke on matters touching the Good of the Order, as did Bros. Baldwin, Renwick, Goodenough, Blackwood and Dewey. The occasion was greatly enjoyed by those who participated.

Franklin's old officers having been re-elected (excepting Sister Flaxman, the deceased Lecturer, whose place is as yet vacant), were installed on the 7th by Bro. C. A. Hull, Bro. H. W. Johnson assisting.

At Sacramento last Saturday the new officers of Pomona and Subordinate Granges were installed together, and after the ceremonies the banquet-hall was the scene of a fine spread provided by the sisters.

Sebastopol's installation took place on the 7th, Bro. E. W. Davis, W. O. S. G., officiating. Stockton's officers were duly inducted the same day by Bro. Elliott, assisted by Sister Cora Beecher.

Washington's installation also came off on the first Saturday of the new year, with enjoyable adjuncts, edible and audible.

Wheatland was forebanded in this pleasant work, which was publicly performed on the last day of '87 by W. P. M., Frank Kirshner, assisted by Bro. Anthony Huffaker.

The installation at Yuba City, Jan. 7th, was largely attended and marked by features of special interest. These have been touched upon by Bro. Flint and "W." in the pages of the *Patron*, from which most of the foregoing is condensed and to which we refer those desiring more extended information as to what the Order is doing in California, Oregon and other parts of the United States.

Installations to Come

Lodi—January 21.
Point of Timber—January 21.
Watsonville—January 21.
South Sutter—January 28.
Valley—January 28.

Postal Telegraphy.

The trumpet of the *Herald of Trade* gives no uncertain sound as to postal telegraphy. Hear it!

There is a growing demand for a postal telegraph—a system of telegraph lines owned and controlled by the Government. When the subject was first broached it met with decided opposition; but under discussion, more information was drawn out and a better understanding arrived at, and to-day it numbers with its advocates the ablest political economists of the country. They recognize the fact that this is the age of push, and that the country calls for cheaper and more rapid means of communication.

Again, the telegraph, as now conducted, is more in the interest of a limited few than of the many; in other words, there is a rank discrimination, greatly to the injury of the business community at large.

Aside from this, the very important and vital fact must not be lost sight of that the whole theory of the establishment and operation of the Postoffice Department has been that it should be an instrumentality for the enlightenment, as well as for the convenience of the general public. It is upon that theory that second-class matter (newspapers and periodicals) are transported any distance between the two oceans for the otherwise ridiculous price of one cent a pound. Intelligence is one of the great safeguards of a republican form of government,

and in order that intelligence may be disseminated generally and cheaply, the rates of postage have been reduced from time to time to the lowest possible points. It is in the line of this policy that the addition of the telegraph to the postal system is urged, and by none more earnestly than those who have given the subject deep thought and consideration.

Our country is growing too rapidly in population, wealth, and general trade, to allow what should be a branch of the General Government to be monopolized by a few and controlled by no other consideration than to make all the money possible out of the necessities of those compelled to give patronage.

Grange Elections.

EUREKA.—December 24.—J. C. Burns, M.; F. A. Duryea, O.; Mrs. H. F. Pillsbury, L.; J. O. Burns, S.; A. C. Pillsbury, A. S.; Mrs. Srite, C.; M. Srite, T.; R. S. Futhy, G. K.; Miss A. Futhy, Sec.; Miss D. Burns, P.; Miss L. Lewis, F.; Miss A. Burns, Ceres; Miss E. Hulbert, L. A. S.

FRANKLIN.—Wm. Johnston, M.; Lake Freeman, O.; W. A. Johnston, S.; P. B. Bradford, A. S.; Mrs. A. E. Freeman, C.; I. T. Freeman, T.; C. P. Freeman, Sec.; J. B. Bradford, G. K.; Mrs. W. A. Johnston, P.; Mrs. S. G. Bradford, F.; Mrs. E. S. Johnston, Ceres; Mrs. Annie Bradford, L. A. S.; Miss Matie Johnston, Org.

MERCED.—January 11.—W. E. Elliott, M.; M. D. Atwater, O.; H. J. Ostrander, L.; C. Healy, S.; J. A. Perry, A. S.; J. T. Lander, C.; Wm. Applegate, T.; Mrs. E. S. Elliott, Sec.; H. Halterman, G. K.; Mrs. J. A. Perry, Ceres; Mrs. J. T. Lander, P.; Mrs. M. Healy, F.; Mrs. L. A. Atwater, L. A. S.

NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

Suffrage and Tariff.

Merced Grange passed the following resolutions at a recent meeting:

Resolved, That Merced Grange most heartily approves of Senator Stanford's course in his effort to so amend the naturalization laws as to require a residence of 21 years to entitle any person to the right of suffrage.

Resolved, That Merced Grange is opposed to the reduction of the present tariff on wool, and that our Representatives in Congress be instructed to use all their influence to defeat any effort to lessen the duty on any grade of wool, also on raisins, wines, nuts, grapes and all kinds of semi-tropical fruits and hops.

WOMAN SUFFRAGE IN WASHINGTON TERRITORY.—An Associated Press dispatch from Olympia, 16th inst., says that a bill conferring the right of suffrage on the women of Washington Territory passed the Lower House of the Legislature that afternoon by a vote of 14 to 9. It passed the Upper House last week by a vote of 9 to 3. Petitions are pouring in from all quarters asking Gov. Semple to veto the bill. Those opposed to it think he will return the bill without his approval. Friends of the measure say it will pass over his veto. It is claimed by the anti-suffragists that the measure was carried through by a deal over the removal of the capital. Eastern Washington is pulling hard to have the capital removed to some point east of the Cascade mountains, and it is charged that members from the Eastern section have voted for woman suffrage under a promise of a return of the favor in the way of votes for the relocation of the capital. The Legislature, three years ago, gave women the right to vote, but the Supreme Court a year ago declared it unconstitutional, and has recently reaffirmed that decision. The present bill was framed so as to stand the test in the courts. Among the changes is a provision that women shall not be required to serve as jurors.

THE SALOON MUST GO.—The St. Louis *Globe-Democrat* is far from a temperance paper, but it says: "There are to-day 200,000 saloons in the United States, which is equivalent to saying that we have 200,000 places of business which are so many stumbling-blocks in the way of our national safety and welfare. After all possible arguments have been made as to the right of these institutions to exist, the fact remains that they are in no sense beneficial to the country, they are a positive and continuous detriment. They may be excused on one ground or another, but they cannot be justified. No man who cares anything for his reputation will undertake to defend the saloon as an agency of civilization, or to show that the liquor traffic is in any way conducive to material or moral progress. The enlightened judgment of mankind condemns the business as a business, and no amount of sophistry can hide the truth that if all the saloons on the planet should be suppressed it would be a great gain for human comfort and happiness."

THE young ladies of Danville Grange will give a leap-year social at the hall Feb. 23d. All gentlemen and their escorts are cordially invited. Should any young gentleman be so unfortunate as to have no best girl he may come alone, and trust the floor managers for a good time.—*Martinez Item*.

TEMESCAL GRANGE has the tariff up for discussion to-day, 21st. It is hoped there will be a large attendance.

EVEN Mexico for some distance beyond the Rio Grande, suffered some detriment to its cattle herds through the blizzard just before Christmas.

Smooth City Frauds.

It is no grateful task to undertake to make people suspicious of their fellow-men. We would rather teach mankind to trust one another, and it is with pain that we every now and then recognize the duty of teaching honest, confiding persons to question the word and motives of others who seem fair, honorable and trustworthy. But there are sleek sharpers about with pleasant, winning ways who are but cruel and deceitful beasts of prey, as cunning and as heartless as a coyote, who live only by outwitting and despoiling the guileless and trusting.

A few instances, drawn from San Francisco papers of 1888, will illustrate our meaning, and, we hope, convey sufficient warning.

Somewhat over a twelvemonth since, an industrious machinist, who had worked nine years for one of the large shoe-manufacturing firms in this city, and laid up nearly \$2000, was forced by failing health to give up his position. After a trip to the islands, which did him little good, he came home and began to look about for some business in which, with his small capital and broken strength, he might still make a comfortable living for himself and family.

He soon saw advertised for sale in a morning paper a half-interest in a well-established insolvent factory, which purported to be doing a good profitable business. Calling at the address named, he was most politely treated by the gentlemanly agent, and presently introduced to the plausible Neustadt, who explained that he was reluctantly compelled to withdraw from the prosperous firm of Neustadt & Hamberg, in order to give his whole attention to a growing real-estate and brokerage business in which also he was interested. The victim was taken to a bogus factory, where a dozen girls, directed by an "experienced and trusty" foreman, were busy running machines, became convinced that it was just the chance he was in search of, was talked out of all doubts and hesitation by the adroit, oily-tongued swindlers, and presently, without consulting his more prudent wife, closed the pretended bargain and paid down \$1200.

It is too long a story for us to detail, how he was led to make over the rest of his money to the specious robbers, and how at last his eyes were opened to the killing fact that he had been choused out of all his savings. In his already weakened state the loss nearly drove him frantic, and, impoverished and disheartened, he soon succumbed to the disease which was preying on him, leaving his widow and four orphan children destitute.

Another sad case is that of an old Oregon farmer, who owned a ranch in Jackson county worth \$8000, representing the toil and thrift of 20 years. He came down to San Francisco to look around, took the bait of a half-interest in a sham real-estate office, and was then fooled into giving not only his spare cash but also a deed to his home-ranch in exchange for a worthless deed for a piece of real estate on Fifth and Brannan streets, to which the thieves who pretended to execute the instrument had no title whatever.

The foolish old man cannot recover his farm, as the swindlers disposed of it in a hurry to a person who bought and paid for it in good faith, and is left poor and almost heart-broken.

That Hamberg, Neustadt and Pilcher, the partners in the fraud, are arrested and imprisoned does not make good the losses to their victims, but we hope the woful experiences of Tom Trenell, the S. F. machinist, and F. M. Parker, the Oregon rancher (among many others), will put other honest men upon their guard against falling into the teeth of such human hyenas.

ILLEGAL FENCING.—In the U. S. Circuit Court at Denver, on the 9th inst., Judge Brewer rendered a decision in favor of the Government in the case of the U. S. vs. the Cleveland Cattle Co., in which suit was brought to enjoin the company from fencing a tract containing nearly 4,000,000 acres lying in the southeastern part of the State. This case has been in the courts for a number of years. The final argument was made before Judge Brewer in St. Louis last September. The case will probably be carried to the U. S. Supreme Court.

RAILROAD AND CATTLEMEN.—Charles B. Hudson shipped 378 steers from Bennington, Kas., with orders to have them in the Kansas City stockyards next day in time for the markets. The Union Pacific railroad failed to do this, and the cattle were sold next day, when the market was dull, at a loss of \$756. Hudson sued and recovered the money, and on the 7th inst., in the U. S. Circuit Court at Kansas City, Judge Kregel refused to grant a motion for a new trial.

COLD STORAGE AT SAN DIEGO.—Articles of incorporation of the Occidental and Refrigerating Company of San Diego have been filed. The manufacture and sale of ice, the refrigerating of all articles or products requiring cold storage and dealing in such articles are among the objects of its organization. The capital stock is \$100,000, and among the incorporators are E. C. Reed, A. G. Nason, A. Hart, J. C. Kitton and H. A. Howard.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

PLANTING ALMONDS.—Livermore Herald, Jan. 12: The almond is the coming tree in Livermore valley; 80 acres were planted last season, and upward of 400 acres will be put out this winter—all to A. T. Hatch's varieties, the "I. X. L.," "Nonpareil," and "No Plus Ultra." The fact that Mr. Hatch himself is our leading planter confirms us in the belief that almond raising is to be one of the principal industries of Livermore valley. The tree bears at an early age, is a thrifty grower, and the varieties named always produce a good crop of large, white, soft-shelled nuts.

Contra Costa.

ARBOR SOCIETY.—Antioch Ledger, Jan. 14: A meeting of the Arbor Society was held at Union hall Tuesday afternoon, Mrs. E. L. Wemple presiding. The attendance was large and the members were evidently there with the intention of transacting business. The report of the committee on the variety of trees suitable to the climate was accepted and the recommendation made acted upon. Of the three varieties of trees selected by the committee (viz., walnut, mulberry, and pepper) the society evidently favored the mulberry, as that tree was decided upon when the vote was taken. Land owners on the east side of the road, who had been interviewed, had expressed themselves as perfectly willing to donate a strip of land eight feet in width to the purpose of the society. Two committees were appointed—Mrs. J. P. Abbott as chairman of a committee to further the object of the organization, with the privilege of selecting such assistants as she required, and a committee to investigate and report on the varieties of mulberry and that variety best adapted to the purpose; also to learn if the trees sent out by the last State Board of Sericulture cannot be obtained. To Mrs. Willis and Mrs. Carmau this duty was assigned.

Lassen.

WHAT THE COUNTY IS GOOD FOR.—Long Valley Cor. Record-Union: Lassen having been tucked away off by itself, remote from railroads and waterways, is comparatively unknown to the outside world. Of the harder fruits, such as apples, peaches, pears, blackberries, raspberries, strawberries and plums, she is prolific, and challenges not only any other part of California, but the world at large to produce better. Her cabbages, turnips, onions, beets, parsnips, carrots, potatoes, beans, peas, corn, for quantity and quality she will "size up" with any portion of this broad domain, acre for acre. Alfalfa, timothy, blue-joint, red-top or her native grasses are nutritious and abundant. Her wool commands the highest market rates; her beef and mutton are sought after by every slick butcher in the Bay City, while Sacramento is always bidding for a band of her fat steers. The soil will, if properly cultivated, produce from 30 to 40 bushels of wheat per acre, and a cash market is always found at Reno at from \$1.50 to \$2 per cental. Lassen is not ashamed to show her record on the production of wheat, barley, oats or rye with any of you. There are thousands of acres awaiting the grub-hoe that can be had for the taking. Industry and brains are all that are required to make of them beautiful, thrifty homes, and if you have among your influx of home-seekers any considerable number of good, honest, hard working, law-abiding American citizens without money enough to buy an orange grove, refer them to Lassen, where, with brave hearts, a pair of willing hands, a grub-hoe, plow and span of Norman horses they can make a home that any American could point to with pride. Improved lands can be bought for from \$10 to \$50 per acre. The Nevada & California railroad running north from Reno gives us the world for a market.

Los Angeles.

WALNUTS PAYING.—Santa Ana Blade: H. K. Snow has a walnut orchard at Tustin, 330x336 feet in dimensions—less than 2½ acres of land—and he has sold \$856 worth of nuts this year and has saved nearly 200 pounds for family use. This nets him over \$380 per acre, and the expense of cultivating and working of nuts will not exceed \$100 for the whole tract. This grove brings in an income of \$300 per acre clear of all expenses, and, mind you, most of the trees were set out nine years ago last spring.

Marin.

VACCINE FARM.—Journal, Jan. 12: San Rafael has a vaccine farm, said to be the only one west of the Mississippi, and the present epidemic or scare of smallpox has caused a run on its product and brought it into fame. The proprietors are Dr. Dubois and J. G. Sheppard. Some 40 or 50 calves are now at the farm, and more are being added. Some are bought and some are rented or loaned—in fact, anything to get calves except stealing. The process of producing and obtaining the virus is peculiar, and those who know it keep it secret. Dr. Dubois has been working at it for years, and is a proficient. His labors are now being rewarded, as the demand for points is greater than he can meet, and his produce is also a great boon to the coast, as hitherto we were dependent on the East, and only a small proportion of the points sold here were effective.

San Bernardino.

ONE ORANGE ORCHARD.—Citrograph: Wm. Curtis, who has lived at Old San Bernardino

for many years, is the owner of one of the finest orange groves in this section. He estimates his crop this year at about three boxes to the tree, taking old and young, big and little. His oldest trees—18 years—are good for an average of 12 boxes each. His trees are 22 feet apart, which gives 90 to the acre. If his orchard would all do as well as the oldest ones are doing, he would get 1080 boxes to the acre. The selling price is \$2 per box; \$2160 per acre is a pretty good income. Cut it down one-half and it would not take many acres to support a family. Yet what Mr. Curtis has done any one else can do, given the soil, climate, water, attention and time. So far from the orange business of California being overdone, it looks as if orange planting was just commencing.

ORCHARD-ROBBERING TOURISTS.—*Riverside Press*, Jan. 14: Complaints of thieving in orange groves come in thick and fast. A gentleman and two ladies were caught by the owner of an orchard filling a wagon and given a lesson they will not be apt to forget this trip. The thieves all claim that they get permission from the hotel proprietors and liverymen and drivers of carriages to help themselves to everything in sight. It would be a good idea, in addition to the mounted police force, for the growers to place large placards in all hotels and livery-stables warning tourists of the penalties attached to a violation of our laws in taking fruit without permission. The penalty is severe and should be enforced.

FROST BELL AND FIRES.—*Valley Echo*, Jan. 12: Thos. Bakewell and sons turned out last Saturday night at one o'clock, when the danger-bell rang, and lit fires in their orchard in Arlington. They had the signal set at 28°. The temperature was raised by the "smudge" at least three degrees. The smoke hung thick through the grove. The signal is made by a peculiarly constructed indicator—a bar of steel and gutta percha, which changes its length with change of temperature and starts an alarm.

San Diego.

A PREHISTORIC DITCH.—*Press and Horticulturist*: H. J. Stevenson, surveyor for the Palm Valley Water Co., came to Riverside on Tuesday, to report progress and get instructions for further work. He reports making a singular discovery while surveying the canal line running south and easterly from the old Agua Caliente springs. He had run one line on a grade of four feet to the mile, from the present terminus of the stone canal to the new townsite, but in crossing a depression near the mountains, it became necessary to build a quarter of a mile of flume. In order to obviate this expense he was instructed to make a new survey on a grade of eight feet to the mile, so as to strike the townsite at a lower level, and cross the depression without a flume. On this last survey he struck an old canal that must have been used centuries ago, for large trees had grown up in the very bottom of the canal, and the indications were that when used it carried a very large volume of water. The most singular thing about it was that the surveyors found it just where they wanted to construct the new canal, and on following it up for about a mile, it was found to have a regular grade of about eight feet to the mile.

A FAIR TO BE HELD.—*National City Record*, Jan. 12: The San Diego County Horticultural Society met at Elsinore last week and decided to hold a fair at San Diego some time during the fall, the date being left to a subsequent meeting. All persons interested in the fair and in advancing the interest of the county are invited to place themselves in communication with G. H. Bower, the secretary at El Cajon.

HEROIC TREATMENT FOR CODLIN MOTH.—Under date of December 18th Chester Gunn of Julian, *Quarantine Guardian*, wrote to G. W. Parnell, secretary of the County Horticultural Society, as follows: I have to report that yesterday a man named J. W. Bailey, from San Bernardino, brought to Julian four barrels of apples which were badly infected with codlin moth. I examined his fruit soon after he got here. I then notified him to sell no more till I could come home and find out what to do. I returned with a copy of Ordinance No. 17, which I gave him to read. I then gave him his choice between giving me the fruit and barrels to destroy or being prosecuted. He gave me the fruit, and we had a big bonfire in the street. All the apples which had been sold in Julian were put in the fire, except what had been eaten, and we hope the hogs found all of the cores which were thrown out. Mr. Bailey sold one barrel between here and San Bernardino, so he has probably scattered the seed along the road.

San Joaquin.

STOCKTON ORANGES.—*Independent*, Jan. 10: Yesterday morning Louis Hansel plucked two fine oranges from a tree in his yard. The fruit is not very large, but it has an excellent flavor. Mr. Hansel's trees are heavily laden with oranges and they do not appear to have suffered any from the heavy frosts.

SHIPMENT OF WHEAT.—*Independent*, Jan. 13: Yesterday the firm of Smith & Wright, grain dealers, shipped 815 tons of wheat by the barge Atlas, to San Francisco. This is the first shipment of wheat by barge from Stockton since last September.

CABBAGE FOR TEXAS.—Several carloads of cabbages grown on Roberts island have been shipped to Texas during the past few days. The supply of cabbages raised on the island

this year far exceeds the demand required for home consumption.

Santa Clara.

RAISINS.—*San Jose Herald*: John Phelps, an old resident of San Jose, reports very encouraging prospects in the raisin business. His six-year-old vineyard averaged a ton of fine raisins per acre, and when it is in full bearing he hopes to get double that amount. If, as Mr. Phelps says, raisins can be made for 60 cents a box and sold at \$1.25, there is money in the business.

Santa Cruz.

EXPERIMENTING WITH FLAX.—*Pajaronian*, Jan. 12: Geo. A. Trafton has received 120 pounds of flaxseed from Mr. Hatfield of the Menlo Park Flax-Mill, and he will distribute the same among farmers who are desirous of experimenting with the cultivation of flax. Mr. Hatfield visited this valley last October with a view of moving his mill to this town, but he has concluded to defer the removal until the result of the experiments with the trial seed is known.

Sonoma.

AGRICULTURAL PARK.—*Santa Rosa Republican*, Jan. 12: There was a meeting of the Agricultural Park Association Wednesday, at which the following officers were elected: J. N. Bailhache, Pres.; S. I. Allen, V. P.; G. A. Tupper, Sec.; E. W. Davis, Treas. According to the reports of the secretary and treasurer the affairs of the association are in a more prosperous condition than ever before. The entire indebtedness has been reduced to \$600. Two years ago it was a little less than \$6000. The present Board of Directors was re-elected.

HYBRID DEPREDATORS.—I. Satori of Russian River brought to the Board of Supervisors Thursday the stuffed skin of a peculiar animal which was killed while committing depredations upon a band of sheep. It is somewhat larger than a coyote, with ears shaped like a coyote's, but longer, of a dark brown color mottled with white and gray. Its feet and legs are exactly like a dog's, and those who are acquainted with its habits and know something of its origin say that it is the offspring of coyotes and large wolf-dogs breeding. It was brought before the Board to determine whether the same bounty for them as for coyotes will be allowed. There was a band of six after the sheep when this one was killed and they are committing great depredations on the flocks of sheep and herds of calves. The board decided that no bounty should be allowed upon the hybrid animal. The dog features are more prominent than those of the coyote, and a bad precedent would be established if the coyote bounty of \$10 was laid upon them.

Tulare.

HERDING THE HARES.—*Visalia Times*, Jan. 12: The people residing between Tule river and Deer creek assembled at a point west of the lone sycamore, on Saturday last, for a rabbit-drive, a corral and fence having been erected there for use on such occasions. About 150 men and boys and 100 ladies were present. It was the most successful drive yet made in this county, 1800 rabbits having been corralled and killed. About 4000 rabbits were driven to the corral, but through a misunderstanding of the ways of entrance, they were driven up on the wrong side and were thus allowed to escape. Another drive will take place next Saturday over the same ground, to which everybody is invited. The corral is 40 feet square and has two wings extending three-quarters of a mile on each side.

TULARE PORK.—An idea of the hog product of this county may be formed when it is stated that one man, during the year 1887, purchased and shipped 37,000 head, for which he disbursed the sum of \$240,000. This is the business of one dealer, but there are eight or ten others engaged in the business of buying and shipping hogs. Probably there is \$1,000,000 paid out for hogs in this county every year.

STOCK SUFFERING.—The continued cold weather is having a deadly effect on the cattle feeding on the plains, as well as those in the hills. The snow that fell low down on the foothills, to a depth sufficient to cover the grass, has not thawed any since it fell, and consequently the cattle there have to browse on the shrubbery. Old cattle in that vicinity are dying in great numbers, as they were generally in poor condition previous to the snowfall, owing to the scarcity of dry feed. Probably one-half of the stock in the mountains will die. John Stokes has something over 600 head of cattle on the Kelsey ranch near Goshen, and it is stated that six or seven head die every day, and he has a force of men engaged in skinning them and saving the tallow. Those persons fortunate enough to own alfalfa hay are feeding liberally, and will lose none of their stock, though most of the cattle seen present a pinched appearance.

Yolo.

FROM ONE VINEYARD.—*Woodland Democrat*, Jan. 12: The foreman of J. G. Briggs' Glorieta vineyard says that 30 carloads of raisins have already been shipped from their place, and 30 more will be, before the season is over. The vineyard consists of three quarter-sections.

LICORICE.—Mr. B. B. Franklin, who lives about eight miles from Woodland, toward Madison, was in town to-day and showed us a sample root of licorice plant he has growing upon his place, which was five or six feet long, and green and fresh.

SPANISH MERINO SHEEP.—*Woodland Mail*: Frank Bullard has deposited with the Board of Trade a specimen fleece from his clip of this

year, to be placed with Yolo's collection at the rooms of the State Board in S. F. This single fleece fairly shows the quality Mr. Bullard clips from his celebrated band of over 1000 Spanish merino sheep. It weighs over 25 pounds, and in texture is as soft, fine and firm as silk. The growth measures fully five inches and is remarkably clean and snowy. Mr. Bullard finds a ready sale for all his young bucks at prices ranging from \$20 to \$100, the demand for them coming from all parts of the State and the Territories. He has given special attention to breeding the Spanish merino for the past 10 years. He does not breed in and in, but is importing new blood from the best Eastern and foreign breeders. Every sheep on his place is registered upon his books, and is identified by patent ear-tags which he uses with success. Thus he can trace the pedigree of every sheep on the place, and so is enabled to breed all his stock intelligently. Year after year Mr. Bullard captures the State Fair prize for the best exhibit of this class of wool. He cultivates about 100 acres of alfalfa irrigated from Moore's ditch, and by this means keeps his sheep in the finest condition. His clip this year will weigh 16,000 pounds, which will bring him \$2000.

NEVADA.

GLANDERS.—*Reno Gazette*, Jan. 9: Glanders has broken out in Lyon county, near Dayton, during the past few weeks, and over 20 horses have been taken with it. The disease was brought over here from California by a man who sold some infected stage horses to a rancher near Dayton. Thirteen horses have been shot and more will have to go. Some infected horses have been fed recently in one of the hay-yards of this city. The commissioners of this county should take immediate action or there will be a run of glanders in this county. Yesterday J. Nichol, the thoroughbred horseman of Mason valley, came before the Board of Commissioners and stated that the disease was on at least ten ranches of Mason valley, and it would become necessary for all counties adjoining to take immediate steps.

CONDITION OF CATTLE.—While the winter has been unusually severe in the western part of the State, stockmen do not anticipate much loss, although advices agree that many old cows have succumbed. From stockmen, who have lately come in from the East, the *Gazette* also learns that snow lies deep on the ranges and in the valleys; and should the storm continue, and a freeze-up result, a great many cattle will go under. The loss will be heavier on the smaller stockmen who are unable to prepare for winter feeding. In Squaw, Independence, Ruby, Clover and several other valleys, which are occupied by wealthy cattlemen, an ample supply of hay has been stacked, and it will have to be an unusually severe winter to cause loss.

The American Horticulturists.

Partial List of Excursionists.

As we go to press on Wednesday evening, the excursion train carrying the members of the American Horticultural Society is approaching San Francisco. They reached the borders of California on Monday, and were met on the desert by a delegation from the Riverside Board of Trade with greetings emphasized by gifts of oranges, raisins and other Riverside products. They arrived in Los Angeles on Tuesday, and on Wednesday started northward, to arrive San Francisco on Thursday afternoon. The meeting will open according to announcement in San Jose on Tuesday, Jan. 24th.

Just before leaving his home in Greencastle, Indiana, Prof. W. H. Ragan mailed us a list of those whom he had booked for the excursion up to that time, stating, however, that many others might afterward come aboard at points further west. Therefore the list we give below is not complete, but contains a large number of those who may be seen at San Jose and Riverside. Our design in publishing the list as early as possible is to give our readers an opportunity to learn if personal friends are included, meeting whom would be an additional inducement for them to attend the two meetings of the society in this State. Next week we shall try to complete the list so that it may serve as a full index to Eastern attendance at the Riverside meeting. Of course there will be hundreds of other Eastern people at both meetings and fairs, but we probably can note only those who come under the auspices of the visiting society.

Dr. Joseph Albrecht, New Orleans, La.
Abner Allen, Wabunsee, Kan.
Henry Avery, Burlington, Ia.
Josh. G. Bailey, Columbia, Tenn.
Sam Barnard, Sec'y Hort. Soc'y, Table Rock, Neb.
James A. Bayless, Lee's Summit, Mo.
J. S. Beatty, Simpsonville, Ky.
H. Y. Beebe, Pres. Hort. Soc'y, Ravenna, O.
F. M. Benham, Petosky, Mich.
J. C. Blair, Kansas City, Mo.
J. P. Buck, Appleton, Wis.
Benjamin Buckman, Farmingdale, Ill.
Prof. J. L. Budd, Agricultural College, Ames, Ia.
William Byrns, Kansas City, Mo.
Clemons, Cloon & Co., Kansas City, Mo.
John W. Collins, Liberty, Mo.
Chas. G. Comstock, Albany, Mo.
A. F. Cook, Gibbstville, Wis.
Wm. N. Cook, Grand Rapids, Mich.
Chas. C. Cornett, Madison, Ind.
Matthew Crawford, Cuyahoga Falls, O.

E. H. Cushman, Euclid, O.
John B. Durand, Prairie City, Mo.
J. A. Durkes, Weston, Mo.
Parker Earle, Pres. Am. Hort. Soc'y, Cobden, Ill.
Mrs. Melanie T. Earle, Cobden, Ill.
Samuel Edwards, Mendota, Ill.
G. C. Eisenmayer, Mascoutah, Ill.
G. W. Endicott, Villa Ridge, Ill.
J. C. Evans, Treas. Am. Hort. Soc'y, Harlem, Mo.
J. J. Fairbanks, Denison, Tex.
C. Falkner, Waco, Tex.
C. W. Faust, Canton, O.
Washington Folck, Marshall, Mo.
Samuel Gainer, Pilot Point, Tex.
W. G. Gano, Parkville, Mo.
J. Y. Gilmore, 6 Camp street, New Orleans, La.
L. A. Goodman, Sec'y Hort. Soc'y, Westport, Mo.
Dr. A. Goslin, Oregon, Mo.
Prof. W. J. Green, Experiment Station, Columbus, O.
D. S. Grimes, Denver, Col.
Mrs. J. T. Grimes and daughter, Minneapolis, Minn.
J. H. Hale, South Glastonbury, Conn.
L. Harms, Euclid, O.
Edmund H. Hart, Federal Point, Fla.
W. F. Heikes, Huntsville, Ala.
Peter Henderson, 35 Courtland St., New York.
E. P. Henry, Butler, Mo.
John S. Hicks, Roslyn, N. Y.
Amos Hiestand, Vincent, Penn.
W. D. Hills, Odin, Ill.
C. M. Hobbs, Sec'y Hort. Soc'y, Bridgeport, Ind.
E. T. Hollister, St. Louis, Mo.
F. Holsinger, Rosedale, Kan.
R. H. Howard, 792 Lafayette Ave., Brooklyn, N. Y.
J. M. Howell, Dallas, Tex.
Mrs. J. M. Howell, Dallas, Tex.
T. S. Hubbard, Fredonia, N. Y.
Dr. Robt. Hughes and lady, Okawville, Ill.
H. S. Hurd, Burlington, Ont.
Joseph I. Irwin, Columbus, Ind.
Mrs. H. C. Irwin, Columbus, Ind.
Sylvester Johnson, Pres. State Hort. Soc'y, and lady, Irvington, Ind.
F. C. Johnson, Kishwaukee, Ill.
Mrs. J. R. Johnson, Sec'y Hort. Soc'y, Dallas, Tex.
John Kaufman, Kansas City, Mo.
C. C. Kelsey, Humboldt, Kan.
T. W. Kizer, Winchester, Ind.
J. Van Lindley, Pres. H. S. and lady, Pomona, N. C.
William Lyons, Box 685, Minneapolis, Minn.
J. F. Martin, Pres. Hort. Soc'y, Winfield, Kan.
J. W. Maxwell, Euclid, O.
W. P. Mesler, Cobden, Ill.
Mrs. W. P. Mesler, Cobden, Ill.
B. S. Miles, Gray's Summit, Mo.
F. C. Miller, New Philadelphia, O.
Curtis J. Miller, Canal Fulton, O.
T. V. Munson, Pres. Hort. Soc'y, Denison, Tex.
Mrs. Maria Munson, Denison, Tex.
M. L. McClave, Benton Harbor, Mich.
N. Ohmer, Pres. State Hort. Soc'y, Dayton, O.
M. I. Parker, Carthage, Mo.
Miss H. E. Peake, Fairmount Av., Jersey City, N. J.
Geo. P. Pfeffer, Pewaukee, Wis.
Chas. F. Pierce, 205 La Salle St., Chicago, Ill.
G. Poindexter, Blue Lick, Ind.
Prof. E. A. Popenoe, Ag. Coll., Manhattan, Kan.
J. H. Priest, Greencastle, Ind.
Z. S. Ragan, Independence, Mo.
W. H. Ragan, Greencastle, Ind.
Horace Rainey, Columbia, Tenn.
T. D. Randall & Co., 219 S. Water St., Chicago, Ill.
Mrs. T. D. Randall and daughter, Chicago, Ill.
J. C. Ridpath, L. L. D., Greencastle, Ind.
Wm. Roy (Royston Park), Owen Sound, Ont.
Geo. E. Ryckman, Brockton, N. Y.
J. M. Smith, Pres. State Hort. Soc'y, and lady, Green Bay, Wis.
E. Ashley Smith, Lockport, N. Y.
Henry Speer, Butler, Mo.
Nat. Stevens, Forney, Tex.
I. N. Stone, Sioux City, Ia.
Dr. W. Thompson, Effingham, Ill.
Prof. H. E. Van Daman, U. S. Pom., Washington.
J. M. Ward, Naples, Ill.
R. H. Warder, North Bend, O.
B. C. Warfield, Sandoval, Ill.
C. L. Watrous, Pres. A. A. of Nurserymen, Des Moines, Ia.
D. B. Weir, Lacon, Ill.
Leo Weltz, Treas. Am. F'try Cong., Wilmington, O.
S. D. Willard, Geneva, N. Y.
Dr. R. J. Williams, Gadsden, Tenn.
Mrs. Wade Burden, Springfield, Mo.
H. I. Budd, Mount Holly, N. J.
Hiram Craig, Ft. Calhoun, Neb.
H. J. Clarke and daughter, Tottenville, N. Y.
W. H. Farrell, Leavenworth, Kan.
Dr. Allen Furnas and lady, Danville, Ind.
C. Harrington and lady, Painesville, O.
C. J. Holmgren, Hamilton, N. Y.
D. Igenfriz, Monroe, Mich.
A. Kanatraz, Centralia, Mo.
Joseph D. King, Ravenna, O.
Theo. M. Layne and lady, Cloverdale, Ind.
Jacob W. Manning, Reading, Mass.
Hon. C. J. Monroe, South Haven, Mich.
W. J. Maltby, Baird, Tex.
J. S. Newmeyer and lady, Love Lake, Mo.
J. C. Newbury, Pilot Point, Tex.
W. W. Ross, Pilot Point, Tex.
Preston Rider, Crothersville, Ind.
L. T. Sanders, Collinsburg, La.
Mrs. Michael Sells, Indianapolis, Ind.
W. W. Thompson, Smithville, Ga.
W. G. Veal, Fort Worth, Tex.
L. A. Williams, Glenwood, Ia.
Judson Williams, Ottawa, Kan.
Levi Zook, Oregon, Mo.
John N. Seacore and lady, Danville, Ill.
M. B. Rudisill, Green Castle, Ind.
Miss Sallie Rudisill, Indianapolis, Ind.
David Wilson, Martinsville, Ind.
Mrs. Wilson and son, Brazil, Ind.
W. H. White, Lena, Ind.
Theo. Goodrich, Cobden, Ill.
Rev. M. A. Johnson, Burlington, Ia.
Edwin Soper, Danville, Ind.
C. C. Fisher, Moorefield, W. Va.
Geo. L. Martin, Brant, N. Y.
J. W. Jeffries, Bridgeport, Ind.
W. R. Mott, Yonkers, N. Y.
Ransom Hull, Burgh Hill, O.
Geo. H. Rupp, Shiremanstown, Pa.
Sam'l Patterson, Berlin Heights, O.
Judge J. McIlhany, Bird, Tex.
Madison McIlwain, Warren, Mo.
B. M. Smith, Beverly, Mass.
J. A. Stever, Penn Yan, N. Y.



Twilight in the Country.

[Written for the RURAL PRESS by ANA E. TAYLOR.]

The ruby sunset fades away,
And leaves a tinted sky;
The robins cease their tuneful lay,
As toward the south they fly.

The feathery clouds float idly past,
All flecked with red and gold;
Their radiance over all is cast,
Most beautiful to behold.

The meadow-lark while soaring high,
Trills forth his sweet good-night;
And answered by his mate close by,
They take their homeward flight.

The mavis whistles blithe and gay
To welcome evening's hours;
The cow-bells tinkle far away
Amid the fragrant flowers.

The canyon sloping toward the vale
Is filled with rosy light;
The best and rarest art would fail
To paint the shades so bright.

Beside the pearly, rippling stream,
The tangled blossoms grow;
And dainty silvery fern leaves gleam
When gentle breezes blow.

The cypress shadows fall to meet
The lovely changing shades;
And all the air is still and sweet,
Among the quiet glades.

Far in the woods the swallows dart,
And skim the shining stream;
Where creamy lilies love to part
The waters all agleam.

The restful hush that evening brings
Has fallen everywhere;
The bat flits past on silent wings,
In twilight's dewy air.

With loving tenderness the night
All sunset shades enfold;
And far above with netted light
Shines glistening stars of gold.

In pearly skies the pale young moon
Sheds forth its feeble light;
And scattering rays in deepest gloom
Bids all a sweet good-night.

Miss Rugget's Narrative.

Law! haint you never heard tell how Mis Peasley an' Mis Briggs come to be so dead sot agin each other? That beats me! I s'posed everybody in this place knowed all about it. 'Pears to me that folks in small towns don't seem to spend their time to no better advantage than a-mindin' of other folk's business, jest as if they didn't have none of their own to attend to. Wal, it do beat all creation the way some folks will run to get the last piece o' tattlin' thar is goin'. 'Twa'n't never so with me. I never could abide folks that gossips. An' as to what my neighbors is a-doin' or aint a-doin' 'a' long's they let me alone I'll let 'em mind their own business an' I'll tend to mine—say! d'ye hear that air pianny a-goin'? That's Mis Kingsley's pianny, an' that's one of her young ladies as is a-visitin' of her which is a-playin' of that pianny!

An' d'ye see Mis Fair's window-blinds has got their slats turned so's she can watch out through 'em? Land o' Goshen! Won't thar be some fun a-goin' on now? Ye see Mis Fair's powerful jealous of them two gals which is a-visitin' of Mis Kingsley, one of which is a-playin' of Mis Kingsley's pianny this blessed minute. Mr. Fair is one of them men that fond of music that there aint no gettin' round it. An' Mis Fair she don't care nothin' at all about it, an' never touches her pianny, so, bein's Mis Kingsley an' Mr. Fair's cousins onct off, why he will go over an' hear them gals play. One, she sings some, an' t'other jest plays, but law! she do scramble over them keys to beat all out doors. An' they're both good-lookin' inter the bargain, them gals is. I don't say but what Mis Kingsley is a-doin' more'n the law allows havin' of Mr. Fair there so much, an' them gals dressed up like all possessed, an' ready an' willin' to wall their eyes at any man, single or double, which they certainly do. But you jest oughter be here right along an' watch them slats of Mis Fair's fly open ker-slap whenever she hears that pianny a-tunin' up. An' they do say that patience is allers rewarded, he! he! an' if she sets there long enough she's bound to see Mr. Fair a-walkin' over, an' jest a-goin' right in, jest as if he was to home, an' then that pianny begins to thump. Sometimes I've seen Mis Fair that mad that she couldn't stand it no longer, an' jest come a-flouncin' out of her house an' go a-bouncin' inter Mis Kingsley's. Onct I went in arter her jest to see what she was a goin' to do. But law! she didn't do nothin'—she jest sot there an' coughed! But

maybe ye think her face wa'n't red! She's middlin' sandy complected, anyhow, one of them peppery kind with more temper than anythin' else, an' she was as red as a lobster from her collar up.

But let me see. What was it I started in to tell ye? Oh, yes! 'bout Mis Peasley'n' Mis Briggs. Ye see Mis Peasley had one of her apells—an' I s'pose nobody knows nothin' 'bout the way that air woman must have suffered in them spells of her'n—an' Brother Peasley he allers 'lowed she'd go off in one of 'em. There was some as did say, an' make no secret on't, that he'd a ben mighty glad to have seen her went. I aint nowise s'prised myself if that's so, fer Mis Peasley was twenty years older'n Mr. Peasley, an' when he sot out here to take the Zion church there was them among the elders as said they shouldn't never have hired him if they'd a-known Mis Peasley was that old an' peenky she couldn't be looked to far to help in the societies an' sich. Wal, as I was a-goin' to say, Mis Briggs was a-takin' care of Mis Peasley through this here spell I'm speakin' of; Brother Peasley he used to come in an'—there! what'd I tell ye! There goes Mr. Fair after that pianny music like a fish after the bait. My! but aint Mis Fair mad, now? You jest watch them slats!

Wal, as I was sayin', Brother Peasley used to come in an' look at her, an' fetch a big sigh, an' shake his head an' go away agin. An' Mis Briggs—she was a war widder—she'd shake her head an' sigh, too, an' between 'em both they kept the air a-movin' in that air room, now, I ken tell ye. Wal, one night Mis Peasley seemed to be lower'n usual, an' she jest lay there as if she was purty near gone under, 'n' bimeby in comes Brother Peasley, an' he heaves a big sigh, an' shakes his head, an' Mis Briggs she heaves another, an' wags her head drefful solemn-like. Mis Peasley she didn't seem to be conscious nor nothin'.

Mr. Peasley he heaved another sigh an' sot down an' looked fust at Mis Peasley 'n' then at Mis Briggs. Mis Briggs was a handsome woman allers; one of your fat and jolly kind everywhere but in a sick-room. There she was as fat as ever, but her face'd be longer'n yer arm allers.

"She's a-failin' purty fast, Sister Briggs," says Mr. Peasley.

"Yes, Brother Peasley, she do seem to be that low since sundown that the dear soul aint got much life left in her."

"Jes so, jes so," sez Mr. Peasley, an' I'll warrant ye he didn't feel near so down in the mouth as he tried to look.

"She never's been so low as this before," sez he, an' fetched another powerful sigh. Mis Briggs she heaved one too, but bein's she'd never been with Mis Peasley in any of her spells before she couldn't say no more.

"I shouldn't be surprised if she didn't last until mornin'" sez Brother Peasley, a-lookin' kinder longin'-like at Mis Briggs; "she's worse than I ever knowed her to be."

Mis Briggs didn't say nothin'.

"The hand of the Lord is laid heavy upon me," sez he purty soon. "Did you ever know anybody so low as she is to git up, Mis Briggs?"

"No, Brother Peasley, I never seen anybody so low as she is an' live," sez Mis Briggs, "but ye can't most allers tell; sometimes them as seems the worst off'll rally wonderful."

"Yes, I s'pose that is the way with some folks," sez he, "but it don't seem as if Arrerbeller could ever survive this spell." Ye see he was bound an' possessed to think so 'cause he didn't want her to.

They didn't say nothin' no more fer some time, but jest sot there a-heavin' of big sighs, an' Mis Briggs a-fannin' of Mis Peasley. Bimeby he sez, sez he:

"It's purty hard on a man to be left alone in this world."

Mis Briggs didn't say nothin'. Maybe she thought he'd better not count his chickens 'fore they was hatched.

"I s'pose," sez he, "it's harder on a man than it is on a woman."

"They do say sich is the case, Brother Peasley, but it's hard fur a woman, too."

"Jest so," sez he, an' they both fetched long breaths, "you've ben a widder woman an' knows what it is to be left alone, dear sister. You must get powerful lonesome sometimes."

Mis Briggs smiled kinder pensive-like, an' jest then they both seen Mis Peasley sorter straighten out an' fetch a long breath too.

Mis Briggs held up her finger solemn-like an' sez:

"She's a-goin' now."

Brother Peasley he t'wont flopped ont'er his knees by the bedside an' somehow nuther ketched holt Mis Briggs's hand instead of Mis Peasley's.

"Oh, dear sister," sez he, "help me to bear this heavy load; Arrerbeller is a goin'—"

An' jest then what d'ye s'pose happened? Wal, Miss Peasley she sot right up in bed, an' she sez, sez she:

"No, Arrerbeller aint a-goin'," sez she, "but I ken tell ye who is a-goin', an' that's Marier Ann Briggs, right out of this house, now, t'wont, without no further delay. Git right out o' this room, you hussy," sez she, powerful strong fur a dead woman. "Git right along an' don't stay fer nothin'. John Jacob Peasley, you leave go of her hand, an' don't you go a-holdin' of any widder woman's hand, widder er no widder, never no more, fer Arrerbeller aint dead yet." (Ye see they was both struck so dumb they didn't have sense enough to let go of hands.) "An' next time don't you

neither of ye marry a widder nor yet a widderer until his wife is dead an' buried, even though her husband is an' may be." With that Mis Briggs got up an' went right out, an' Mis Peasley sez to Mr. Peasley, "John Jacob," sez she, "give me that medicine an' keep this here fan a-goin'," an' John Jacob done it, you'd better jest believe. Since which time Mis Peasley an' Mis Briggs has ben dead set agin each other, fust an' last, fore and aft, hithermost an' hindermot, an' Mis Peasley's mighty spry fer her years yet—if there aint Mis Fair a-bouncin' over to Mis Kingsley's this blessed minute! An' ther she'll set an' cough as red as a turkey-cock until he's through with one kind o' music an' ready to catch another.—Marion Manville.

Punishing a Grandfather.

Down on the Cape in a time now well gone by, Benjamin C—— was a prominent man, wealthy, and foremost in a good many enterprises. Old Mr. C—— was thrifty, like most of the Cape people, with a high regard for the almighty dollar. He had a lively, freckle-faced, athletic grandson, as agile as a squirrel, who was named for him Benjamin C. D——, since a man of a good deal of prominence on his own account, and who lived with him. The old gentleman's barn, as a good many other old places have done, became terribly infested with rats. The old gentleman was so greatly annoyed that he offered the boy 50 cents apiece for all the rats he would catch and show to him alive on the premises—a precaution to prevent sharp practice on the part of the youth. After two or three days little Benjamin came to old Benjamin and asked him to step out into the barn. He did so, and was conducted to a big diased molasses barrel that stood in the middle of the barn floor, and asked to look in it. And there, on the bottom, was a wriggling mass of rats three or four feet deep, struggling vainly to get out of the barrel.

"My gorry!" exclaimed the old gentleman. "Where did you get all the rats?"

"Caught 'em here in the old barn, gran'sir."

"How many be they?"

"Eighty. That's just forty dollars, gran'sir."

"Forty dollars! Why, I aint goin' to pay you all that money."

"Aint you? Didn't you agree to, gran'sir?"

"Well, yes, but I hadn't no idee when I did that you'd catch such a tarnation lot."

The boy looked up. There was a rope dangling down from the beam above that was used to help in climbing up the hay-loft. Benny pulled himself up hand over hand on this rope until he hung suspended over the barrel.

"Aint you goin' to give me that forty dollars you agreed to, gran'sir?" said the boy.

"Never!" said the old man, looking over again into the barrel with its squirming mass of rats.

"Well, then, here goes!" said the boy.

With a lively kick of his foot he upset the barrel in the direction of his grandfather. The multitude of rats poured out around the old man's feet. He leaped wildly up and down in terror, and sprang through the mass to a ladder that stood near. Then he ran up the ladder with an agility that he had not equaled for 50 years. And the rats resumed possession of the premises.—Ex.

The Glorious Climate of Minnesota.

And this is the heartless and irreverent way in which the Chicago Tribune discourses about it:

"Yes," remarked the St. Paul man to a friend from Chicago as he stood arrayed in his blanket suit and adjusted a couple of buckskin chest-protectors; "yes, there is something about the air in this northwestern climate which causes a person not to notice the cold. Its extreme dryness," he continued, as he drew on a couple of extra woolen socks, a pair of Scandinavian sheepskin boots and some Alaska overshoes, "its extreme dryness makes a degree of cold, reckoned by the mercury, which would be unbearable in other latitudes, simply exhilarating here. I have suffered more with the cold in Michigan, for instance," he added, as he drew on a pair of goatskin leggings, adjusted a double fur cap and tied on some Esquimaux ear-muffs, "in Michigan or Illinois, we will say, with the thermometer at zero or above, than I have here with it at from 45 to 55 below. The dryness of our winter is certainly remarkable," he went on as he wound a couple of rods of red woolen scarf about his neck, wrapped a dozen newspapers about his body, drew on a fall-cloth overcoat, a winter-cloth overcoat, a light buffalo-skin overcoat, and a heavy polar bear-skin overcoat; "no, if you have never enjoyed our glorious Minnesota winter climate and its dry atmosphere, its bright sunshine and invigorating ozone, you would scarcely believe some things I could tell you about it. The air is so dry," he continued, as he adjusted his leather nose protector, drew on his reindeer in mittens, and carefully closed one eye-hole in the seal-skin mask he drew down from his cap—"it is so dry that actually it seems next to impossible to feel the cold at all. We can scarcely realize in the spring that we have had winter, owing to the extreme dryness of the atmosphere. By the way," he went on, turning to his wife, "just bring me a couple of blankets and those bedquilts to throw over my shoulders,

and hand me that muff with the soap-stone in it, and now I'll take a pull at this jug of brandy and whale-oil, and then if you'll have the girl bring my snowshoes and ice-berg scaling stick, I'll step over and see them pry the workmen off the top of the ice-palace who were frozen on yesterday. I tell you we wouldn't be going on this way 500 miles further south, where the air is damp and chilly. Nothing but our dry air makes it possible."

Abuse of the Toothpick.

The toothpick, when used with discretion and at proper times and in proper places, is an unobjectionable little instrument. Its occasional employment is, as a rule, necessary to cleanliness and the preservation of the teeth. So, also, is the use of the tooth-brush. This adjunct of the toilet is, however, never used in public. The person who, after partaking of a meal, should proceed to publicly use his tooth-brush would speedily find himself banished from decent society. Yet such action would be less objectionable to witness than the service to which some people who pretend to refinement and culture put the toothpick. There is but one place in which it may be rightly used—the dressing-room—and no person who has the slightest consideration for the feelings of others will handle it anywhere else.

It would seem to be almost unnecessary to make such statements as those in the foregoing paragraph. No one possessing any delicacy of feeling or squeamishness of digestion will dream of contravening them. And yet the public use of the toothpick is daily increasing, and has already reached proportions that strike the foreign visitor with astonishment and disgust, and make the lives of many of our citizens anything but agreeable.

The practice has doubtless grown owing to the large number of people who live or have lived in hotels and boarding-houses, where toothpicks were furnished with the idea that guests would take them to their rooms, and in some of the good hotels guests can even now only procure toothpicks at the doors by which they leave the dining-rooms. In other hotels and in many boarding-houses, and also, it is said to have to write, in some private houses, the toothpick-holder is a regular ornament (?) of the meal table, and its contents are assiduously worked.

In no other country that the writer has ever visited have toothpicks been publicly used in private houses or in the presence of women. An English woman or a French woman of the better class not only never dreams of using a toothpick before people, but she considers it something that it is more pleasant not even to mention. Here, however, it is no uncommon occurrence to hear a lady ask for the toothpicks, and select one that she thinks will fit her needs.—The Epoch.

Dandruff.

EDITORS PRESS:—I would like to ask a question through your paper. Can any of the readers of the PRESS tell me of a permanent cure for dandruff? If they will kindly do so it will greatly oblige—CONSTANT READER, Woodland, Cal.

THE STATUS OF SCHOOL-TEACHERS.—Judge Wallace of the Supreme Court has rendered a decision in favor of the plaintiff in the case of Miss Kate Kennedy, who applied for a writ of mandate to compel the Board of Education of this city and county to restore her to her position as principal of the North Cosmopolitan grammar school. The law quoted by Judge Wallace as governing the School Department in transferring teachers is as follows: Teachers in the public schools cannot be removed by the Board of Education at its mere will and pleasure, but only for one of the causes enumerated in the Political Code as grounds of removal; second, nor can such removal be accomplished by an order made ex parte; third, to effect such removal, charges must have been filed and notice and an opportunity to be heard given to the accused teacher; fourth, no transfer can be made so as to involve the loss of rank and pay upon the part of the teacher transferred.

TRYING TO GET POSTED UP.—A Nebraska man who talks of locating in California writes the Placerville Democrat asking where Government land can be had; how close to a railroad. Can you plant it in olive and orange trees without cutting off the trees or plowing the land? Can you raise any fruit the first year? Is there any prairie and hay land close to it? How much gold can a man dig in one day? The editor suggests that in his next letter he ask how much corn a pig can eat, and how many cast-iron boot-jacks will be required to shingle a lamp post.

HUMANE AND SELF POSSESSED.—The Semi-Tropic noticed a teamster of exemplary patience in the street at Colton the other morning. He was driving eight mules attached to an immense load of wood, when one of the number, with the contrariness usual to the race, suddenly concluded to go the other way. In his vain efforts to do so, the team became quite seriously disarranged. It took some time to get them back into proper working order. Yet during the whole time the man in charge did not administer a kick or a blow, but patiently pulled and persuaded them into place.

YOUNG FOLKS' COLUMN.

What the Frogs Sang.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

A musical toad had her home in a hole,
Croak! Croak! Croak!
Beneath a gray rock on a little green knoll,
Croak! Croak! Croak!
As mildly malicious as toad nature may be,
The neighbors all cried, "what an amiable lady!"
The beetle, the snail and the esthetic mole,
Croak! Croak! Croak!

The esthetic mole made a tragical stride,
Croak! Croak! Croak!
"Like the poets of old I am sightless," he cried,
Croak! Croak! Croak!
"I've a beautiful soul and a mind analytic;
These glasses, I'm told, are becoming a critic."
And he mounted his goggles with infinite pride,
Croak! Croak! Croak!

Sang the musical toad in a low minor key,
Croak! Croak! Croak!
"On some sweet summer marsh he is dreaming of me!"
Croak! Croak! Croak!
"O love!" cried the mole, all his soul in a quiver,
"I've an underground castle not far from the river;
O say dearest, say, that our wedding shall be!"
Croak! Croak! Croak!

Said the musical toad with a coquettish start,
Croak! Croak! Croak!
"Shall I give you my hand, when you've stolen my heart?"
Croak! Croak! Croak!
The wedding created a social sensation;
The beetle and all of the knoll population
Were bid to the union of Music and Art—
Croak! Croak! Croak!

My First Pet.

[Written for the RURAL PRESS by AUNT MARY.]

I am going to write a little story for those children who like truly true stories better than fairy tales. My story, even the names, is all true. I wonder if there are children nowadays who like live pets better than dolls and toys—I am sure I did.

When I was a little girl I lived away off in Minnesota, and saw more Indians every day than I did white folks. One day an Indian woman came in, and, taking a beautiful little animal off her back, laid it on the floor, asking mother to buy it. I was so excited I ran to the next room, where uncle and aunt were, saying: "Oh, oh! come and see—such a lovely thing, with such bright, black eyes."

"It must be a snake," said Uncle Jonas. "I don't know of anything with brighter eyes than a snake."

I had never been to a kindergarten school, as some of you have, or perhaps I would have said it was a quadruped. As it was, I only said no; not a bit like a snake—it has feet.

"Oh! a mouse, perhaps."

"No, ever so much bigger than a mouse."

"A buffalo, possibly," said this teasing uncle, while Aunt Fanny laughed. She hadn't been married very long, and I guess she thought almost everything Uncle Jonas said was funny.

I was rather vexed then, and went to ask mother what it was. She told me it was a fawn or young deer. The Indian woman was glad to leave it for a pan of potatoes and calico enough to make herself a short gown.

We untied its poor little feet and gave it some warm milk. In a few days it was as tame as a kitten and would run about after us and come whenever we called "Betty." It had beautiful white spots all over its sides. My little brother and I would stroke its hair and put our arms around its neck and thought it the dearest little creature in the world. But one evening when we called it did not come, and though we ran through the pasture and up the hill calling "Betty, Betty," we could not find it.

Next day we found it killed and half eaten up by Indian dogs. No need to tell of tears. It was a big trouble for a six-year-old, and although I had many pets afterward, I never forgot dear little Betty the fawn.

A Thrilling Romance.

DEAR EDITOR:—As this is the first of the year, I will send you my first effort of story writing. I wrote it and read at my school. Thus runs my story:

Maud.

On a small farm in the country lived a girl about 16 years old, who was tall and awkward looking. Her hair was very thick and the color of a carrot; she had gray eyes, and was altogether homely. The boys and girls of the small school she attended ridiculed her because she was not pretty. And one boy, Grant Warden, especially was the tease and torment of her life; but soon this trouble was ended, for he was sent to college, and all went well for some time. But alas! she was taken ill with the typhoid fever, and was sick unto death for many days. It was not until then that her friends and playmates ceased to ridicule her. As they stood around her supposed deathbed, they thought only of her good traits, and were very sorry for the way they treated her in the past.

When her life hung as if by a mere thread,

the crisis came and the doctor said she would live.

She slowly recovered, and when she was pronounced out of danger and was allowed to go about the house as of old, she found she was greatly changed during her illness. Her hair had fallen out, and now her head was covered with a profusion of beautiful auburn ringlets, and her once dull, gray eyes were darker, larger and lustrous, and she was proud as she glanced at her reflection in the mirror.

Her aunt and uncle with whom she lived concluded to send her to college. She was very much delighted at the idea of going to school again, and tried in all ways to please her guardians.

She was 18 years old, and was going to complete her education. The professor was very kind to her, and after a great deal of hard studying, she became one of the graduates.

They were to have some exercises, and many attended, most of them being friends and relatives of the members of the class. Among them was a very handsome young man, and he was none other than Grant Warden, Maud's old schoolmate.

There was one young lady that he was particularly impressed with her beauty, and on inquiring as to who she was, he could scarcely believe the truth of the informers when they told him it was Maud Manners. He thought, could it really be the little girl whom he used to make sport of in bygone days. But now he had quite changed his mind, and now he thought she was one of the most beautiful creatures ever beheld.

And after a year's pleading with her, he led her to the altar as his beautiful bride.

This is the end of my story.

I hope some of the readers will say how I have done.

I wish you all a happy New Year.

KITTEN'S MISTRESS.

Clover Creek, Shasta Co.

A Ghost Story.

[FOUNDED ON FACT.]

[Written for the RURAL PRESS by HELEN SWEIT, aged 12 years.]

Some years ago I was living with my parents in a roomy, well-finished, two-story cottage in the southern part of San Francisco. The street was neither large nor fashionable, but the society was good with the exception of the usual sprinkling of "undesirable neighbors."

We had not been there long before we began to be troubled with certain unearthly noises, which seemed to proceed from the basement. In vain we ransacked every portion of the house from top to bottom, and cudgeled our brains to find some clue to the mystery.

Our large family of cats precluded all possibility of rats, and as there was no cellar, and the house was built upon solid ground, we seemed, after a couple of weeks' anxious investigation, as far from the solution as ever.

Sometimes sounding suspiciously like a cough or sneeze, and oftener like a suppressed grumbling murmur, the sounds still continued baffling all our most strenuous efforts to find their source.

Spiritual friends suggested "sperrits," and advised us to engage the services of a medium, and hold communication with the supposed visitors from "lands unknown," and we felt half inclined to take their view of the case, for, in our fevered imagination, as soon as the lights were put out the whole house seemed filled with mysterious rappings, the stealthy tread of light feet, and similar performances usually attributed to spooks and other evil spirits.

One evening toward dark, sitting in the bay window in front, I saw a little Irish boy, son of a washerwoman on the next block, come running along in a rapid yet stealthy manner, and instead of coming in at our gate or at our neighbor's as I had supposed he would, he squeezed in between the two houses which were about a foot apart, and disappeared.

Here at last was a key to the mystery. We searched carefully but could find nothing to indicate the whereabouts of the boy; nobody in the back yard, nobody in the front yard, nobody under the stairs, nobody between the houses.

The next day we informed the police, and toward evening a watch was set. Pretty soon one little boy came along, squeezed in between the houses, and disappeared; then another repeated the action; then another, and still another, until at least 20 had done the same.

On removing the sidewalk we saw, through the dense clouds of tobacco smoke which filled the place, the objects of our search huddled closely together in a sort of subterranean cave of their own construction under our house, indulging in the "manly" pastimes of smoking and chewing tobacco.

We boarded up the space between the houses and the "sperrits" troubled us no more.

WILLOUGHBY mentions a parrot which, when he said to it, "Laugh, parrot!" immediately broke out laughing, and cried out an instant after, "Oh, the great fool who made me laugh!" A keeper of a glass shop possessed one that, when he accidentally broke anything or knocked over a vase, invariably exclaimed in tones of anger: "Awkward brute! He never does anything else!"

GOOD HEALTH.

Coffee—Its History and Use.

We give from the *Chronicle* the following report of a lecture recently given by Prof. Lane before the Cooper Medical Institute of this city on the origin, history, and use of the coffee plant:

"In searching for the origin of coffee," said Prof. Lane, "authors have agreed to assign its birthplace to Ethiopia. When it was carried to Arabia it soon became naturalized. In a search for the earliest mention of it, one writer, inspired with that reverence which has sought to find out all things in the sacred book, assures us that coffee is mentioned in the history of King David, where it is stated that this was the potion which was offered by the hands of fair Abigail to calm the excited monarch. The proof urged in favor of this biblical claim is that the drink offered was prepared from something roasted."

"While visiting Paris," continued the lecturer, "I was agreeably surprised to find in a museum a portion of the original coffee shrub which was brought to France. Probably no more precious sample of this berry exists in the world. Coffee, at the time of its introduction into use, was very expensive, selling for from \$20 to \$25 a pound. Such a price led to its general cultivation, and soon, instead of being the monopoly of Arabia, whence it was first derived, it was grown in the East and West Indies, Central and South America, and now large amounts of it are grown in Java, Ceylon, Mexico, Guatemala, Costa Rica and Brazil. The production of the latter country is the largest, being about 4,500,000 quintals annually, one sack generally holding about one quintal. While coffee can only be cultivated in a warm climate, yet it cannot bear great heat. The seed is first planted in a cool, shaded nursery, the infant plants being scrupulously screened from the rays of the sun. It is next transplanted to the fields destined for its growth, and there it is carefully cultivated for nearly five years before the product is sufficiently abundant to be remunerative. The shrub usually reaches a height of from 12 to 15 feet, and is well covered by leaves of a dark, glossy green. Small flowers of snow-white color spring from the stem at the foot of the leaf. When in full bloom the appearance is exceedingly charming. The flowers are soon transformed into round, green berries, which, ripening, present the appearance of red cherries. From two to three crops of mature berries may be gathered annually. The work of preparing the berries for the market is done partly by hand and partly by machinery. Each berry should have two grains on it, yet sometimes but one is found, and this one is especially prized and commands the highest price. The pulp of the berry is sweet to the taste."

"A chemical analysis of coffee, after being burned, shows that it contains 20 per cent of water and about 50 per cent of cellulose—a substance resembling starch—and grape sugar. The agents which especially distinguish it are caffeine and coffeine. The former belongs to that group of chemical agents named alkaloids. Coffeine is a volatile oil, the result of an essential change in coffee produced by roasting. To this subtle and fugitive principle the aroma of coffee is due, and in roasting this oil permeates the entire grain; but if the heat be too great, or continued too long, it is dissipated and lost. Experiments show that caffeine and coffeine have different effects on the animal body, the caffeine acting as a transient stimulant, while the coffeine is more prolonged in its effects and exercises a sedative or tranquilizing action. But in drinking an ordinary cup of coffee, these two actions are obtained, stimulation preceding for 15 minutes the stage of sedation or repose."

"Coffee lessens tissue waste. Physicians have found that, among other articles, coffee temporarily arrests and stays this change. Coffee has another action—that of stimulating the faculties. The soldiers of the French army fought better in Syria and Egypt because they received coffee among their rations, and to authors and scientists it has been an untold blessing. Certain evils, too, may arise from its overuse, such as insomnia and palpitation of the heart. Children should not be allowed to drink it freely, because, as Savarin says, it dries them up and converts them into dwarfed machines. Commercial cupidity and dishonesty of the dealers often prevent the article from coming pure on our tables. But there is cheating in all trades. Both ground and unground coffee are falsified."

"Coffee figures largely as a remedial agent and a disinfectant. For nervous headache, it is often a cure, and gives great help in cases of narcotic poisoning or great depression of strength from hemorrhage. As a disinfectant, it is less disagreeable than chloride of lime and more accessible."

At the conclusion of the lecture, loud applause ensued. Prof. Lane then announced that on the evening of January 20th Dr. Cushing would lecture in the same place on "Physical Exodus."

KEROSENE AND DIPHTHERIA.—A well-known doctor says that the fumes of kerosene when a lamp is turned low are likely to cause diphtheria. The New York Board of Health a few years ago decided that to this, more than any other cause, the prevalence of this disease was

to be attributed. This is given as accounting for the fact that diphtheria generally begins to spread with the advent of short days and long nights. Children dislike to go to bed in the dark, and the kind mother lets the lamp remain in the bedroom, usually turning down the flame, so that the light will not keep the child awake. Many bedrooms are thus semi-lighted all night, and the windows being closed or raised but slightly, the atmospheric condition is simply deadly. A turned-down kerosene lamp is a magazine of deadly gas that the healthiest lungs cannot be safely exposed to.

DOMESTIC ECONOMY.

Tested Recipes.

[Written for the RURAL PRESS by ADA E. TAYLOR.]

Foamy Sauce.—Yolks of two eggs, beaten light in a little water, mix one-half cup of sugar and one tablespoonful flour together, then add to the eggs, pour over the whole about two cups of boiling water; steam 10 or 15 minutes. Flavor to taste.

Chocolate Frosting.—Whites of 4 eggs, 1 cup sugar, 1 tablespoonful vanilla, 3 bars chocolate, grated. Beat whites stiff, add sugar and chocolate mixed together, then vanilla. Place over a kettle of boiling water until it is thoroughly steamed and has a shiny appearance; cool before putting on the cake.

Fruit Cake.—Work 1½ pounds of butter to a cream, add 1½ pounds of brown sugar, 1 small cup syrup, 14 eggs well beaten, glass of brandy; mace, nutmeg, cloves, allspice, and cinnamon; mix all together, then work in 3 cups of flour as light as possible; add fruit as follows: Four pounds of currants, 2 pounds citron, 5 pounds seeded raisins, all well floured and mixed before putting in the cake. Bake 3 or 4 hours in a moderate oven.

Snowflake Cake.—Whites of 12 eggs, 2 cups of sugar, 1 cup butter, 1 cup milk, 3 cups flour, 1 cup cornstarch, 2 heaping teaspoonfuls yeast powder, 3 tablespoonfuls lemon, 1 cup of very thinly shaved citron, dusted with flour. Beat the butter to a cream with the hands, then add sugar, then milk, then flour and cornstarch in which the yeast powder has been sifted, then the eggs beaten; last of all, gently stir in the citron.

Cocoanut Pudding.—Soak one cup of cocoanut in two pints of boiling milk for half an hour, then let boil again and add the yolks of three eggs, beaten in a little milk, one cup of sugar, two teaspoonfuls cornstarch, mix together, set in a pudding dish, and place on top the beaten whites of five eggs, in which has been added one-half cup sugar; sprinkle over the top a little cocoanut. Bake in a slow oven ten minutes.

Mince Meat.—Eight pounds of meat, 25 cts. worth of suet, 6 pounds of raisins chopped, 4 pounds of currants, 1 large pan of chopped apples (then stewed), 1 pound citron, one-half can cinnamon, 1 dozen nutmegs (ground), 2½ cans of cloves, one-half can of allspice. Mix them all dry, then add 4 pounds of brown sugar and one-half gallon syrup, and one-half gallon brandy. Put all in a boiler, mix well together, and put on the stove till it come to a boil.

Chinese Camp, Cal.

Tanning Skins With Fur On.

EDITORS PRESS:—Please will you inform me how to tan skins and keep the hair on?—M. E. C., *Healdsburg.*

Isaac H. Bailey, an authority in such matters, publishes the following formulas for accomplishing this in his *Shoe and Leather Reporter*: Take two parts each of alum and salt, and one of salt-peter, all well pulverized. Clear the flesh of fatty matter. Sprinkle it white with mixture. Fold in edges and roll up; remain four days, then wash with clean water, and then with soap and water. Pull the skin when drying, to make it soft. Another recipe is: Lay the wet skin on a smooth slab or a hard board; scrape with a dull knife until all loose flesh and film is removed; then wash off in soft water. Take a glass or stone jar, put in an ounce of oil of vitriol and a gallon of rain or river water. Let steep in this for about half an hour. Take it out, work it with the hands until dry, when it will be pliable and soft. The more worked the softer. Use no grease.

TO BANISH THE MOSQUITO.—The great annoyance that comes from the presence of mosquitoes is the Yolo *Democrat's* excuse for offering the following remedy, which is said to be effectual in clearing a sleeping-room: Roll a piece of paper around a lead pencil, so as to form a case; fill this with very dry pyrethrum powder, putting in a little at a time and pressing it down with the lead pencil. Set in a cup of dry sand or something to hold it erect, and an hour before going to bed close the room and burn one of these cartridges. A single one will be sufficient for a small room; a large one will require two. [The same result can be secured much more easily. Put a small teaspoonful of the powder on a crumpled piece of paper; place the paper on a fire-shovel and light one corner of the paper. The powder ignites, smokes like a small volcano for a few moments, and the mosquitoes are quiet for the night.—EDS. PRESS.]



T. DEWEY.

W. B. EWER.

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SAN FRANCISCO:

Saturday, Jan. 21, 1888.

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Tree Cleaner.—Charles J. Woodbury.
Cards.—Hines & Co., Cadiz, Ohio.
Forest Trees.—R. Douglas & Son, Waukegan, Ill.
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Orange Trees.—H. L. Wheatley, Altamonte, Fla.
Horses.—Theodore Skillman, Petaluma, Cal.

See Advertising Columns.

The Week.

Still the temperature and chilly north wind remain the main topics of conversation. The spell has considerably overstepped the California limit of three to five days for anything disagreeable in the way of weather, and though the thermometer has been doing better for a day or two, we do not yet feel the winning south wind, nor do we see the gathering rain-clouds. The low temperature and the correspondingly high coal prices have wrought much discomfort, and we hope both are nearly over.

Agricultural matters have been almost at a standstill. The California calendar has no mark for "timely work" when the top of the ground is frozen, and so the farmer has coked his feet on the kitchen stove and lifted up his voice against the weather. The fruit-grower has his pruning to do, but he doesn't like the idea of bundling up with a shawl when he goes out in the orchard—it looks too much like an Eastern farmer going out to water his "critters"—so he, too, has had recourse to warm words. But there is an end to all things temporal, and there will be to this, and we shall soon have shooting grass blades and blooming trees and all that.

G. W. MEADE & Co. resumed business to-day, Jan. 18th.

The Pacific Railroads Again.

The telegraph on Wednesday morning brought a message transmitted to Congress by President Cleveland, the message being accompanied by the two reports of the Pacific Railway Commission, to which we alluded recently in these columns. The President does not incline toward Congressional action which will bring the properties into the hands of the Government. On this point he says:

Any proceeding or arrangement that would result now or at any other time in putting these roads or any portion of them in possession or control of the Government is, in my opinion, to be rejected. Certainly, as long as there is the least chance for indemnification through any other means, I suppose we are hardly justified in indulging in irritation and indignation naturally arising from contemplation of malfeasance to such an extent as to lead to the useless destruction of these roads or the loss of the advances made by the Government. I believe that our efforts should be in a more practical direction, and should tend with no condonation of wrongdoing to the collection by the Government on behalf of the people of the public money now in jeopardy.

This seems to be the ordinary business way of looking at the matter and is the view any mortgagee would take when he held a claim upon property which he did not want, and which would be of value only as a part of a business which is to be continued. In such cases the mortgagee usually makes the best terms he can to save at least a part of his investment, and in this hope may allow the continuation of persons whose conduct he cannot approve. Of course, it is a question whether this is the proper basis on which to settle a question of such public import, or whether the moral effect of a more summary method of procedure would not be worth more to the future of the country than in regaining the value, if any, which may yet be recovered from these corporations. This question is too broad for present discussion; besides, it is a question which one can well consider and settle in his own mind, or which may receive attention from various organizations given to discussion of public affairs.

There is, however, in the message of the President another matter of moral weight which is forcibly brought out and which can be best expressed in his language, as follows:

It is almost needless to state that the companies have availed themselves to the utmost extent of the permission given them to issue their bonds and to mortgage their property to secure the payment of the same by incumbrances having the preference over the Government's lien, and precisely equal to it in amount.

When the relations created between the Government and these companies by the legislation referred to is considered, it is astonishing that the claim should be made that the directors of these roads owed no duty except to themselves in their construction; that they need regard no interests but their own, and that they were justified in contracting with themselves, and making such bargains as resulted in conveying to their pockets all assets of the companies. As a lienor the Government was vitally interested in the amount of mortgage to which its security had been subordinated, and it had a right to insist that none of the bonds secured by this prior mortgage should be issued fraudulently or for the purpose of division among the stockholders without consideration.

This is a pretty sharp arraignment of the process which was followed of treating the Government aid as a contribution to private aggrandizement, and this is the conduct which President Cleveland rightly says should not be condoned, although he believes the Government, having been thus treated, should now make the best arrangement it can to recover what it can of the immense loan which it made to the companies. The whole matter is now before Congress, and we shall soon discern its attitude on the proposition.

CACTUS FODDER IN TEXAS.—It is said that something like 50,000 steers will be fed on cactus the coming season in the State of Texas. The process is reported to make solid and delicious beef, and as the fodder is easily procured it is likely to be largely adopted in other sections of the Southwest.

DEHORNING.—I. C. Steele of Pescadero dehorned 53 two-year-olds and one older cow Dec. 27th, and reports them all in tiptop condition, despite the surgery and the cold snap.

THE CALIFORNIA COTTON-MILLS of Oakland have received 223 bales of cotton from Valley Center, San Diego county.

The Terrible Weather.

California has undergone an exceptionally cold spell. Sergeant Barwick of Sacramento notes a registry on his minimum thermometer of 19° F. on Saturday and Sunday, January 14th and 15th. This record has the greater interest because it goes to verify a record of 19° made by Dr. Logan in 1854, and which has been thought possibly a mistake on his part. This fact is in itself significant because it shows how rare it is for the temperature to fall so low, and that it is a third of a century since such cold has been known. It is not a wonder, then, that we cry out "terrible weather" when we feel an atmosphere that only comes once in a generation. As to the effect of this experience beyond the shivers and oburgations of the people, it has so far been seen to seriously injure only plants known to be tender. Reports are that the orange is showing itself a hardy plant, when in proper condition, by age or matured wood, to stand the infliction. Both north and south, in some districts where oranges are grown, there has been ice formed on standing water and frozen ground, which did not thaw during the succeeding day, and yet old orange trees only suffer injury on their young shoots. Young trees, however, are seriously hurt in some localities; in others, where the temperature has not fallen so low, even these have not been materially injured. On the whole, it is shown that our semi-tropical fruits do not succumb to the coldest weather known here since the American occupation.

The cold weather coming on bare pastures has wrought some injury to our live-stock which have not been given extra food or shelter. It has killed some grain and will necessitate re-sowing such fields. It has made our flower-gardens rather sorry-looking areas, and by vote of all, once in a generation is often enough for such weather.

Such a complaint sounds rather childish, though, as we read the daily accounts of the fearful weather in other parts of the country. The account of Dakota winter given by the writer of our Christmas story in the issue of December 24th, is far within the truth as set forth from day to day by the dispatches from that region, and in fact from the whole West and Northwest region. Let us cite merely a few most heart-rending facts from a single day's dispatches:

Robert Kennedy frozen to death in his wagon while going for coal to the railway station in Sherman county, Kansas.

Two children frozen on their way home from school; a man and team frozen on the road; two men frozen while walking along the road; father and son frozen while driving cattle to feed on cornstalks; three children frozen on their way home from school, although their teacher tried to save them and escaped herself with frozen feet; a schoolteacher and eight children frozen; a man and boy frozen while returning from a funeral, and a mother lost both legs by freezing while returning from the funeral of a son who had perished in the snow previously—all these casualties occurred in Nebraska.

In a single county in Dakota 19 deaths are reported. Schoolteachers and groups of children, as high as eight in a group, have perished.

But we need not continue this distressing narrative. The thermometer has fallen 40° to 50° below zero, the wind and snow have blown blizzards, and life cannot withstand these conditions.

A dispatch from Omaha Jan. 18th is as follows: The latest reports from all quarters show that the loss of life during the recent blizzard foots up nearly 200. This includes Dakota, Montana, Minnesota, Iowa, Kansas and Nebraska. When the record of the loss of life is complete it will show the largest number of deaths ever known to have resulted from a similar occurrence. Unprotected cattle were frozen by the thousand, Nebraska suffering greatly in this respect.

With such things in mind, what reason have we to complain of our little discomfort which would indeed have been hailed as almost a return of summer by the poor people in these inhospitable parts of the country? Rather let us give thanks that our lines have been cast in pleasant places, and let us give a heartier welcome to the thousands who are now coming to California to escape the ills which human endurance is powerless to withstand. Happy are they who secure in California homes for themselves and a heritage for their children.

Forestry.

It is announced that the Forestry Commission will hold a meeting in their office in the Nevada block on January 24th. Messrs. Kinney and Bettner are expected to arrive from their southern homes, and John D. Spreckels, lately appointed as successor to Mr. Coleman, will take his seat in the board. Reports are expected from some of the large number of local forestry guardians which have been appointed, and other matters of importance are expected.

Word has been received from Senator Stanford that he will introduce a bill for the preservation of the forests somewhat different from that adopted by our board and submitted by them at the Santa Rosa convention. It has also been announced by telegraph that Senator Hale has introduced a bill, prepared by the American Foresters' Congress, to preserve the forests. It withdraws from entry as forest lands all public lands of the United States more valuable for their timber than for agricultural purposes. It institutes the office of Commissioner of Forests and authorizes the appointment of four assistant Commissioners. The Commissioner is instructed to form forest land into what are designated as forest reserves. He is given power to frame rules and regulations for the government of these reserves, and to appoint rangers to see that the rules are observed. No forest lands are to be sold, but the stumpage on them may be disposed of in the discretion of the Commissioner of Forests.

It is evident that more public attention is being drawn to forestry in all its branches than ever before in this country. The idea of preservation of forests from illegal and wasteful destruction is gaining force by public opinion and by the prosecutions which the Government is conducting against trespassers. It is certainly true, as has often been pointed out in our columns, that effective measures should be adopted to prevent our new country from following the hard experience which older countries have undergone and from which they are now putting forth such vigorous efforts to recover.

The Fruit Union.

The meeting of the stockholders of the Fruit Union is in progress as we go to press on Wednesday, and we are, therefore, unable to give a report this week. We will state, however, in advance of a full report, that the report of the secretary shows the Union in good condition financially. Stock subscriptions during the year have footed up \$5408, and from various agents \$17,017 has been received, making gross receipts \$22,425. There is now over \$8000 in the bank, and the total assets aggregate \$11,300.

Salaries amounted to \$7689.50. This amount includes expenses of an Eastern manager and some back salaries. A dividend of six per cent has been declared, and two per cent will go into a reserve fund. The shipments of last season aggregated 11,368,020 pounds. The gross charges, freight, cartage, etc., footed up \$356,289.59, making the net returns to the Union \$319,574.85, the gross receipts being \$675,864. The Union has gained during the year 269 members. Of stockholders, 486 have paid in full for stock subscribed, and 217 members are delinquent, holding 3415 shares. But we must defer other facts until our next issue.

NAILS LEFT STICKING OUT in barns and stables cause the death of horses every now and then. We notice in the Martinez Item that Mr. Donnelly sustained the loss of a valuable mare a few nights ago through one of these accidents. The animal had been sick and was moving around, when she struck a nail, which penetrated her head and killed her. This is not the first time we have made note of such casualties. Moral: Don't leave ragged or sharp nails sticking out where there is likelihood of horses, cattle, or human beings running against them.

CANNERS' SUPPLIES.—There is much talk among canners about the rise in price of tin solder and sugar which they claim will materially advance the cost of canned goods during this season's pack. Some even claim that the cost of canning will be 25 per cent higher than heretofore. This will certainly not be desirable, and we hope such forecasts may not be realized.

Agricultural Review.

Leading Articles of California Production in 1887.

[Written for the RURAL PRESS by J. R. F.]

The year 1887 was, in many respects, most remarkable. Opening auspiciously for leading farm products, prices stiffened for the first few months with the highest range of values in April extending into June. With the commencement of the last half of the year values for cereals began to weaken off, and ruled only fair to the close of the year. Wools, hops and one or two other articles also gradually shaded off. Outside of these, other products gained in strength, closing the year strong. Under appropriate headings below, this is given more at length. The State gained in population by large immigration of a desirable class. The increase is placed at 100,000, which, if correct, gives the State a population of 1,250,000. Some authorities place it some higher. While the State made large gains in population, the gain has been, if anything, larger proportionately in wealth. The banks have larger lines of deposits, carry larger reserve funds. Land has advanced in price. Many large tracts of land have been cut up and sold to actual farmers. Railroad building has been unexampled in the history of the State. Without further details it is safe to state that there has not been an industry, manufacturing or otherwise, but shows an increase; and as the year closed favorable it warrants the assertion that 1888 will show a still further gain, and if anything be larger proportionately over 1887 than that year was over 1886.

Wheat.

The year 1887 was most remarkable in two respects. First, the bold attempt of the syndicate formed in September, 1886, to control the world's market, entering the markets on this coast and in the East, and by manipulations made sharp turns up and down, catching friends and foes alike. This move met with strong opponents who fought to the bitter end, for as fast as one went to the wall another with stronger financial backing took his place. Those who fought the syndicate the more bitterly were in Great Britain and at the East. After sending prices for futures up from comparatively low prices to an advance of from 40 to 70 per cent and crushing many in so doing, they met final defeat. Whether the bull interests on this coast were connected with the corner run at Chicago is an open question. Many believe they at the first were, but after having sent that market to high figures the Californians unloaded on the others, causing financial wrecks and a collapse in prices, which also broke the markets abroad and caused those running a German wheat corner to go to the wall. When the Chicago corner broke the pool here stood under this market and succeeded in buying options aggregating over 100,000 tons from the bears, who had already sold quite heavily. Then began a systematic advance in both options and sample parcels. Prices were fluctuated up quite rapidly until \$2 17½ was reached for seller 1887, the last of July, against \$1.89 for the same option the fore part of the month. Spot wheat sold at \$2.09 per cental on July 29th, against \$1.85 on July 1st. There were such large quantities of seller 1887 offered on Call, and money having grown very tight, with large quantities of wheat already put to the pool, and still larger quantities near at hand for delivery, that the pool found themselves unable to carry the load and on August 3d there was a collapse. The directors of the Call Board Association thereupon announced that the sessions would be suspended until further notice. By their prompt action, and through the exertions of the conservative element on 'Change, a panic was averted, which might have been far-reaching in its results. No sessions of the Call Board were held between August 3d and 23d. On September 1st the president of the Call Board announced for sale, for the benefit of the creditors, 5600 tons No. 1 white wheat, more or less, which had been held by the bull syndicate. A total of 5800 tons was sold at an average of a little over \$1.24½ per cental, the whole making a total value of \$144,599. Other sales were also made. Wild statements were made as to the quantity of wheat involved in the failure of the syndicate, ranging all the way from 200,000 to 400,000 tons. The quantity was finally narrowed down to about 106,000 tons. A final settlement of the great wheat deal was made in December. It was generally reported that the pool and their financial backing lost very heavily, but all such reports are exaggerated. Many large moneyed men on this coast, at the East and in Europe who shorted the market were forced to compromise with the pool at heavy losses, and the enormous sum drawn in from this source will never be known, but it runs into the millions of dollars. There are those closely allied with the persons supposed to have been intimately connected with the pool managers who claim that the losses by the pool will prove very small after

the wheat now held is disposed of. But then so muddled is the entire affair that no one can form a correct idea how they will come out. During the month of September the local market was unsettled, ranging under light trading from \$1.20 to \$1.35 per cental. The market began to gather strength in October, and under freer trading and gradual strengthening markets abroad, values held strong at slowly advancing prices in November, with strong markets in December.

In this connection it is in place to note several important points that favored the bull interest. The Australasian wheat crop was very short, while Chili and the Argentine Republic had a light crop, as did India. The stocks in the consumption markets were exceedingly small on January 1, 1887, as were they in the supply markets. The average seeded in the United States showed a falling off in comparison with the preceding season. As the year 1887 advanced, running well into April, crop prospects in Great Britain and on the continent were unusually gloomy. So poor was the outlook that the very best-informed did not look for more than half a crop, which of course inspired confidence in higher values later on in the season. Suddenly the whole complexion changed, for the European weather turned for the better, and from that time until after harvest favored the farmers, which resulted in larger wheat crops in England, France, Germany, Austria and Hungary than harvested for several years before. Full particulars of this and other wheat information were given at the time in the RURAL PRESS. Large crops abroad, with the collapse of the wheat corners, contributed no little in keeping values down the remainder of the year, notwithstanding the large shortage in the crop in India, Italy and United States.

For references and for other purposes we give the following ranges of spot prices for wheat by months for the first half of the year, when the pool was in full sway:

January.....	\$1 52½ @ 1 60
February.....	1 47½ @ 1 57½
March.....	1 47½ @ 1 67½
April.....	1 67½ @ 1 80
May.....	1 70 @ 1 85
June.....	1 80 @ 2 10

The Liverpool market for California wheat ranged as follows by months in 1887:

Off Coast.		Just Shipped.		Nearly Due.	
High.	Low.	High.	Low.	High.	Low.
Jan. 38s od	36s gd	40s cd	38s 3d	30s 6d	37s od
Feb. 36 9	36 6	38 9	37 6	37 0	36 3
Mar. 38 3	36 3	39 6	37 0	38 0	36 3
Apr. 38 3	38 0	40 0	38 9	38 3	37 9
May 39 6	38 0	40 6	38 9	40 3	37 9
June 39 9	38 0	40 6	40 0	40 3	39 0
July.....	..	39 6	39 0	39 6	39 0
Aug. 32 0	31 6	..	..	..	..
Sep. 31 0	30 6	33 6	30 0	33 3	30 6
Oct. 33 0	31 6	33 6	31 3	33 0	31 3
Nov. 34 3	32 6	35 0	33 0	34 0	32 3
Dec. 35 0	33 6	35 6	33 6	35 0	33 6

Date of Arrival of New Wheat

At tide-water each year since first production and price:		Price.	
Year.	Month.		
1859.....	June 14.....	\$1 40	to \$2 00
1860.....	July 3.....	1 50	to 1 55
1861.....	July 24.....	1 50	to 1 62
1862.....	July 11.....	1 62	to 1 65
1863.....	July 25.....	1 50	to 1 60
1864.....	July 9.....	2 80	to 2 95
1865.....	June 12.....	2 20	to 2 25
1866.....	June 25.....	1 50	to 1 60
1867.....	June 17.....	1 55	to 1 70
1868.....	June 18.....	1 90	to 2 00
1869.....	June 15.....	1 40	to 1 45
1870.....	June 9.....	1 70	to 1 80
1871.....	June 23.....	2 30	to 2 37
1872.....	June 10.....	1 80	to 1 85
1873.....	June 7 (at Vallejo).....	1 75	to 1 80
1874.....	June 11.....	1 65	to 1 87
1875.....	June 2 (at Vallejo).....	1 25	to 1 67
1876.....	June 9 (at Oakland).....	1 75	to ..
1877.....	June 2 (at Vallejo).....	2 40	to ..
1878.....	June 13.....	1 70	to ..
1879.....	June 20.....	1 65	to ..
1880.....	June 24.....	1 00	to ..
1881.....	June 7.....	1 25	to 1 40
1882.....	June 6.....	1 67	to ..
1883.....	June 19.....	1 65	to ..
1884.....	June 30.....	1 45	to ..
1885.....	June 3.....	1 42½	to ..
1886.....	June 5.....	1 25	to ..
1887.....	June 11.....	1 86	to ..

The wheat crop on this coast last year was very large in both Oregon and Washington Territory, being fully 20 per cent more in Oregon, and 50 per cent more in Washington than was that of 1886. In this State the weather was decidedly against the crops. There was almost an entire absence of heavy dews and fogs in the sections; each act an important part, with long-continued absence of rains. Before rains did come many hundreds of fields were total failures in the San Joaquin and Sacramento valleys. The following is a fair estimate of the out-turn in cents by counties:

County.	Acres.	Yield.
Alameda.....	70,000	180,000
Butte.....	200,000	1,950,000
Calaveras.....	40,000	300,000
Colusa.....	400,000	2,500,000
Contra Costa.....	130,000	750,000
Fresno.....	220,000	910,000
Humboldt.....	8,000	60,000
Kern.....	15,000	150,000
Los Angeles.....	150,000	900,000
Mariposa.....	1,500	15,000
Mendocino.....	15,000	100,000
Merced.....	150,000	800,000
Monterey.....	120,000	570,000
Napa.....	15,000	100,000
Sacramento.....	85,000	700,000

County.	Acres.	Yield.
San Benito.....	30,000	150,000
San Bernardino.....	3,000	12,000
San Joaquin.....	260,000	950,000
San Luis Obispo.....	80,000	350,000
Santa Barbara.....	50,000	150,000
Santa Clara.....	60,000	300,000
San Mateo.....	6,000	20,000
Santa Cruz.....	30,000	200,000
Siskiyou.....	12,000	120,000
Solano.....	60,000	500,000
Sonoma.....	40,000	400,000
Stanislaus.....	300,000	1,000,000
Sutter.....	100,000	850,000
Tehama.....	100,000	850,000
Tulare.....	300,000	1,200,000
Tuolumne.....	5,000	30,000
Yolo.....	150,000	550,000
Yuba.....	30,000	20,000
Ventura.....	15,000	50,000
Other counties.....	12,000	50,000

Totals..... 3,262,500 17,497,000

Receipts at this port last year were as follows in cents:

	California.	Oregon.
January.....	958,142	103,650
February.....	318,657	77,825
March.....	682,200	120,430
April.....	678,070	242,640
May.....	568,971	181,522
June.....	1,081,469	51,900
July.....	1,257,539	24,250
August.....	1,472,546	44,496
September.....	786,873	67,843
October.....	246,219	118,755
November.....	510,860	102,755
December.....	648,703	104,068

Totals..... 9,210,249 1,240,134
1886..... 15,887,037 588,617
1887..... 11,853,200 1,189,677

When it is remembered that California was at one time deemed incapable of producing wheat, the rapid growth of the industry on the coast is one of the most surprising evidences of our progress. The following table gives the crop for each year since 1853, that is, since the business passed beyond the experimental stage:

	Centals.	Centals.
1853.....	1,000,000	1871..... 4,500,000
1854.....	1,000,000	1872..... 16,000,000
1855.....	1,500,000	1873..... 15,000,000
1856.....	1,750,000	1874..... 16,500,000
1857.....	1,500,000	1875..... 11,000,000
1858.....	2,000,000	1876..... 15,500,000
1859.....	3,000,000	1877..... 9,000,000
1860.....	5,300,000	1878..... 16,000,000
1861.....	2,750,000	1879..... 18,500,000
1862.....	4,800,000	1880..... 35,000,000
1863.....	3,000,000	1881..... 22,700,000
1864.....	3,000,000	1882..... 24,000,000
1865.....	4,500,000	1883..... 23,000,000
1866.....	8,000,000	1884..... 33,000,000
1867.....	7,500,000	1885..... 19,000,000
1868.....	8,500,000	1886..... 24,500,000
1869.....	9,000,000	1887..... 17,497,000
1870.....	6,500,000	

Barley.

The year 1887 opened firm at \$1.05@\$1.10 per cental for good to choice feed and \$1.15@\$1.25 for fair to choice brewing. By the end of the month the market advanced 10 cts per cental for feed and 5 cts for brewing. The advance was due to dry weather and a good shipping demand. In February rains set in, causing the market to advance, which was followed by another decline of 10 cts the latter part of the month. These low prices brought in buyers chiefly for shipping, and a slight advance resulted, which was lost by a decline early in March, followed by a jump of 10 cts, owing to a large short interest trying to buy to fill, and also to free shipments overland, so as to take advantage of the cut in overland freights. This was followed by another advance early in April; this time it was 5 cts per cental. Continued dry weather, light stocks and a good demand made the strong market. With rains, the market for feed fell off from 3½@6½ cts, which was followed by an advance of from 7½ to 10 cts in feed and 2½@5 cts in brewing. From this time to the end of May the market settled until it was about 5 cts lower all around. June held to the same prices. From this time until the end of the year the variations in prices were very slight, but with a general downward tendency up to September, from which time to the close of the year there were few changes, with a fairly steady tone. Under heavy receipts, stocks in this city gradually accumulated from August to November. Since then they show a slight falling off. The home consumption was unusually large—larger than ever before—due to more active training in railroad building, opening up new farms, hauling lumber and all else that went to assist in the building boom in the State, but chiefly in the southern counties. Another thing also created a larger consumption: owing to the high cost of hay, more rolled and ground barley was fed to stock with out feed. The shipments out of the State, both by sea and rail, since the new crop season, were very much less than during the like time in 1886.

The crop of 1887 was the largest in the history of the State, due to the increased acreage. The dry weather continued so late in the season that wheat seeding in many sections was out of the question, so that barley was seeded as the safest crop. Besides this, the low stage of water in the rivers allowed of more land being seeded to barley. Taking all this as a whole, caused the better-informed to place last year's barley crop at fully 50 per cent over any former season.

The receipts at this point last year were in cents as follows:

	California.	Oregon.
January.....	60,232	84
February.....	46,308	3,366
March.....	76,773	266
April.....	77,642	200
May.....	140,634	809
June.....	91,011	122
July.....	223,599	.....
August.....	379,948	.....
September.....	393,292	.....
October.....	269,912	80
November.....	172,378	.....
December.....	142,746	.....

Totals..... 2,071,475 4,927

Receipts by years from all sources compare as follows:

	Centals.
1876.....	1,907,058
1877.....	780,425
1878.....	1,571,954
1879.....	1,768,839
1880.....	1,907,058
1881.....	1,244,835
1882.....	1,548,162
1883.....	1,416,468
1884.....	1,841,145
1885.....	1,111,123
1886.....	2,095,816
1887.....	2,076,402

The monthly exports of barley from San Francisco by sea in 1887 were as follows:

Months.	Centals.
January.....	6,611
February.....	9,497
March.....	5,632
April.....	13,089
May.....	6,726
June.....	31,957
July.....	12,138
August.....	68,275
September.....	33,494
October.....	48,228
November.....	113,952
December.....	65,740

Total..... 415,339
1886..... 723,648
1887..... 185,297

The overland shipments from the State to Eastern cities during the 12 months ending November 30, 1887, were 66,850 centals, against 249,372 centals for the 12 months ending with November, 1886.

The overland shipments during the past year were made as follows:

From	Centals.
San Francisco.....	1,321
Oakland.....	36,366
San Jose.....	24,478
Sacramento.....	4,685

Total..... 66,850

The shipments by sea in 1886 and 1887 compare as follows in cents:

To	1887.	1886.
New York.....	194,972	187,005
Great Britain.....	42,670	391,151
Australia.....	30,311	.....
New Zealand.....	6,593	.....
Chili.....	22,004	47,721
Hawaiian Islands.....	108,723	89,098
Elsewhere.....	10,066	8,673

Totals..... 415,339 723,648

The outlook for 1888 is far from discouraging. The stock, to be sure, on January 1st was nearly double that held on January 1, 1887, but then prices are lower now, the consumption fully 50 per cent greater than then, while there will be a decided falling off in the average seeded. Then again, the crop at the East was light and higher prices are expected to obtain there before the spring months are over.

Corn.

Corn does not play an important part in the cereal productions of this State, and consequently our main reliance is on the Western States where it is grown at the expense of other feed cereals. Last year the receipts at this port from all sources aggregated 196,043 cts. against 216,909 cts. in 1886. At the end of 1887 the stock in the State was about 12½ per cent less than reported at the end of 1886. The crop in this State last year was a full average, and of good quality, but the crop east of the Rocky mountains was short. Compared with 1886 it was about 25 per cent less, while the quality as a whole is poor, the bulk not being suitable for bread purposes. Aside from the short crop, large quantities of corn on the cob are reported to be burnt as fuel owing to the scarcity and consequent high price of coal.

Oats.

Receipts in cents last year were as follows: Californian and east, 172,802; Oregon, 223,534; total, 396,336. In 1886 they were as follows: Californian, 121,107; Oregon, 369,960; total, 491,067. The market ruled in buyer's favor the fore part of the year under free receipts from Nebraska, but when the high overland freight rates went into effect prices stiffened and remained strong throughout the season or up to July, owing to very light stocks, about nil in Oregon, to draw from. The crop in this State last year was quite light and generally of poor quality. Oregon and Washington Territory had very large crops, fully 50 per cent more than those of 1886. The quality of the grain, too, shows a higher grade, being fuller, brighter and generally heavier. Receipts from both Oregon and Washington continued light up to December, causing a strong market to rule, but owing to the known large supplies buyers did not anticipate their wants. Pursuing this conservative policy, as soon as receipts began to increase consigners had to make concessions so as to clean up consignments to save

expenses. These concessions caused a gradual weakening in values. The outlook is not of a very encouraging character, as the supply up North is low, and barley being cheap, oats will not be freely taken unless further concessions are obtainable.

Rye.

The receipts of rye in 1887 aggregated 27,804 cts. and in 1886, 24,511 cts., or which 95 cts. came from Oregon. Rye has never been in great favor in this State, consequently the production is light; but with increased immigration many have arrived who give rye flour the preference over all other kinds, consequently the demand was good last year, particularly the last three months of the year. This naturally caused a strong advancing market. The year closed with higher prices paid—\$2.50@2.75—than obtained for many years.

Buckwheat.

Receipts in 1887, 2293 sacks and in 1886, 6860 sacks. Buckwheat like rye is only used to a limited extent, and consequently very little goes a long way. The crop in 1887 was short, causing a stronger market to rule, with the year closing on a higher range of values.

Ground Feed.

The market for both bran and middlings fluctuated considerably during the year, prices varying with the demand and receipts to a greater extent than for years. Prices held up remarkably well, not dropping at any time to the average of 1886. The strength of the market was due to lessened production and a good demand. Receipts in 1887 aggregated bran 440,408 sacks, and middlings 101,004 sacks, and in 1886 they aggregated bran 464,263 sacks, and middlings 138,792 sacks. Oregon also sent in 1887, 35,101 sacks bran, and 8182 sacks middlings against, in 1886, 67,686 sacks bran and 29,617 sacks middlings. Ground and rolled barley was used more freely in 1887 than ever before, owing to its relative cheapness, and also to its being better for use with chopped feed. Prices were governed by the price of grain barley. Other ground feed moved in price in sympathy with the grain, but not being used heavily, does not cut much of a figure.

The Stock of Grain.

The Directors of the San Francisco Produce Exchange have submitted the following report of the stocks of flour and leading cereals of the crop of 1887 remaining in the State of California January 1, 1888, and a comparative statement of previous years:

Year.	Flour.	Wheat.	Barley.	Oats.	Beans.	Corn.	Rye.
January 1, 1882.	133,161	15,101,220	893,322	35,143	98,843	157,716	32,009
July 1, 1882.	119,324	2,892,048	1,024,416	21,305	48,708	67,716	32,009
January 1, 1883.	158,308	8,841,879	1,641,406	118,660	48,708	67,716	32,009
July 1, 1883.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009
January 1, 1884.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009
July 1, 1884.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009
January 1, 1885.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009
July 1, 1885.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009
January 1, 1886.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009
July 1, 1886.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009
January 1, 1887.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009
July 1, 1887.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009
January 1, 1888.	177,000	9,794,500	1,728,200	148,330	63,000	90,485	32,009

Hay.

Receipts in 1887 aggregate 111,063 tons, against 99,442 tons in 1886. Dry weather in the early part of the year was against a large crop of hay, and as the consumption was large, the large carryover from the crop of 1886 was soon gone. The consumption in this State last year is estimated at fully 25 per cent over that of 1886, due to more railroad building, more active teaming and poor pasturage in the latter part of the year. Prices kept up throughout the year, and, as the demand run on the better grades, the supply of choice to extra choice was soon exhausted. The only grades in the market are fair to good, but then they are called good to choice. The year closed on a higher range of values than known for years. It is claimed that by the time new hay comes the supply throughout the State will be virtually used up,

and the new come on a hungry and high market.

Potatoes.

Receipts in 1887 compare as follows with 1886 in sacks:

	1887.	1886.
California	992,737	965,775
Oregon	94,659	113,829
Totals	1,087,396	1,079,604

The market ruled strong the forepart of 1887, under light receipts and a good demand. The quality of the bulk of the receipts was only fair. The low water in the Sacramento and San Joaquin rivers allowed larger areas of land to be planted; and as the weather was favorable to crops, a very large yield was the result. Receipts of new and large supplies to draw from caused prices to sag off and rule low up to December, when prices began to show some strength, which was followed by a steady advance until the year closed with at from 20 to 30 per cent higher than ruled in November. Oregon has sent of her new crops very little, owing to high waters flooding several large potato districts. The crop in the Western States is about 25 per cent below an average; and as good prices rule there, Utah is contributing from its surplus.

As new potatoes can be laid down from this State in Chicago by from two to five weeks earlier than they can be supplied from the Southern fields, trainloads were made up here to run through on fast time. A rate of 70 cents for 100 pounds was granted by the railroads and this greatly encouraged the export trade. Chicago took the bulk of the new potato shipments, and as the trains were composed of from 12 to 14 cars each, it may readily be seen that the business was undertaken on no small scale.

Onions.

Receipts compare in 1887 as follows with 1886:

	1887.	1886.
Sacks.		
California	134,035	114,002
Oregon	10,714	4,006
Totals	144,749	118,008

The year opened on a strong market and high prices, owing to light receipts and a good demand. The market held strong up to the new crop arrivals, when an easier turn set in, which was followed by falling prices as new improved in quality and increased in receipts. Prices ruled low up to December, when they began to fluctuate as receipts lessened, but with a strong turn reported. The year closed on a strong market, with prices about 40 per cent higher than ruled in November. Oregon's crop was larger on the beaver-dam lands, and when our market began to appreciate, receipts from that quarter commenced. The quality in 1887 was good.

Cabbages.

The crop in 1887 was quite large and of uniform good quality. More attention was given to setting out cabbages, owing to the high prices of 1886. As the waters in the rivers were low, more land on the river-bottoms was cultivated. The first three months of 1887 prices ruled high, but under a lessening demand and receipts of new for the home trade prices eased off and fell before the spring months had passed to low figures, and by July 50 cents was the top. Toward November prices began to appreciate and were followed by a higher range of values in December, owing to large shipping orders outside of the State to points on the overland railroads. At one time in December hard heads sold up to \$1.25 and \$1.35 per 100 lbs., but fell back to \$1 at the close of the year, owing to freer supplies coming forward.

In root and other vegetables, the year's production, prices and general trade were a counterpart of former seasons, so that a review is unnecessary.

Fruits.

Horticulture in California is making rapid strides, forcing itself to front rank as a leading farm industry. Not only are valley lands found adapted to fruit cultivation, but also the foothills and even higher altitudes. The many kinds of climates and soils admirably fit the State to the cultivation of all varieties of fruits, and those too, of good size, color, and most excellent quality. That this latter assertion is correct is witnessed in the heavy shipments to the East where ready markets are found, and this in the face of heavy freight charges. If freights were reasonable the industry would be capable of greater expansion. Even as it is there is a wonderful growth, owing to the large increase in canning and drying. In order to show the quantity dried and canned, the following tables are given. The quantity and variety dried were as follows in pounds:

	1887.	1886.
French prunes	1,750,000	2,000,000
German prunes	75,000	125,000
Apples, sun-dried	200,000	300,000
Peaches, sun-dried	1,750,000	750,000
Plums, sun-dried	4,000,000	500,000
Pears, sun-dried	40,000	50,000
Grapes, sun-dried	600,000	175,000
Apricots, sun-dried	200,000	150,000
Nectarines, sun-dried	100,000	30,000
Figs, sun-dried	90,000	150,000
Apples, evaporated	550,000	500,000
Apricots, evaporated	3,000,000	450,000
Peaches, evaporated, peeled	500,000	100,000
Peaches, evaporated, unpeeled	750,000	200,000
Plums, evaporated	50,000	85,000
Nectarines, evaporated	50,000	25,000
Totals	10,105,000	5,590,000

The quantity canned and put up (24 cans of 2 each in a case) was as follows in 1887:

	Cases.
Apples	5,500
Asparagus	5,500
Apricots	175,500
Blackberries	25,000
Cherries	60,000
Currants	5,000
Gooseberries	15,000
Grapes	35,000
Nectarines	3,000
Pears	150,000
Peas	25,000
Peaches	220,000
Plums	40,000
Quinces	6,500
Raspberries	6,500
Strawberries	15,000
Total	772,500

The shipments overland of green or raw fruits aggregated in 1887, 35,342,850 lbs. This, of course, includes grapes. Prices throughout the season were good for all kinds of fruits, with relatively higher prices for prunes and plums. Sun-dried fruits are going out of favor, and it will be only a question of two or more years when they will not be found in market. The crop of prunes was very light, but that of peaches and apricots very heavy, but the two latter were marketed at good average prices. The short fruit crop at the East aided no little in giving us good markets for our raw, dried and canned fruits. In the *RURAL PRESS* of December 24th, a full review of 1887 dried fruits was published, which also gave a good idea of the general market for raw fruits, to which the writer advises subscribers to refer for further information.

Estimates of the number of fruit trees now growing in California orchards range from 9,000,000 to 10,000,000. As there has been an immense new acreage added to the orchards of the State during the year, it is safe to say that the latter estimate is none too high. In the foothill districts and in the Sacramento valley thousands of young trees were set out, while in Santa Clara, San Joaquin, Alameda and Solano counties the new acreage is very great. San Luis Obispo has never out much of a figure as a fruit-growing county, but on the strength of the new coast-line of railway being built that way, many trees have been planted which will come into bearing soon after the time that the facilities for reaching the market have been provided.

Olive-culture is making rapid strides, and bids fair to soon be of large proportions. They are now grown in a dozen counties in this State. Santa Barbara and San Diego have been the chief producers, but Placer, Sonoma and Santa Clara are coming to the front as olive growers. Last year the olive crop was small in all the orchards except those of San Diego county, where the yield was very good. It is believed that there are upward of 100,000 trees in bearing in California. A great deal of planting has been done during the year, especially in the Santa Clara valley.

The orange crop promises to be equal to 1886, notwithstanding many large orchards in Los Angeles county were cut up and sold for town lots. The number of new trees that come into bearing offset the number uprooted. The crop is backward and only a few carloads were received in this city in December against nearly 100 in December, 1886. The quality of first receipts are, as a rule, indifferent; consequently, the fruit meets with poor sale. As the season advances receipts increase, the quality improves and the demand grows rapidly. Owing to Florida sending large quantities of her oranges to Europe this season, California oranges will have a clearer field. The only drawback at present appears to be prospective high overland freights. The planting of orange trees is extending to about all the counties in the State, and under considerable rivalry a higher state of cultivation is the rule, which should cause better fruit to be turned out. The better the fruit and the better the selecting and packing for market the higher are the prices realized.

Viticulture not only holds its footing in this State, but is increasing, with a large number of new vineyards being planted each year, while the older established are being improved either by grafting new and improved varieties of grapes or else uprooting the old vines and planting the new in lieu. The greater attention is being paid to table and raisin varieties at the expense of wine grapes, for it has been demonstrated that with our large and rapid-expanding trade for raisins and fresh grapes, that take the general average, better value is received. The 1887 crop was much less than at first estimated. The causes that led to the lessened outturn have been noted in the *RURAL PRESS* at various times. The principal reason for the light yield was untimely rains. Prices the past season were better sustained than for several years past, and at no time was there such a glut as several weeks witnessed in the fall of 1886. The East took larger quantities than usual, while on this coast the increased consumption is placed at 15 per cent over any former year.

Raisins.

The rapid strides made by California in the raisin industry is a source of continued wonder to Eastern and European commercial writers, as well as to the general trade, who take all things for granted without prying into the true secrets underlying success. Californians never do things by halves, and once get them started right there is no fear but the result will

meet the ideas of the most sanguine enthusiast. Beginning with only an experimental few thousand boxes in 1873, it has grown into more than that many hundred thousands, as the following table of production shows:

Year.	Boxes.
1873	6,000
1874	9,000
1875	11,000
1876	19,000
1877	32,000
1878	48,000
1879	65,000
1880	75,000
1881	90,000
1882	115,000
1883	140,000
1884	175,000
1885	500,000
1886	703,000
1887	900,000

Some authorities place the out-turn of 1887 at about 800,000 boxes, equivalent to 16,000,000 lbs. This the writer believes to be too low, as the shipments so far out of the State show. If it had not been for untimely rains the crop would have been fully 1,000,000 boxes, if not reaching to as high a figure as 1,200,000 boxes of 20 lbs each. It was not until 1885 that California raisins came prominently before the Eastern consumption, due to three main reasons. First, cholera in Spain created fears that Spanish raisins would cause the spread of that disease among consumers of the fruit at the East. Second, the persistency and good generalship of Frank S. Johnson of Wm. T. Coleman & Co., assisted by G. W. Meade of G. W. Meade & Co., in keeping that result before the public through the press, and also their able manner in getting Eastern dealers to try California raisins by selling at a low range of values; by this and no other way can a new article be introduced. Third, the first few years' experience demonstrated to packers trading here, and which they were not slow to embrace, that the utmost care must be taken in selecting and picking uniform grades. This soon won its way with consumers, and since then still more care is exercised, as also the using of attractive labels and boxes. The very best improved machinery is only used, while only experienced hands are given employment in responsible positions. There is another important fact in favor of California raisins, viz.: their superior keeping quality. They do not get sugared like the Spanish, which causes the latter to be shunned by many in the East. The improvement in the brands of our raisins sold in the East was so great during 1886 that a greater demand for them than ever was created throughout the East, and every packer of reliable or well known California brands had his capacity tested to the utmost during the past year. In some sections the grapes were not as large as desired, and considerable difficulty was found in securing fruit to make fancy grades, so that a good portion of the product has been run into "loose" raisins. For this class, however, there is a great demand. In the larger factories the work of raisin-packing is almost entirely done by steam-power.

Last year's pack of choice grades is about exhausted, and being well concentrated here and at the East, a higher range of values is looked for before the spring months end.

Honey.

Dry weather in the leading bee districts caused an almost total failure of flowering plants, which, combined with weather otherwise unfavorable for bees, the crop in 1887 was quite light. The quality also did not average good. The crop is estimated as follows in pounds:

Honey extracted	1,250,000
Honey comb	300,000
Beeswax	30,000

The season opened in this city at the following prices:

Choice extracted honey	5½ @ 5¼
Light amber to dark	4 @ 5
Comb honey choice white	13 @ 15
Light amber to dark	12½ @ 8

As the supplies lessened and demand increased, values appreciated. The East called more freely for supplies than ever before, owing to a drought at the West, causing a light crop of honey, many districts proving a failure. The stock of honey in New York City and elsewhere at the East is the lightest known for years, causing very high prices to rule.

So far this winter the weather in this State has been against the bees, owing to more or less dry followed by cold and more freezing weather than experienced since 1854. Of course if warm rains followed by warm, sunshiny days set in soon, pasturage will improve and both wild and cultivated flowers will be in abundance, so as to give the foods all the material required in making and storing up honey.

Butter.

Although the receipts of butter last year were nearly as large as in 1886, yet the year closed on a bare market and high prices, this, too, in the face of a large carryover of pickled from 1886 into 1887. The year 1886 was the best pasturage season known for years. With food abundant and extending well into the year, the output of butter was very heavy, and an unusually large quantity was pickled and packed solid. As fresh roll continued in good supply with comparative low prices ruling, consumers gave it the preference, consequently a large stock of pickled and solid was carried into this year. The fore part of the year was dry and against pasturage, but heavy showers of rain fall-

ing in April and May, caused more natural feed, and as dairymen had increased their number of milch cows, the output of butter was large, causing prices for fresh to rule low. The low prices induced free packing, but not so largely as in 1886. With dry weather and poor pasturage, also an enlarged demand, fully 30 per cent over former seasons, prices began to appreciate, and as the output continued to decrease, notwithstanding free imports from the East, values closed the year 1887 very high, fully 40 to 50 per cent over those ruling on December 31, 1886. On January 1, 1887, there were in this city in first hands 2846 kegs of pickled and 1300 cases of fresh roll, and on January 1, 1888, there were 315 kegs of pickled and 800 cases of fresh roll. B-sides the above at the beginning of 1887 dairymen had lower stocks than at the beginning of 1888.

Cheese.

The output in 1887 was quite large, but the southern counties took more direct from the dairies than in 1886, and consequently the receipts in this city were light. The remarks about butter apply to cheese. The market close fully 40 per cent higher on Dec. 31, 1887, than on Dec. 31, 1886.

Eggs.

Prices ruled fairly good throughout the year, and quite high the last two months, being from 25 to 40 per cent higher than during the like time in 1886. The consumption increased fully 25 per cent over 1886. Like butter and cheese, many points draw direct from large centers of supply, which lessened the receipts in this city. Taken as a whole, the year 1887 was not favorable to chickens, although it was good up to the last three months of the year, dry weather and poor feed being against them; with cold weather toward the closing days. Owing to the large increased consumption of poultry, with good prices ruling, it is claimed by many that there will be more eggs set in 1888 than for some years past, which will have its effect on the egg supply. B-sides, it is claimed that there are fewer hens in the State than in 1886. But as the East sends us liberal supplies, the market is controlled to a very considerable extent by overland receipts.

Dairy Produce.

The monthly receipts of butter, cheese and eggs during 1887 were as follows:

MONTH.	BUTTER—POUNDS.		CHEESE—POUNDS.		EGGS—DOZEN.	
	California.	Eastern.	California.	Eastern.	California.	Eastern.
January	506 30	86 100	316 300	24 800	133 885	6 130
February	536 200	7 600	381 200	15 700	214 9 0	1 0 810
March	1 136 700	3 800	444 300	28 000	189 030	241 380
April	1 103 800	151 100	614 700	24 700	183 840	163 430
May	807 300	173 700	319 800	73 100	134 810	163 960
June	908 400	77 700	309 800	157 000	97 675	227 570
July	1 131 200	43 300	365 100	75 500	62 714	143 980
August	636 200	60 900	266 700	162 300	61 790	120 040
September	433 200	83 000	181 200	97 300	59 960	114 980
October	203 300	783 600	3 889 400	988 470	1 391 745	1 353 335
November	9 647 100	627 800	4 010 900	548 100	1 683 200	2 199 900
December	8 019 600	494 4 0	3 657 500	471 000	2 778 280	1 151 000
Totals	9 647 100	783 600	3 889 400	988 470	1 391 745	1 353 335

Hops.

The superior quality of the crop on this coast in 1886, with short crops at the East and in Europe, caused a free marketing and at good prices. As usual, many growers and dealers holding for the last cent carried over considerable both on this coast and at the East, which they have been closing out since at prices considerably less than were obtainable the latter part of 1886 and forepart of 1887. The crop on this coast in 1887 was larger than that of 1886 but the quality was generally poor and irregular. Many growers were fortunate enough to contract their crop at good prices—figures nearly twice as much as obtained at the close of 1887. Crops in Europe were large last year, as they were at the East, but taken as a whole the quality was poor. Dealers and brewers throughout the world let the market sink to low prices up to December, when they came in, particularly in Europe, and bought quite freely, causing better prices to rule at the close of the year. The crop on this coast compares as follows:

	1884.	1885.	1886.	1887.
Bales.	Bales.	Bales.	Bales.	Bales.
California	41,231	26,183	28,411	36,424
Oregon	10,903	7,300	12,549	10,200
Washington Ter.	24,168	17,572	23,794	27,400
British Columbia	111	48	60	95
Totals	76,407	51,112	63,814	74,219

In previous years the total crops were as follows: 1883, 42,027 bales; 1882, 26,453 bales; 1881, 17,662 bales; 1880, 15,465 bales.

Wool.

Last week's RURAL PRESS contained a full statistical review of the movements of wool in 1887 and also the production by years from early days. To this readers are respectfully referred for information on the subject.

The year opened with light supplies and the range 12 cts to 15 cts for fair San Joaquin and 16 to 18 cts for best, Southern Coast 12 to 15 cts and Northern 18 cts to 21 cts. Preparations were made to ship all fall wools East, to be sold for owners' account. Just prior to the Interstate Commerce bill going into operation, on April 5th, there was an active demand, and the market was cleaned up. During the first week of April sales equaled 3000 bales. Then came rates of \$3.70 to New York and \$3.83 to Boston, practically prohibitory. So the market had an excess of dullness. This was, however, soon ended, as it was found that the Canadian Pacific was a most important factor in the situation, as it reduced, or rather fixed, rates at \$1.50 per 100 pounds for wool in grease, and \$2 for scoured. Large shipments began to be made that way, and also by the Pacific Mail, etc., and the market became active again. It advanced first slowly and afterward more rapidly, until an advance of from 10 to 20 per cent was established, after which they settled back under poor assortments and discouraging Eastern advices. Dealers and shippers, as a rule, lost money. The fall clip came on a dull and weak market. As the season for fall wools advanced, prices shaded off, until a low range of values ruled at the close of the year. The change in women fashions is being severely felt by growers of second-class wools. Women now want finer woolen goods, with more mixing with silk, the same as obtained from 1875 to 1879. Coarse wools are neglected. The reason why the European wool markets are higher and American lower is due to finer wools offering for sale abroad. With railroad building in this State, sheep husbandry is giving way to farming, and soon breeding will be carried on on farms for the carcass and not for the wool, as meat will pay more. The outlook for 1888 is bad, as the dry weather has made poor pasturage, and as sheep are poor the wool will be harsh and lifeless. Even with improved pasture and better sheep, many flocks of sheep will have two grades of wool, with a weak, rotten streak between them. Against this buyers will discriminate.

Nuts.

The walnut crop in 1887 was large, as the following comparison shows:

	1887.	1886.
Walnuts	1,500,000	750,000
Almonds	500,000	600,000
Peanuts	250,000	275,000

The dry weather the forepart of the year was against peanuts. The almond crop was light, but whether due to the yield to the tree being less or some orchards uprooted in Los Angeles county and the land sold for town lots, is an open question. The low prices heretofore ruling for almonds were against their cultivation. But prices having ruled high for soft-shelled, will undoubtedly stimulate its culture. Walnuts sold at good prices throughout the year. This is due to the greater favor in which Californian are held. They are gradually but surely supplanting the imported. Peanuts met with good sales throughout the year, with very few changes reported.

Beans.

The crop in 1887 was large and of good quality, the average being above former years. Receipts aggregated at this port 458,339 pounds, against 320,769 pounds in 1887. Notwithstanding the large crop, prices for the new crop gained in strength, closing the year at an advance on an average of about 40 per cent over the opening prices, white varieties showing the most marked advance. The almost total failure of the Eastern crop and a lessened yield in Europe, created a strong demand for Californian from the large distribution centers east of the Rocky mountains. It is claimed that although prices are quite high, still they are liable to go much higher before the spring months roll by.

Seeds.

The crop of mustard-seed was large, and in consequence dealers, aided by the daily press, were enabled to manipulate the market to lower figures than the consumption warranted. The East drew quite freely throughout the year, but was enabled to keep values down by giving lower quotations through the press than actual sales justified. The year closed with a light stock, and with the usual spring demand prices ought to appreciate. In grass seeds the year was unfavorable to free sales, owing to dry weather interfering with seeding. On account of the drouth in the large grain-growing belt in the Western States the crop of several kinds was light, causing higher prices to rule at the close of the year.

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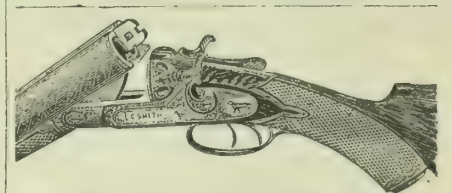
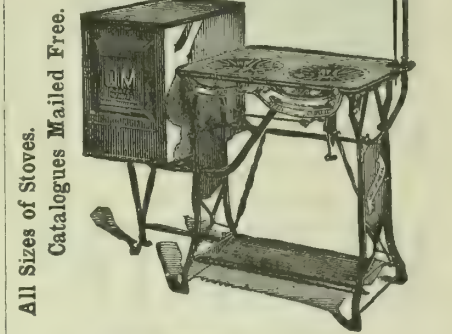
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AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as Journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 220 Market St., San Francisco Elevator, 12th Street.

THE WOODBURY TREE CLEANSER FOR WINTER AND SPRING.

After two years' experience I have to announce that there has not a single case come to my knowledge where the Woodbury Tree Cleanser has not fully and satisfactorily accomplished everything that has been promised.

By reference to a late report from Prof. Klee, I observe he states that he has found very good results from it in almost every case, and that he has encountered no records of any injury from its use. I am informed that it has his recommendation as a thorough-going successful and cheap Winter Wash, and it is certainly endorsed by the leading orchardists in the State. [Please send for their published letters.]

It has had an unexampled success in exterminating Scale on all kinds of Fruit Trees. It is sent all ready for use, and instructions which are very simple, are furnished with every package.

Price 3½ cents per pound in cases, 80 pounds in a case; in 8-pound cans, same price, 15 cents extra for can; 3½ cents per pound (10 per cent off) in barrels; about 400 pounds in a barrel.

I also make a fine

ROSIN WASH,

Containing no Kerosene, perfectly harmless and thoroughly successful. This is the valuable remedy strongly recommended by Prof. Klee for the Cottony Cushion Scale or "Icerya." Price ½ cent per pound higher than the Woodbury Tree Cleanser. I also manufacture the fine Anti-gumming Farm Machine Oils and general Lubricating Oils. I respectfully solicit correspondence.

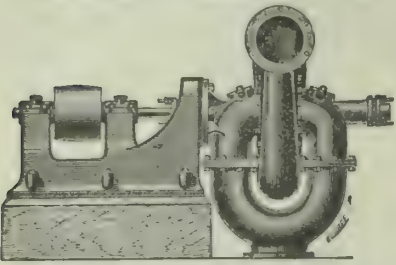
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As the musical New Year heaves in sight, we greet it with the "Sound of Cornet" (or any other musical instrument, for all of which Oliver Ditson & Co. provide the very best instruction books.) With the New Year, many new pupils will commence to learn the Piano; to them and their teachers we commend

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Books that Sell Everywhere and all the Time:

College Songs, 50 cents; War Songs, 50 cents; Jubilee and Plantation Songs, 30 cents; Minstrel Songs, new and old, \$2; Good Old Songs we used to sing, \$1.

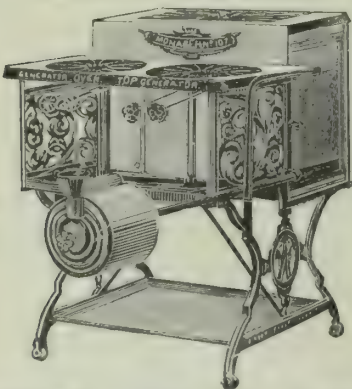
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Santa Barbara County, California.

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Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for colonies or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

E. de la CUESTA, Agent, Santa Ynez.

McCLUNG & PRAY, Agents, 325 Montgomery St., San Francisco.

SIDNEY LACEY, Agent, Los Angeles.

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Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES

At \$75 per Acre.

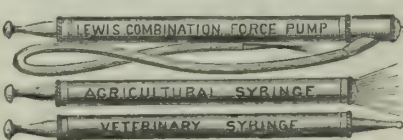
Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. Maps and further particulars of

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Selling LEWIS' COMBINATION HAND FORCE PUMPS. It makes 3 complete machines. I have agents all over the United States who are making \$10 to \$30 per day selling these pumps. I give their names and addresses in catalogue. To introduce I will send a sample Pump, express paid, to any express station in the U. S. for \$5.50. Made of brass; will throw water from 50 to 60 feet, and really for only \$1. Indispensable for spraying fruit trees. The Potato Bug Attachment is a wonderful invention. They sell rapidly. AGENTS WANTED EVERYWHERE. Send at once for illustrated catalogue, price list and terms. Goods Guaranteed as Represented or Money Refunded. Address LEWIS & COWLES, Catskill, N. Y.

INSECTICIDES!

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By the use of these Washes all insect life reached will be destroyed, and all trees washed will show a marked improvement in growth and general appearance. For sale by

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Large tracts subdivided at auction or private sale.

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Containing 7685 acres, situated near Salinas City, Monterey County, is offered for sale. For particulars address J. C. HOAG, 312 Van Ness Avenue, or TYLER BEACH, San Jose, Cal.

WEST COAST LAND CO.

TEMPLETON, SAN LUIS OBISPO CO., CAL.

Home of Wheat, Fruit, Wine and Olive; 15,000 acres sold in past 8 months to 220 settlers, representing a population of 1100; 49,000 acres—small subdivisions—average, \$22.50 an acre; 1/4 cash, balance 5 years, 6 per cent. Catalogues and maps free. C. H. PHILLIPS, Manager.

A NEW COLONY

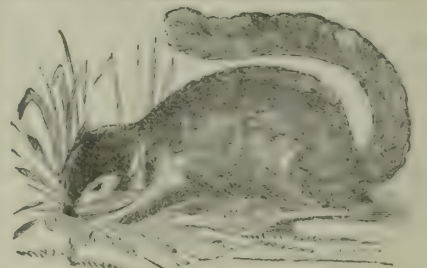
On the new extension of Southern Pacific Railroad, on the lands belonging to R. T. BUELL, Esq., near Los Alamos, Santa Barbara county, Cal. Parties desiring to visit the property now, can go via San Luis Obispo and take the cars from thence to Los Alamos, thence by stage to the Colony. 20,000 acres of the best lands in California, subdivided into 20, 40 and 80-acre farms; \$20 to \$30 per acre. INTERNATIONAL IMMIGRANT UNION, 401 California St., San Francisco

GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Map," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

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STRYCHNINE! STRYCHNINE!

Farmers who want the PUREST and BEST Strychnine, SURE TO KILL Ground Squirrels, Gophers, Mice and other animals which destroy the crops, should specify "MALLINCKRODT'S ST. LOUIS" STRYCHNINE, manufactured by

Mallinckrodt's Chemical Works,
ST. LOUIS and NEW YORK,

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SOLD BY ALL DEALERS.

Insist upon having our brand, and allow no substitution of other makes. See that our cap and label is on the bottles.



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To Dairymen, Fruit-Growers and Farmers!

SITUATION WANTED.

An experienced man, with wife, wants a situation. Understands Dairying, Irrigating, and General Farming. Can give the best of references. Address, H. B., Box 361, San Francisco

I CURE FITS!

When I say cure I do not mean merely to stop them for a time and then have them return again. I mean a radical cure. I have made the disease of FITS, EPILEPSY or FALLING SICKNESS a lifelong study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infallible remedy. Give Express and Post Office.
U. G. ROOT, M. C., 183 Pearl St., New York.

Utilizing Flax Fiber.

The idea of using home-grown flax fiber to supplant the large quantities of twine and other manufactured articles which are now brought here from a distance has been a recurring subject for discussion for years. Several efforts have been put forth to establish factories which it was hoped would begin with coarse linen manufactures and gradually work up to higher and finer products. For some reason or other these undertakings have not hitherto reached a successful basis, but it is encouraging to know that effort is still being put forth, and it certainly appears, upon *a priori* grounds at least, that we should have manufactures of this kind in profitable working. The latest announcement looking in this direction is the starting of a twine factory in East Oakland adjoining the cotton-mills. The *Chronicle* gives this account of the origin of the enterprise:

The manager and principal owner, Mr. Bruce, was formerly in the employ of the cotton-mills, and during a visit to the coast counties saw some samples of flax straw which he recognized as equal to the best French flax, and the idea occurred to him that its manufacture into twine could be made profitable in this State. Considerable flax is grown along the coast for the seed, which is sold to the linseed oil factories of San Francisco, but the straw has heretofore been thrown away as useless. He interested a few capitalists, among them Daniel Suter of San Francisco, and the plant for the mills was procured. About one dozen machines are now in operation manufacturing flax twine, which commands a price in California that makes the manufacture profitable. Mr. Bruce, who has had considerable experience in the flax industry, as operated in Scotland, states that the coast soil, with its damp, foggy climate, is peculiarly adapted for flax growth, producing a strong and fine fiber. The more fog the better for the fiber. The straw, he states, is as valuable as the seed, and farmers may thus make a double profit. An acre will produce two tons of straw and 1000 pounds of seed. The straw is worth about \$12.50 per ton and the seed 2½ cents per pound, or a gross income of \$50 per acre.

We do not vouch for the estimate of crop and values. It has been claimed by some that the condition required in seed and in fiber by the users of each prevented both from being utilized from the same plant; that a plant which fully matured its seed had gone too far to yield the best fiber. We are not practically informed on that subject. We know, however, that where the flax industry is important, as in some European countries, they have different varieties of flax, of higher growth than the seed flax grown in this State, which are advocated by fiber growers. A collection of fiber varieties was secured some time ago by the State University and has been grown from year to year at Berkeley. These varieties have already been mentioned in our columns, and the seed is distributed to those who desire to test its growth. We are very anxious to see the flax industry located here and desire the success of all who may put forth effort toward that end.

CITRUS WINDFALLS are all utilized in Florida by crushing them and extracting the juice, which is made into wine and excellent vinegar.

THIRTY thousand sheep owned by Oregonians are being wintered in the vicinity of Fremont, Neb.

THERE is talk of organizing a Horticultural Society in Colusa.

The Woolly Aphis.

WALNUT GROVE, CAL., Jan. 6, 1888.

Mr. Charles J. Woodbury, 123 California St., S. F., Cal.—DEAR SIR: Yours of the 3d inst. to hand last evening. In regard to the Woolly Aphis, I can only give you my experience. When I came here, my apple trees were badly infested with Aphis, so I washed them thoroughly to exterminate and have not seen any signs of the Aphis since, which has been over two years. Yours respectfully,

L. D. GREENE.

I will remark that I have known of no case where my tree-cleanser has been used as an antidote for the Woolly Aphis where it has not been perfectly successful.

Full directions accompany its use. Price, 3½ cents per pound in cases, 80 pounds in a case; in 8 pound cans same price, 15 cents extra for can. In barrels, 3½ cents per pound, 10 per cent off, 400 pounds in a barrel. I also manufacture the fine Anti-Gumming Farm Machine Oils and General Lubricating Oils.

Address CHARLES J. WOODBURY,
123 California St., S. F., Cal.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,
T. A. SLOCUM, M. C., 181 Pearl St., New York.

HOW HE WON.

William Beach, Hanlan's Conqueror, Tells How he Did It.

The recent exploit of Mr. William Beach leaves no doubt that he is the handiest man in the world with the sculls. The ease with which he outrowed his opponent, the supposed invincible Ned Hanlan, shows that in form, stroke and muscular development, adapted to sculling, he has no equal.

Although an Australian by virtue of residence, Beach was born in Surrey, England, in 1851, and removed with his parents to New South Wales in 1854. He was brought up to his father's trade, and, while toiling like a young Vulcan in the smithy, unconsciously developed that magnificent physique which has since brought him world-wide distinction. When about 23 years of age, Beach commenced rowing on the Illawarra lakes against local competitors, and from the outset kept winning until gradually handicapped out of all races. Following are his chief aquatic performances while in Australia:

December, 1880—Won Deebie's handicap, Woolloomooloo bay.

January, 1881—Second Pyrmont Regatta, won by Pearce.

January, 1881—Second National Regatta, won by D. McDonald.

February, 1881—Beat N. McDonald, Parramatta river.

March, 1881—Beat George Solomons.

May, 1881—Beat Charles Reynolds.

October, 1882—Second Punch trophy, won by E. C. Laycock.

December, 1882—Beat T. Clifford, Parramatta river.

January, 1883—National Regatta, swamped, won by Messenger.

March, 1883—Nowhere, Grafton Regatta, won by D. McDonald.

March, 1883—Won Woolloomooloo Bay Regatta prize.

December 7—Won James Hunt's trophy, Parramatta river.

April 2, 1883—Beaten by E. Trickett, championship (first time).

April 12, 1883—Beat E. Trickett, championship.

April 17, 1883—Beat E. Trickett, championship.

April 12, 1884—Beat E. Trickett, championship.

August 16, 1884—Beat E. Hanlan, championship world.

March 17, 1885—Beat T. Clifford, championship world.

March 27, 1885—Beat E. Hanlan, championship world.

December 19, 1885—Beat N. Matterson.

November 26, 1887—Beat E. Hanlan, championship world.

Mr. Beach's system of training includes a run of two or three miles before breakfast, a walk of six or seven miles afterward, and a pull over the course. After dinner comes another two-mile walk and a second pull over the course, during which he rows himself right out, eases off, and then pulls again. A long walk concludes the day.

A man under such physical strain, even though he be a giant, must often feel the failure of his strength to his will, and, powerful though he be, it is not surprising that Mr. Beach candidly states that during his training, previous to meeting Edward Hanlan the second time for the world's championship, his trainer bought for him Warner's safe cure, and he says: "I was agreeably astonished at the great benefit which followed its use." While in training he finds this the best possible aid to a command of all his natural powers, because it does not first goad and afterward weaken the system, but acts in perfect harmony with nature's laws.

Mr. Beach's experience is confirmed by the experience of many thousands of athletes all over the world. Under the great physical strain they break down and die prematurely, because they have not been able to keep disease away from their kidneys and liver, whence most diseases originate. Mr. Beach recognizes this necessity, and has sagacity enough to use the only scientific specific for that purpose. He has not only the prestige of victory, but the prestige of a true scientific method of training and keeping up his wonderful physical condition. If he did not voluntarily give up the championship, it would no doubt be a long time before it was wrested from him.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Sample It.

Three select samples and three future issues of the *Illustrated Pacific States Weekly* will be sent, postpaid, to any address on receipt of 25 cents. Office, 220 Market street, S. F.

Black Scale.

December 29, 1887.

Messrs. Woodin & Little, 509 and 511 Market St., S. F., Cal.—GENTLEMEN: Referring to Prof. Ongerth's Liquid Tree Protector, I desire to say that about two months ago I found quite a percentage of my olive trees infested with the black scale. In some instances the tree was entirely enveloped by a black smut, while the branches, to the very extreme tips of the tender shoots, were covered with the young scale. I sprayed my trees once only with the Tree Protector. The effect was wonderful. It not only completely and entirely destroyed the scale, but it seems to have invigorated the growth of the tree. It is all and more than all you claim for it.

Very respectfully,

THOMAS BECK, U. S. Appraiser.

Do you think of buying a piano? Then observe Kohler & Chase's advertisement of the "Ivers & Pond" in this issue.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING JANUARY 10, 1888.

376,375.—LINE THROWING PROJECTILE—J. N. Fletcher, S. F.

376,150.—SPEED CHANGER—A. Harding, Oakland, Cal.

376,153.—CABLE-RAILWAY CROSSING—E. S. Holden, S. F.

376,339.—BELT SHIFTER AND TRAINER—F. L. Palmer, Berkeley, Cal.

376,340.—ELEVATOR—F. L. Palmer, Berkeley, Cal.

376,172.—PAYING COMPOUND—A. Walrath, Nevada City, Cal.

376,403.—CAN-FILLING MACHINE—W. H. Wright, San Jose, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Combined Plow-Seeder and Pulverizer.

Mr. L. B. Ruggles, president of the Traver Warehouse and Business Association and a farmer of large experience, has been experimenting for some time past on his farm, and has finally constructed an attachment to a gang-plow which he claims to be superior to any now in use for seeding and the other purposes for which it is intended.

A description of the new invention is as follows: The attachment consists of a number of drill-wheels, 16 inches in diameter, having a V-shaped or cutting edge, set in a wooden box-like frame that may be adjusted and hinged to the rear of any gang-plow to which a seeder is or may be attached.

There are two drill-wheels for each plow in the gang, one to form a drill-row in the ridge or center of each furrow, the other in the lap or where the furrows meet, thus forming twice as many drill-holes as there are plows in the gang.

The ordinary gang-plow seeder will be used, but transferred to the top of the drill-frame, and agitated by the same wheel and method as in ordinary gang-plow seeders. A seed opening is over the rear of each wheel and the seed is conveyed to and dropped in the channels formed by the drill-wheels.

The planter is attached to the rear of the drill-frame by steel springs and is a bar the same length as the drill-frame, beneath which are as many curved steel blades as there are drill-rows, and each blade catches the ridge left between them, turns it back over the seed, presses the soil upon it and completes the work.

The effect of the wheels and planters is to thoroughly press, pulverize, level and cultivate the soil, and deposit the seed at a uniform depth and in rows of more suitable distances. A caveat has been filed and steps taken to protect the invention by patent.

Mr. Ruggles claims that there is no better time to sow grain than when ground is in good condition for plowing; that if plowed and left to wait for the drill or seeding at some future time it is liable to dry out or be packed again by heavy rains; that land well plowed is left too loose and porous for seeding and requires pressing down again, and the great trouble with the ordinary gang-plow seeding is the ground is left unprepared, is loose so the air gets to the seed, and the roots, if they start at all, are liable to dry out and perish; that the surface is uneven, some seed falling to the bottom of the furrow where it is too deep, and some upon the surface, where it lacks moisture and perishes or makes a feeble growth; that one opening in the seeder for each plow is insufficient, as it leaves the rows too far apart and too much seed is left in one place and not enough in another; that seed should be planted at a more uniform depth, and experiments prove that it should be not less than one nor more than two inches deep; that seed should be far enough apart to stool, and yet close enough to utilize all the space; that after land is plowed it should be again pressed down so as to close up the spaces between the particles of earth and retain the moisture longer, and hence land sown by this method will be more likely to make a good stand, sure growth and insure a better yield.—*Traver Advocate*.

YOUNG MEN or women who desire instruction in penmanship, book-keeping, short-hand, type-writing, or other commercial studies, the common English branches or modern languages, are referred to the advertisement of the Pacific Business College, which has now been established a quarter of a century.

GREAT SALE OF HORSES.—Do not overlook the auction sale of horses advertised in this issue by Killip & Co., to occur on Feb. 16th. Sale catalogues are now ready, and should be sent for and studied over by our stockmen.

Buena Vista Rancho.

This fertile tract of land, containing 7725 acres, has been platted into 60 farms suitable for mixed farming and fruit growing. It is four miles from Salinas City, Monterey County, and will be sold at low prices and liberal terms. Address, J. C. Hoag, 312 Van Ness avenue, San Francisco, or Traver Beach, San Jose, Cal.

About Stopping This Paper.

We particularly request any one receiving this paper, who does not wish to continue it, or who does not intend to pay for it, to send written notice of that fact to us. Of course, this does not apply to those who for good reasons know that the paper is sent to them complimentary. In sending word to the publishers, be particular to note all of the following points: 1st, to send it to the P. O. by a trusty hand; 2d, to be sure you have a stamp on it; 3d, that it is correctly addressed; 4th, that your name is plainly written; 5th, that you give the name of your P. O.; 6th, that you give the name of the paper (or we should have to look over the long lists of subscribers on several newspapers). If your letter reaches us with any one of the above points overlooked, we should have to look over thousands of addresses to find your name to discontinue your paper. By missing one or more of the points above enumerated on the part of subscribers, we are doubtless often blamed for not stopping papers when it is impossible for us to do so, and in many cases receive no intimation even about the matter.

A Fine Japanese Orange.

We have tested and are very favorably impressed with oranges brought us by H. E. Amore, of the Japanese Free Importing Co., whose office is at 120 Sutter street, in this city. The oranges, although more than a month from the tree, having been plucked rather green in Japan, were of very sweet and agreeable flavor. The orange is apparently of the Mandarin type, and the most desirable we have seen. It is named the "Oonshiu." The Japanese Agricultural Association of Tokio says in its sixth annual report:

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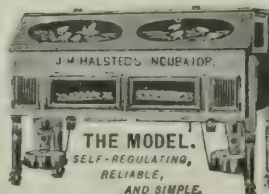
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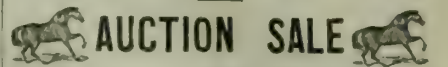
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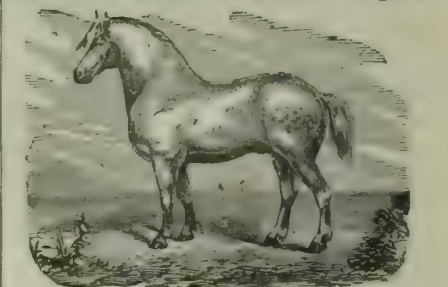
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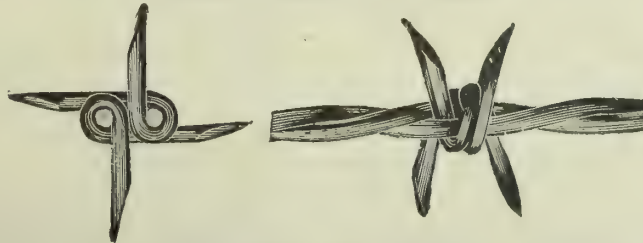
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Dates.....	5 @	10 Mushrooms, lb..	50 @	70
Figs, pressed....	5 @	6 Rhubarb bx....	1 @	—

FEMALE OVERSEERS OF THE POOR.—With reference to the movement in favor of electing women as poor-law guardians in London this winter, the *Pall-Mall Gazette* says: "The ideal to be aimed at is a board composed of equal numbers of both sexes. It is no wonder that the poor detest the poor law when the boards which stand in loco parentis to the pauper are almost exclusively male. If our poor-law administration is to be natural and humane, the sex of our mothers and sisters must be as largely represented on boards of guardians as it is in our own families."

CHOICE wheat is selling at Elmira as low as \$1.20 to \$1.23, and a great deal is being shipped at these figures from the warehouses.

Of hides and tallow the United States produces \$82,949,207 worth. Russia follows close after with \$81,000,000.

Ongerth's Tree Protector.

WOODIN & LITTLE, Agents, 509 and 511 Market St., San Francisco, Cal.—GENTLEMEN: In reply to yours of the 29th ult., as to effects of your Liquid Tree Protector on the tree you treated for me last April, I would say that where the wash was applied the insects of all sorts are certainly killed. The wash is still on the tree, and the bark under it shows a healthy and lively appearance. I was afraid for a while that owing to its gummy feeling and appearance the pores of the bark might be closed to the great detriment of the tree, but so far I am glad to say there have been no indications of any ground for my fears. I am so well satisfied of this that I shall entirely paint the trunks and larger branches of all my trees with your preparation this winter.

I would add that your Grafting Compound is the best preparation I ever saw for covering wounds on trees, and it is apparently not affected by any sort of weather. Yours very truly,

R. D. Fox,

Proprietor Santa Clara Valley Nurseries.
San Jose, Dec. 5, 1887.

Galbraith's Horses.

A new importation of horses just arrived in splendid condition, brings our stock up to about 200 stallions, nearly all of which are from two to six years old, of choice breeding and highest individual merit. Our new illustrated catalogue is now ready, and will be cheerfully sent free of charge to all applicants.

At the great American horse show held at Chicago in November, our stock won no fewer than 28 premiums, including first prize for Clydesdale stallions, four years old or over; first, third and fourth prizes for English Shire stallions, four years old or over; first, second and fourth prizes for English Shire stallions two years old; first prize for Cleveland B. y stallions, two years old; first prize for pony stallions, and grand sweepstakes premium for best draft stallion of any breed.

Inspection of our stock cordially invited.
GALBRAITH BROS.
Janesville, Wis., Jan. 4, 1888.

From Seaboard to Seaboard.

EDITORS PRESS:—A few weeks since we reported sales of Cleveland Bay stallions for California, later to Arizona, and now comes North Carolina with a call for a carload. One of the largest planters and real estate owners of North Carolina purchasing of us the grand young C. B. stallion, Ferdinand, with enough mares and fillies to fill a car. These together with the Shire stallions Talisman, 318 (4723) to Chas. Westrup of this State, and Lord Byron 329 (4543) to a company of 11 Danish farmers in Western Nebraska, the Cleveland Bay stallions Warlock 52 to W. E. Wood of Nebraska, True Briton 144 to G. R. Humphrey of Iowa, Kingfisher to Peak & Dawson of Illinois, Endymion to J. R. Nation and C. F. Cranor of Indiana, constitute our most recent sales.

GEO. E. BROWN & CO.
Aurora, Ill., Jan. 9, 1888.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

F. B. LOGAN—Santa Clara Co.
JOHN G. H. LAMPADUS—San Benito Co.
G. W. INGALLS—Arizona Territory.
WILLIAM POOL—Fresno Co.
WM. WILKINSON—San Joaquin and Stanislaus Co.'s.
A. F. JEWETT—Tulare Co.
E. H. SCHAEFFLE—Pacer, Sacramento, El Dorado Co.'s.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
R. G. HUSTON—Montana Territory.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE MARK ON YOUR PAPER.

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RICH FURNITURE,
ELEGANT UPHOLSTERIES.**
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UPHOLSTERING COMPANY,
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HEALD'S BUSINESS COLLEGE,
24 Post St. S. F.
Send for Circular.
Shorthand, Penmanship, Typewriting, Book-keeping.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GORUM, Sergeant Signal Service Corps U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Jan. 12-18.																								
Thursday.....	.30	42	SW	Fr.	.00	40	S	Cl.	.00	46	N	Cl.	.00	49	N	Cl.	.00	52	E	Cl.	.00	56	SE	Cl.
Friday.....	.02	44	NE	Cl.	.00	42	NW	Fr.	.00	46	W	Cy.	.01	46	NW	Fr.	.00	51	E	Cy.	.00	56	SW	Cl.
Saturday.....	.00	44	E	Cl.	.00	28	N	Cl.	.00	30	NW	Cl.	.T	37	SE	Cl.	.01	52	SE	Cl.	.00	54	W	Cl.
Sunday.....	.00	8	NE	Cl.	.00	28	N	Cl.	.00	34	NW	Cl.	.00	31	NE	Cl.	.00	48	N	Cy.	.00	52	NE	Cy.
Monday.....	.00	6	E	Cy.	.00	30	SE	Cl.	.T	34	E	Cy.	.00	40	NE	Fr.	.00	52	NE	Cl.	.00	52	W	Cl.
Tuesday.....	.50	26	NW	Cy.	.T	49	N	Fr.	.T	36	N	Fr.	.02	41	E	Fr.	.00	54	W	Cl.	.00	56	W	Cl.
Wednesday.....	.00	20	NW	Cl.	.00	41	N	Fr.	.00	40	N	Cy.	.00	46	SE	Cy.	.00	62	N	Cy.	.00	64	NW	Fr.
Total.....	.82												.03								.00			

EXPLANATION.—Cl, for clear; Cy, cloudy; Fr, fair; Fy, foggy; — indicates too small to measure. Temperature, Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Imported Stallions FOR SALE.



THEO. SKILLMAN, the pioneer importer, has just arrived with another choice lot of Stallions, consisting of the celebrated

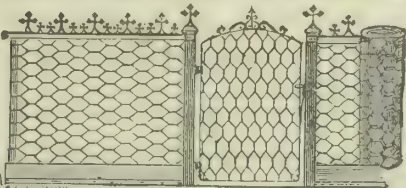
**SUFFOLK PUNCH,
FRENCH COACH,
NORMAN and
PERCHERON
HORSES.**

He has at his stable horses that received prizes in their native countries, and also first premiums at State and District Fairs of California. These are a very superior lot of horses and will be sold as cheap as the same grade can be had in any part of the world, with cost of transportation added. For terms address

THEODORE SKILLMAN,
Petaluma, Cal.

Catalogue on application.

SEDGWICK STEEL WIRE FENCE.



The best Farm, Garden, Poultry Yard, Law, School Lot, Park and Cemetery Fences and Gates. Perfect Automatic Gate. Cheapest and Neatest Iron Fences. Iron and wire Summer Houses, Lawn Furniture, and other wire work. Best Wire Stretcher and Plier. Ask dealers in hardware, or address, SEDGWICK BROS., Richmond, Ind.

MEMORY

Wholly unlike artificial systems. Any book learned in one reading. Recommended by MARK TWAIN, RICHARD PROCTOR, the Scientist, HENRY W. W. ASTOR, JUDAH P. BENJAMIN, Dr. MINOR, &c. Class of 100 Columbia Law students; two classes of 200 each at Yale; 400 at University of Penn. Phila.; 400 at Wellesley College; and three large classes at Chautauque University &c. Prospectus FREE from PROF. LOISELLE, 237 Fifth Ave., N. Y.

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Separate Catalogues for each breed, with history of same. Say which is wanted. Address
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H. L. WHEATLEY, Altamonte Nurseries, Altamonte, Orange Co., Fla.



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FOR MAN OR BEAST.
P. D. T. 1865.
THE H. H. H. Horse Liniment puts new life into the Antiquated Horse! For the last 14 years the H. H. H. Horse Liniment has been the leading remedy among Farmers and Stockmen for the cure of Sprains, Bruises, Stiff Joints, Spavins, Windgalls, Sore Shoulders, etc. and for Family Use is without an equal for Rheumatism, Neuralgia, Aches, Pains, Bruises, Cuts and Sprains of all characters. The H. H. H. Liniment has many imitations, and we caution the Public to see that the Trade Mark "H. H. H." is on every Bottle before purchasing. For sale everywhere for 50 cents and \$1.00 per Bottle.

For Sale by all druggists.

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44 Third Street, San Francisco, Cal.

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And upward.

ROOMS WITH OR WITHOUT BOARD.
FREE COACH TO THE HOUSE
J. POOLEY.



FOREST TREE.

Catalpa, Spruce, White Ash, European Larch, Pines, Spruce, Arbor Vites, etc., etc.
Catalpa Speciosa Seed.
Forest and Evergreen Seeds.
R. DOUGLAS & SON,
Waukegan, Ill.

BEST TREE WASH.

"Greenbank" 93 degrees **POWDERED CAUSTIC SODA** (tests 99.3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

T. W. JACKSON & CO.,
Manufacturers' Agents,
104 Market St. and 3 California St., S. F.

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and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made \$1800 a day, \$76.50 one week. So can you. Proofs and catalogue free.
J. E. SHEPARD & CO., Cincinnati, O.

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Made from Zinfandel grapes. Put up in quart and pint bottles. Price, \$6 per dozen quart bottles; \$4 per dozen pint bottles. Orders can be filled through this office or by H. MILLS & SON, Lakeville, Cal.

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WHITE SEWING MACHINE COMPANY,
108 & 110 POST ST., S. F.

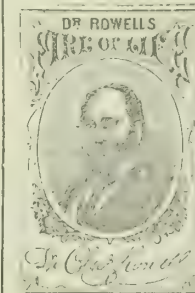
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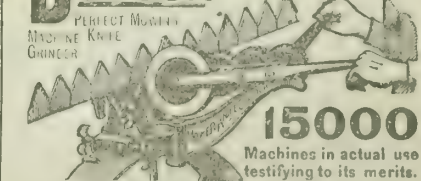


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Every body should have it.
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DR. CHAS. ROWELL.
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DUTTON GRINDER



Can be carried into field and attached to Mowing Machine Wheel. New Descriptive Catalogue free.
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Now is the time to buy. Do not waste money on poor pumps with leather valves, but buy the "C. I. MAX" **SPRAY PUMPS**, the only pump having all its parts made of non-corrosive metal, and the very best Spray Pump in the market.
Send for circulars and prices. Hose furnished to farmers at wholesale prices.
CAL. FIRE APPARATUS MFG CO.
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DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending December 31, 1887, the Board of Directors of the German Savings and Loan Society has declared a dividend at the rate of four and one-half (4 1/2) per cent per annum on term deposits, and three and three-fourths (3 3/4) per cent per annum on ordinary deposits, and payable on and after Tuesday, the 2d day of January, 1888. By order

GEO. LETTE, Secretary.

MYERS' SLIP SHARES

FOR SALE BY
D. N. & C. A. HAWLEY,
2 & 4 Sutter St., cor. Market, San Francisco

160 ACRES NURSERY! 1,500,000 TREES AND VINES!
W. M. WILLIAMS & CO.'S
 SEMI-TROPICAL AND GENERAL
NURSERIES
 Fresno, Cal.

We would respectfully call the attention of the public to our very complete list of Nursery Stock for the ensuing season, consisting of a full line of all the Standard Varieties of

APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, NECTARINE, Etc., Etc.,
 BESIDES A LARGE STOCK OF THE GENUINE

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Guaranteed, and the NEW LYONS CLING PEACH. We have an immense stock of ROOTED VINES, comprising 86 varieties. We carry also a full line of CITRUS FRUITS, well grown and warranted free from all pests and true to label.

Send for Catalogue and address all correspondence to FRESNO, CAL., Box 175.

FRUIT TREES. ESTABLISHED 1863. FRUIT TREES.
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 —AGENT—
CALIFORNIA NURSERY COMPANY.
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 Ever offered on the Pacific Coast at very low rates. Samples on hand at below address.
 SEEDS. SEEDS. SEEDS.

We also offer at lowest rates a large and fresh stock of

GRASS, CLOVER, VEGETABLE, FLOWER, and TREE SEEDS,

All of which are thoroughly tested before being sent out. Large stock of Ornamental Trees and Plants, Bulbs, Roses, Magnolias, Palms, etc., constantly on hand.

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Priced catalogues mailed free on application.

Agent for California Nursery Co. in San Francisco.

STOCKTON NURSERY,
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ADRIATIC and SAN PEDRO FIGS.
 French Walnuts, Home-grown Oranges and Rooted Grapevines.
 Illustrated Catalogue and Price List for the season of 1887-88 free to all sending for them. All Trees, Vines, etc., guaranteed free from scale and other injurious pests. A certificate of inspection furnished to all.
 A full line of Fruit and Ornamental Trees, Shrubs, Vines and Hothouse Plants.
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 "WESTCOTT STANDARD,"
HARDY NORTHERN-GROWN SEEDS,
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 Will be a Special Brand of Seeds Guaranteed by us as Good and Reliable.
 406 and 408 SANSOME STREET, SAN FRANCISCO, CAL.
 Correspondence solicited from Merchants, Farmers and others. All kinds of Seeds, Lawn Grass, Plants and Bulbs always in Stock.

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 OFFERS THIS SEASON FOR SALE A FINE ASSORTMENT OF
FRUIT & ORNAMENTAL TREES.
 SPECIALTIES:
 WHITE ADRIATIC FIG, SAN PEDRO FINEST TABLE FIG, JAPANESE FRUITS,
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 TREES, and also a fine collection of PALMS, YUCCAS,
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 Send 10 cents in stamps for a sample of the dried and cured Adriatic Fig. Fall catalogue now ready. Address all letters to
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Vitis California Seedlings, Phylloxera Proof.

\$10 per 1000.

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A general assortment of healthy FRUIT TREES, VINES and SMALL FRUITS, grown without irrigation, free from Scale Bug and warranted true to name.

Apple Trees in assortment, Crawford's Early, Orange Cling, Salway and other kinds; Royal and Blenheim Apricots or Myrobolan stocks; Bartlett, Beurre Hardy, Beurre Clairgeau, Howell, Winter Nelis and Easter Beurre Pears, Coe's Golden Drop or Silver Prune and other Plums and Prunes in assortment. Rockport, Black Tartarian, Napoleon and Centennial Cherries; Nut-bearing Trees; Grapevines, etc.

Prices furnished on application. Address,

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BARTLETT PEAR TREES,
 The best kind for Shipping and Canning.

General assortment of all kinds of

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Also, a large stock of imported Fruit Tree Seedlings, Apple Pear, Myrobolan Plum and Mazzard Cherry. Send for prices. Address,

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Also Trees and Cuttings of the true White Adriatic Fig.

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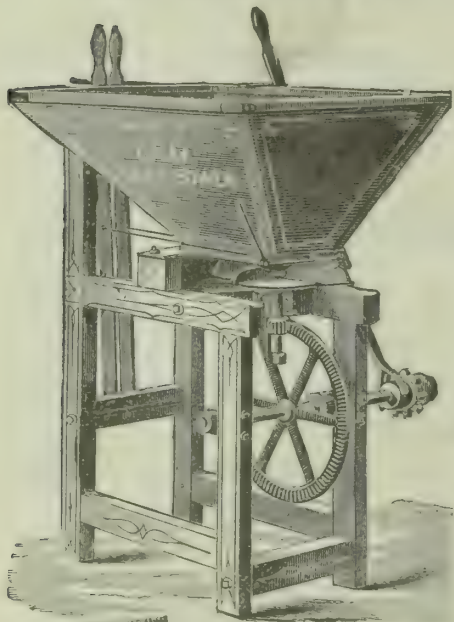
MANUFACTORY: Benicia Agricultural Works, Benicia, Cal.

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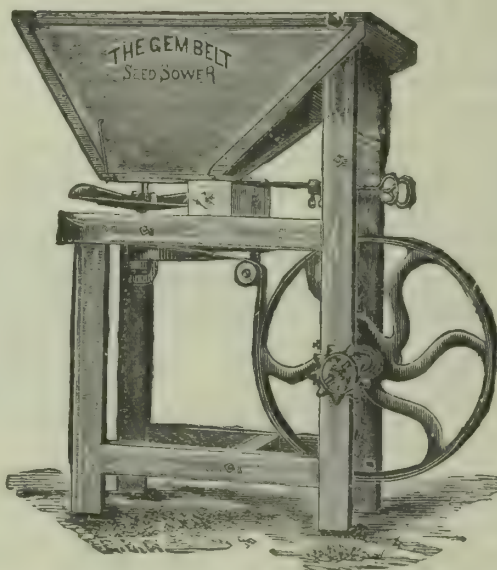
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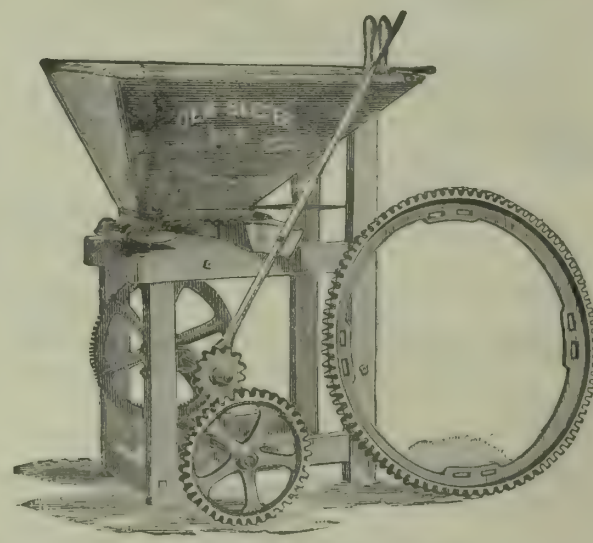
No. 1, Weight, 130 lbs. \$20.

This Machine is run with a Chain and Bevel Gear. It is the one we have sold for years, and has given the best satisfaction of any broadcast seeder yet invented.



No. 2, Weight, 154 lbs. \$22.50.

Runs with Chain and Belt Gear. The advantages gained on the bevel gear are smoothness of movement, noiseless while running, durability of the fast running parts, and the evenness with which it sows the grain.



No. 3, Weight, 164 lbs. \$25.

Runs with all Gears. This machine is preferred by many to the others which run by Chain. The feed valves and distributor are the same as in the others.

We have manufactured the GEM SEEDERS for a number of years, and they have given better satisfaction than any other Broadcast Seeder in the market. They throw the seed horizontally instead of vertically (as in all old-style Seeders), and thus save a large portion of the grain. Where sold they have never failed to give satisfaction. ARMSTRONG'S PATENT FORCE FEED is attached again this year, and is considered by those who have used it, a great improvement.

THE GENUINE GEM SEEDERS are manufactured exclusively for us at Benicia. SEE THAT OUR NAME IS ON THEM.

ACME PULVERIZING HARROW, CLOD CRUSHER & LEVELER.

DON'T BE DECEIVED BY WORTHLESS IMITATIONS.

All genuine bear Trade-Mark, have Steel Clod Crushers, Double FLEXIBLE Gang Bars and the Improved Style, also has

ADJUSTABLE REVERSIBLE COULTERS,

Which when worn may be turned end for end, thus giving double the amount of wear. Works the entire surface of the ground. No other Harrow combines these points.

Sizes: 3 to 12 Feet. With or without Sulky.

ILLUSTRATED PAMPHLET FREE.

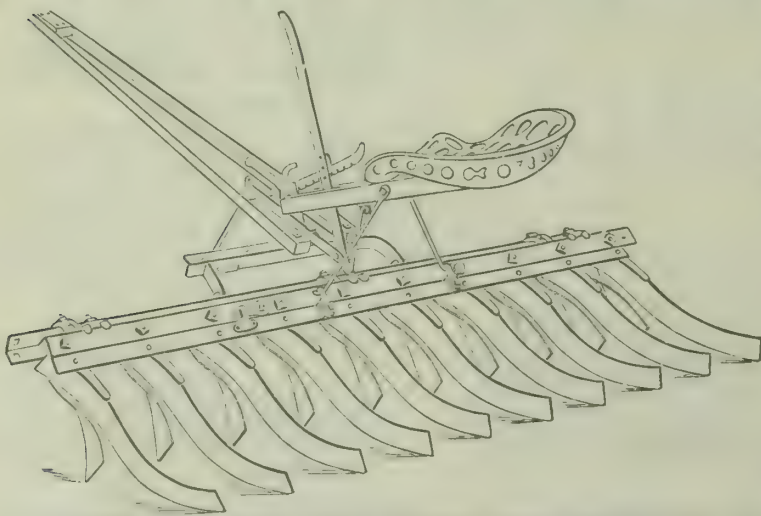
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BULL & GRANT FARM IMPLEMENT CO., San Francisco and Los Angeles, and

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FERTILIZERS!

Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

California Bone Meal and Fertilizer Co.,

116 CALIFORNIA ST., SAN FRANCISCO.

THE "BOSS" ROAD MACHINE.



FOR BUILDING ROADS, MAKING DITCHES, LEVEES, Etc.

Is strong and durable, of light draft and of great strength. Just the thing for farmers in opening ditches through their grain fields. Sold by

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1906 San Antonio Avenue, Alameda, Cal.

PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 4.

SAN FRANCISCO, SATURDAY, JANUARY 28, 1888.

\$3 a Year, in Advance
SINGLE COPIES, 10 Cts.

Scenes in San Jose and Vicinity.

As attention turns this week to San Jose as the point where the American Horticultural Society holds its first California meeting, we

Observatory increases as that princely donation of the late James Lick is now almost ready to be finally bestowed upon the people of California through the Regents of the University as its custodians. The great telescope is practi-

above the sea and 13 miles distant from San Jose on an air line. The road is full of picturesque beauty, and bids fair to be well traveled not only by the throngs of tourists, but by the most famous astronomers of the world, for

Beach, and but a short distance further to the left is the main street of San Jose, which runs at right angles to the street on which the courthouse is located. This main street is a notable one, for toward the west it continues into the



ON THE ROAD FROM SAN JOSE TO MT. HAMILTON.



A SHADY NOOK ON THE MT. HAMILTON ROAD.



SANTA CLARA COUNTY COURTHOUSE, SAN JOSE.



THE CALIFORNIA FAN PALM IN A SAN JOSE GARDEN.

give on this page a few of the hundreds of interesting views which the Garden City and its environs afford. In former issues we have had scenes in orchards in the important Santa Clara district and reproductions of famous pieces at the citrus fairs held there during the last two years. At this time we have two scenes in the picturesque region through which the approach to Mt. Hamilton leads, and two views in the city. Interest in Mt. Hamilton and the Lick

cally finished. Its objective, three feet in diameter, has already assaulted the heavens, and as soon as the minor fittings are complete, the formal transfer by the Lick trustees will be made and Dr. E. S. Holden, ex-president of the University, will assume charge as director of the observatory. The visitor to Mt. Hamilton passes eastward over 26 miles of well-built road, built by the county of Santa Clara, to reach the observatory, which is 4300 feet

every facility is to be given them, according to Prof. Holden's plan, to profit by the peerless lenses of the Lick telescope.

The Santa Clara courthouse, of which a view is given, is a substantial and well-planned building, situated opposite St. James' park, a very pretty breathing-place in the center of the city. Our view includes, just to the left of the courthouse, the St. James hotel, owned by the well-known farmer-landlord, Tyler

Alameda—the "beautiful way"—planted with shade trees years and years ago by the old padres, which connects San Jose with her beautiful sister town, Santa Clara. The same street continued eastward from San Jose reaches to Alum Rock, a beautiful park just at the base of the hills, and thence also leads out the famous roadway to Mt. Hamilton.

Another pretty scene shows twin palms, popular ornamental plants in many of our towns.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

California's Phenomenal March.

EDITORS PRESS:—It is but a few years since California was considered, by the residents of the Eastern States, as an isolated portion of the country, valuable for its enormous production of gold and silver, but otherwise of comparatively slight importance, and certainly not destined to become the home of wealth, refinement and culture, and the garden spot of the United States.

For a time numbers of those who had taken up their residence in this favored State occasionally returned to their old homes, and, full of honest pride for their adopted State, would describe something of its natural advantages; its balmy, healthful climate and beautiful scenery, not surpassed on any portion of the globe; its wonderfully fertile soil, capable of producing five crops of hay or two crops of corn in a single season; strawberries from April to January; profitable crops of fruit at three years from planting; beets weighing from 50 to 80 pounds each and yielding 40 tons to the acre; big trees, from 10 to 32 feet in diameter, etc., etc.

While these facts were related in all sincerity, they were, nevertheless, too much for our Eastern friends to "swallow," and the reputation of Californians for truth and veracity suffered accordingly.

Gradually, however, there came a change. Occasionally parties from the East came here for a few months' sojourn, in search of health or pleasure, and upon their return home gave expression to their opinions of the Golden State, and these opinions, coming from disinterested parties, attracted attention and created a desire among our friends beyond the Rockies to learn more about California. The number of these visitors rapidly increased, and then came the great excursions of the Knights Templar, the Odd Fellows and the Grand Army of the Republic, and these thousands of reputable people, returning to all parts of the Union, related what their eyes had seen upon these golden shores, and California's claims could no longer be gainsaid.

Hence it is that the mighty human stream now pouring into California was not set in motion by Californians interested in creating "land booms," but by disinterested Eastern people who had visited us and returned home with a report that California was indeed a wonderful land "flowing with milk and honey." Never before in this or any other country has been witnessed a tide of immigration similar to that now pouring into California. Throughout the length and breadth of the Eastern States is being taken up the song:

"We are coming, California, three hundred thousand more,
From Mississippi's winding stream, and from New England's shore;
We leave protectors for our ears, our arctics and our muff,
We leave our overcoats of fur and tons and tons of stuff;
We're bound to have the climate of that great Pacific shore,
We are coming, California, three hundred thousand more.

"If you look up all our valleys where the harvest ought to shine,
You'll see our sturdy farmer-boys fast forming into line;
They're tired of the stony soil, of snow, and rain, and sleet,
The city merchant joins the throng, he's tired of the heat.

The blizzard shrieks behind us, we skurry on before
We are coming, California, three hundred thousand more."

Between September 1st and December 15th, there were brought to California over the various transcontinental lines upward of 54,000 persons, and the tide continues undiminished. Large numbers of the throng are men of wealth who come to establish beautiful homes in this land of sunshine, and to invest in mercantile or manufacturing enterprises, or in securities second to none on the globe, viz., California lands. Thousands of our new-comers are sturdy farmers in middle life, who, by years of untiring industry and economy, have managed to acquire a competence, and have concluded to leave the snow, and ice, and blizzards of the East and come where they can live in comfort and till the soil twelve months every year.

Who can estimate the future of this great State, enjoying, as she does, more of nature's gifts than any other spot on earth, and populated by these thousands of intelligent, wide-awake, well-to-do people. The imagination is not capable of producing a brighter picture than California will present 25 years hence.

Already may be seen a wonderful change. What were formerly large stock and grain ranches thousands of acres in extent have been subdivided and converted into general farms, vineyards and orchards. Lively, prosperous towns are springing up all over the State, and the character of their public buildings, churches, schools, business and general improvements indicates a degree of prosperity never before witnessed in any part of the Union. The southern portion of the State was the first to feel the beneficial effects of this

"moneyed immigration." This was due, in great measure, to the impression that only in "Southern California" was to be found the glorious climate of which we boast.

The development in that portion during the last three years has indeed been wonderful, almost beyond comprehension, but it is no longer confined to any one section, and it is well for California that it is not. The tide has rolled steadily northward, until now it has reached the extreme head of the great Sacramento valley, at Shasta's feet, a distance of more than 600 miles, and still our new friends find themselves within the great citrus belt, and enjoying the same average temperature throughout the year experienced in the southern portion of the State, the mercury never falling below 22° above zero, and very rarely reaching that point. While from earlier attention to the industry, the southern counties are naturally further advanced in the production of citrus fruits, yet Northern California's recent citrus fair has conclusively proven her claims in this particular.

She also enjoys advantages in the way of an abundance of good timber and a rainfall so plentiful as to obviate the necessity for irrigation; and last but not least, an additional and almost unlimited market for her fruit productions has been opened up by the recent completion of the California & Oregon railroad, making all rail communication with Oregon, Washington, British Columbia, Idaho, Montana, and Dakota, all of which will be large buyers of Northern California fruit.

We travel over our beautiful State and we find everywhere unmistakable evidences of unparalleled prosperity, and as we recall the California of only ten years ago, we are forced to exclaim, wonderful change! And yet Californians have really no reason to be surprised. We have had this same wonderfully fertile soil, this same unapproachable climate, ever since we crossed the Sierras or entered the Golden Gate. We know, because we have seen it throughout the State, that our valleys and foothills, when properly tilled, will produce fruit crops netting from \$100 to \$400 per acre, and general farm crops far in excess of anything ever seen east of the Rockies. We know beyond a doubt that California is to be the fruit orchard of the world. Within her borders may be grown in wonderful profusion nearly every variety known on the face of the earth. Oranges, lemons, olives, figs and pomegranates, as well as the hardier fruits, are grown from San Diego on the south to within a few miles of snow-capped Shasta on the north, nearly the entire length of the State.

Our soil produces from 5 to 13 tons of grapes and from 7 to 12 tons of prunes to the acre, while orchards of walnuts, oranges and olives yield in some cases, when in full bearing, from \$500 to \$1000 and even more net profit per acre.

What wonder, then, that our lands are sought after? We have many of us cultivated the rocky hills of New England, and know by experience what it is to labor all summer to provide food and fuel for the coming winter, and we are able to appreciate in a measure, at least, the manifold advantages possessed by California and only awaiting development by the thousands now coming and the hundreds of thousands which are sure to follow. California is already the wealthiest State per capita in the Union, but her present prosperous condition is only the shadow of what we shall see a decade hence. Her march is only just begun. With her climate and her soil, and with the class of immigration which we have described pouring in in such numbers, she will continue on her course until she has far outstripped every one of her sisters of the Union. God speed her!

G. W. H.

Notes on San Mateo County.

EDITORS PRESS:—The county of San Mateo is set off from the southern portion of San Francisco by Act of the Legislature consolidating the city and county government of San Francisco in 1856, and organized into a separate county government. While one of the smaller counties in area in the State, there is perhaps no other county having such a variety of soil, climate and scenery. The northern and coast portion is within the fog belt, and among the richest and most productive portions of the State for vegetables, cereals, natural grasses and the hardier fruits. As a butter-making section it is unexcelled by the dairy region of Point Reyes. For the production of vegetables this section is unrivaled by any part of the United States. A great many carloads of vegetables have been sent East from this section during the last two years, and shipments will be greatly increased this year. So immensely profitable is this new industry that a large part of this section of the county would undoubtedly be diverted to this use if the facilities of the proposed coast railroad were available. This section, which a few years ago was held at small figures, bids fair to become the most valuable land of the State. The time is not far distant when thousands of carloads of fresh succulent vegetables will be sent away from this region East in January, February, March and April to grace the tables of our Eastern friends.

The mountainous portion of the county is largely covered by magnificent forests of redwood, oak, laurel and madrone. These forests, though furnishing employment to a great many woodmen, are still largely unbroken on

the western slope of the Coast Range. Here are opportunities for homes for thousands of people who love the stately grandeur of mountain scenery and the silent, primeval forests. But it is on the flats, hills and mountain range facing the east and sheltered from the trade winds, bathed in summer's eternal sunshine, that the greatest immediate changes are about to take place. From Milbrae southward no more charming country can be found in any part of the world, with a climate unexcelled, a soil unsurpassed, a variety of scenery to suit all fancies. This favored section challenges all others in regard to its numerous advantages. The natural suburb of the metropolis of the West, the only point which can be reached by land, it is indeed surprising how it has been neglected so long while other sections having few of its advantages have become densely populated. This has perhaps grown out of the indisposition of many large land-owners to divide up their estates and partly because the transportation company for some reason has maintained higher rates of communication to this section than to others equally distant; but all this now seems to be undergoing a decided change.

The transportation company is reducing its rates, the land-owners are cutting up their land at very moderate prices. We are of opinion that the next three years will work such wonderful changes in this favored section that the old residents will scarcely know their surroundings.

This section has heretofore been particularly the homes of millionaires, too numerous to mention. This section was a favorite home of I. C. Woods, W. C. Ralston and Milton S. Latham, three men whose histories were so strikingly similar, possessed of keen, penetrating intellects, coupled with great activity, achieved pre-eminent success in early life, yet met with great reverses and closed their lives in sadness, if not in despair. They will all be remembered kindly and sincerely, lamented so long as the old residents live.

For beauty of location, a genial and healthy climate with pleasant surroundings, it would be hard to find a place more eligibly located than San Mateo, Belmont, the new town of Phelps, or Menlo Park, while for business and manufacturing no place can exceed the facilities afforded by Redwood City. A large part of the county is, and must always be, tributary to her commercial, mechanical, and manufacturing enterprises. This town has water and railroad facilities connecting her with San Francisco and other towns, while she has hauled to her wharves tan-bark, wood, lumber, grain, and other articles which should enter into her manufactures and mercantile enterprises. When we view the advantages of her location we can but feel surprised that she has not a population of 20,000 instead of 2000.

For fruits, including oranges, lemons, limes, figs, olives, nuts, and grapes, a large part of San Mateo county, east from the summit of the Coast Range, is not excelled by many of the great fruit belts of the State, while the sheltered parts of the coast side are particularly adapted to apples and pears.

OLD RESIDENT.

HORTICULTURE.

Mission or Piccholini Olives.

EDITORS PRESS:—The comparative value of the Mission and Piccholini varieties was discussed at the Santa Rosa convention, where Mr. Butler said: "I would give the preference decidedly to the Mission. While there are not many more on the Mission, the Piccholini are so much smaller, it gives a decided advantage to the Mission."

My opinion about that is quite different. I never heard it proved that the Mission will have more berries than the Piccholini, but know some facts to the contrary. At the place of Dr. Clark here are two eight-year-old trees, a Mission and a Piccholini, standing only 15 feet apart, and having had always the same care. Last season the Mission yielded 49 pounds of berries while the Piccholini gave 63 pounds. This season the Mission had hardly any fruit, while the Piccholini was considered more loaded than last season. On the whole place the Missions yielded a fair crop last season, though the Piccholinis had more. This season the Missions bore hardly any fruit, and, in spite of that, the whole crop was about 30 per cent more than last season.

There is another big advantage for the Piccholini. Dr. Clark commenced to gather the ripe Piccholinis in 1887 on November 1st; the Missions he gathered just before Christmas and then they were but three-quarters ripe. This late ripening, I think, will interfere with the growth of the next year.

I expressed this opinion a few days ago to Judge C. A. Tuttle here. "Well," he answered, "this will account for a fact which, so far, I could not explain. I have on my place two Mission olives, one of which had a fair crop last year, while the other had only few. This year it is just reversed. The poor one of last year has a good crop, while the other one has hardly any berries." The judge picks his olives when they are dead ripe, that is, in February, and is fond of eating them then, as they are, because they have lost all bitterness.

Ellwood Cooper had a small crop this season, though all conditions for vegetation were very

favorable. Might not this interference be the reason of the smaller crop? Has he, perhaps, also remarked that only every second year the crop will be a good one?

Mr. Cooper said about his Mission olives: "We take everything off; pick all the olives on the tree—green, red and purple." On the Piccholini I never have noticed a different state of ripeness, neither in Italy and France nor in this country, and I am pretty sure I would have noticed it if there had been any. I am convinced that the oil of the green olive is different from the oil of the ripe one; perhaps it is better in quantity or quality, but very probably it is not as good. With the Piccholini we can wait till the berries are in that state of ripeness which will yield the best oil; with the Mission we can not, if we do not choose to have two gatherings. There is one advantage of which I have heard in favor of the Mission: that it will take the graft easier. It is very probable that among the 40 or more known varieties of olives there is a better one than either Piccholini or Mission, and it is possible that when we have found this out in a few years we would like to graft. But I do not certainly know that it is so very difficult to graft the Piccholini, and then it is uncertain also whether we shall find any very fine new variety with which it would be profitable to graft large trees. Therefore I shall give the preference to Piccholini as long as no other kind has proved itself to be decidedly better.

In crushing there appears another difference. The large berries of the Mission often slip from under the approaching rolling-stone, while the smaller berries of the Piccholini are more densely packed together and cannot escape it. The result is that even when with the Missions the stone is kept rotating a longer time, still some whole berries will be found in the pulp, out of which the oil could not be expressed, while the Piccholinis all are crushed.

I would like to answer a few "Olive Notes," which are contained in the S. F. Merchant of January 6, 1888, p. 87.

"In dry soil a hole 2½ feet deep and six or eight feet square should be dug." If the correspondent had advised to dig a hole 16 feet square, the distance of the trees being 32 feet, it would have been better. I plow first the land at least three times, the last time with three horses, about 20 inches deep; then I dig a round hole three feet in diameter, that eight holes may be dug to one hole of the correspondent. This will cost me less, and, I am sure, give better satisfaction.

"Either set out the trees immediately after the first rain or wait till February or March. In either case the ground is warmer than when the tree is planted in midwinter." For this very reason it is best to put out the trees when the ground is cold, provided that it is not frozen and no frost is to be expected. Every tree will be hurt least in transplanting when its vegetation is at a rest. The olive will grow in California for 11 months and stand still only for one month. During this period even the smallest twigs will show only ripe wood, and the little sucking roots will not grow. If the trees are transplanted later, they have already commenced to grow again and the young sprouts invariably will wither in spite of the best care. Therefore the best time for transplanting is right after the cold spell.

"Twenty-five or 30 pounds of berries make a gallon of oil." It takes Dr. Clark here 54 pounds, but he does not press out the oil of the third quality. So far we have not heard it proved that less than 40 pounds are needed to one gallon of oil.

"The olive ripens here in November and December, and the tree is perfectly free from disease." About the ripening of the different kinds, we have spoken above, and when Mr. Cooper has to spend \$1 and \$1½ per tree to fight the scale, I think this a fact well worthy to be mentioned.

In column one, page 87, the Merchant says: "It is a great mistake to presume that the olive can be grown on a barren soil without fertilizers." In column two: "It is an established fact that olives thrive and grow the best in the rockiest and most sterile places." There is no doubt that every tree will grow better in a good soil than in a poor one, but what might be a good soil for an apple tree is a poor one for a peach. I have seen in Italy the finest olives three and four feet in diameter growing out of the very rocks on steep hills, where cultivation could not be thought of; and the same can be seen here with oaks, and where an oak will grow an olive will grow also, sure enough.

Part of my land is what by most people would be called a very poor land. On a steep hill with a southern elevation the plow hardly scraped the surface, laying bare the bedrock often at two inches. But this bedrock slate with vertical layers can be broken with the plow, and when exposed to the air will rot very quickly. There are now, after three years' cultivation, not many places where the plow is not going into the beam; besides, the plants will sink down their roots between the strata and always find the necessary moisture without irrigation. The olives and vines on this hill are as splendid as I have seen them anywhere, while oranges, lemons and most of the deciduous trees except nectarines and walnuts make a poor growth.

What we want to advance the cultivation of the olive is not small talk and private opinions of reporters, but facts and reasons given by experienced ranchers who are not afraid to put their names to what they have written.

Auburn, Jan. 9, 1888.

F. Closs.

THE VINEYARD.

Grape Pruning.

EDITORS PRESS:—In the RURAL of Jan. 7, 1888, appeared an article on grape-pruning by Geo. F. Waters of No. 8 Beacon street, Boston, Mass. In this article Mr. Waters states in italic that in pruning, as in everything else, experience teaches. Just how any one can gain experience in grape-pruning at No. 8 Beacon street, Boston, Mass., is hard to understand; yet Mr. Waters' article reads as if it were written by one who has his knowledge more from experience than from theoretical book-learning; and it is not so much to deny Mr. Waters' statements as it is to give my experience in what Mr. Waters calls bud-pruning that I begin this article.

Bud or what is here called "summer pruning" is a system very generally advocated in this State. Some 12 or 13 years ago I summer pruned a strip of about ten rows of grapes for a trial. This was done when the canes were about three or four feet long, and they were cut back so as to leave about two-foot canes. I do not remember what effect this summer pruning had on the quality of the grapes; but when pruning the vines next winter I noticed that the pith of the canes in those ten rows was of a blackish-brown color, and the wood of a peculiar nature, and it lasted several years before these vines made as healthy a wood as the vines not treated in this way.

A year or two afterward a neighbor "of an experimenting turn of mind," while going through these vines discussed the subject and treated one of the healthiest vines he could find to a thorough summer pruning, and the grapes on that vine partly sunburned or mildewed and the balance were of inferior size and color.

Again, a few years later, after a late rain, I wanted to give a certain piece an extra cultivating, and cut the ends off the canes to make room for the horse and cultivator to pass, and again I noticed the same effect, namely, want of size, sugar and color in the grapes and a rotten condition of the wood.

I have also noticed the same thing in several other vineyards where summer pruning was resorted to, and also several times when cows came in the vineyard and topped off some of the first vines in their path.

That a growing cane suddenly cut off during the thickest part of its growth should become sickly seems to me so logical in itself as not to need explanation, and any one who has paid the least attention to growing plants in general must admit that by continued severe cutting during the growing season any plant or tree could easily be killed.

It is claimed by men who have given the scientific part of grape culture more study than I have, that although before ripening a bunch of grapes may contain nearly all the material for perfect grapes, this material is in a different state and must first flow with the sap through the leaves, and there undergo the necessary changes and then descend again to the cluster, which becomes perfect and ripe as soon as all the juices in the cluster have passed through this natural laboratory.

That the leaves are needed to form perfect fruit can be seen by going through a vineyard about the time grapes begin to ripen. Whenever a vine has, through any cause whatever, lost its leaves or only produced imperfect ones, the grapes will be found to lack color and sugar, and no amount of letting them hang on the vines will ripen them.

This can best be seen in a vineyard of which the soil has become too dry by insufficient cultivating. In such a vineyard the only perfect grapes are found on vines with perfect green leaves, while the grapes on other vines hanging in the full glare of the sun will, "all opinions to the contrary notwithstanding," never ripen.

Pinching.

Some grape-growers who believe in summer pruning try to remedy the evil by pinching out only the very tender little top. If this be done, the growth of the vine will not be checked, as the expanding leaves take up the sap for a week or so, after which time the lateral branches start out to grow, and the only danger is that fruit buds forming for next year may be forced so as to sprout, in which case the vine will present a mess from which it will take a pruner two or three years to extract a decent-looking vine. The free effect of this pinching out the top will be to make the young growth more compact with the leaves nearer the center of the vine; but as grapes will mature just as well in the hottest sunshine as in the shade, so long as the vine is healthy, and as besides I have noticed that during blooming grapes will set much better on clusters hanging outside where the dew and fog can dry off from them than they do on clusters in the middle of the vine where the blossoms will sometimes not become dry till hours after the sun comes out, I do not think that either pinching or cutting the top out of growing canes can be beneficial in a single case, with the exception of young vines, which are apt to grow such long and heavy canes that the wind would break them off if they were not shortened.

In returning to Mr. Waters' article, it will

be seen that what Mr. Waters says experience teaches is not just how to benefit a vine by bud-pruning, but rather how much a vine can be injured without quite killing it. Some vines would die unless a few leaves were left beyond the clusters, while others will even succeed in dragging out a miserable existence if no leaves at all are left beyond the clusters; but Mr. Waters forgets to mention a single reason in favor of mutilating a vine in this way, unless it be that afterward there will only be little foxes to cut off instead of long canes.

There is not another important industry in this State conducted in such a happy-go-lucky way, or about which so many erroneous opinions prevail, and as new-comers are constantly trying to obtain information on the subject, I believe a

Few Hints on Grape Pruning

Will be appropriate. Some seem to think if they can only secure an Italian or a Frenchman and turn him loose in the vineyard with a saw and pruning-shears they have done all that is necessary. Many of the worst pruning jobs I have ever seen were done by some of these Italian woodchoppers who did not know a thing about viticulture except how to stow away large quantities of the wine when it was red.

One of the first supposed principles in pruning vines or fruit trees of any kind is to make them bear. This may be the object in old vineyards on the other side of the Atlantic. The problem here is more how to so prune that the grapes produced shall be of good quality and the least possible amount of strength be wasted in producing superfluous wood.

Propagation seems to be the one object for which all living organism strives. It is a well-known fact that plants of all kinds, when approaching the end of their existence, will spend their last efforts in trying to propagate their species, while on the other hand a young, thrifty plant will abstain from bearing so as to reach its greatest possible size, as a future field for reproduction.

If seeds only were desired, the result to work for on grapevines would be to keep them as near dying as possible. But as the desired covering of the seeds is more of an artificial than a natural product, the object is to keep the vine in as thrifty a condition as possible for developing the fruit, and yet not so thrifty as to prevent fruit buds from setting.

By watching a young sprout on a grapevine it will be seen that at each joint is a growth capable of becoming a cluster under the necessary circumstances. On young vines these growths take the form of tendrils, while on old vines the first ones produced will be large clusters and the balance tendrils, which on some varieties will again form small clusters in June, which make the second crop grapes. I have seen exceptional cases where the first clusters formed this way would gradually grow smaller till there were as many as ten in succession, the first one a good, large bunch and the last one a mere tendril with four or five blossoms on it; but the rule is that each young sprout comes out with two large clusters on the first joints and no more.

Some varieties of grapes have a capacity of producing clusters on all sprouts, whether starting from old or young wood, but most varieties will only produce fruit on sprouts starting out of the large buds found on one-year-old canes, while the small buds found near the joints of the two and one-year-old wood, as also all buds on old wood, will be barren.

Again, some kinds of grapes produce clusters which average two pounds in weight, while others only have half-pound bunches. These are the varieties generally pruned short, and requiring the most care. Most of the long-pruned varieties have an instinct for prolonging their own life, which they follow by varying the size of their bunches according to how hard they have been taxed the year before; but the smart viticulturist gets even by leaving more buds as the bunches grow smaller.

Now in pruning the first thing to do is to make up your mind how much grapes your vineyard can produce to the acre. Some vineyards have been known to bear 20 tons to the acre, but the average is generally admitted to be about 3½ tons. Winemakers insist on from 18 to 23 per cent of sugar; if the grapes test below 18 they have been allowed to overbear; if they test above 23 the vines did not bear as much as they could. It may happen that some grapes of the raisin varieties test sweet enough, but have only formed canes from six inches to a foot in length; this is another sign of overtaxing the strength of the vines. It may also happen that three-fourths of the grapes are sunburned. This only happens when the roots cannot furnish moisture for all the grapes on the vines, which is another sign of over-producing. Mildew is more a result of general debility caused by over-production the year before, although a vine loaded with more grapes than the roots can find either food or moisture for is much more subject to mildew than a vine not so situated.

How Many Buds to Leave.

After having decided what amount of grapes your vines can bear, say ten pounds to the vine, "which would be the average with vines planted eight feet apart," it would only seem necessary, for the two-pound cluster varieties, to leave one spur with one small and two large fruit buds, but if this were done the result would most likely be that the thrifty growth of the sprouts on that spur would prevent the fruit buds from setting, and the extra amount of saps in the vine not being able to all go into the three sprouts, would burst out on different

places and form black-knot. With varieties producing half-pound bunches this danger would be obviated, but grapes do not always set well. In case of a shower of rain during blooming nearly all blossoms open at that time would drop off, while grapes already set keep on growing, and the closed buds will not open till after the rain is over. If, however, the rain keeps on for a week or so, all buds will drop off and a whole vineyard may not yield a pound of grapes, but this rarely happens in California. There are several other causes which may prevent grapes from setting full, for which reason it is better to leave two or three or four times as many fruit buds as is required. There is, however, a limit to this amount, as conditions, "climatic or otherwise," which would prevent a vine from bearing 10 pounds of grapes on 20 fruit buds, would also most likely prevent such a result on 100 buds. After pruning a vine so that it has 10 or 15 or 20 fruit buds left, "on vines which set well 10 would be enough, while on others it would be safer to leave 20." It will be seen that vines of some varieties will hardly put forth a single sprout beside the ones from the fruit buds, while others will be covered with over 100 suckers. On vines which make the most suckers I have noticed that all these sprouts together would make such a close mass of leaves as to completely hide all blossoms, and these would, in case the weather was inclined to be only slightly damp, not get a chance to dry off for days at a time, and consequently not set. This can be prevented by pulling out all suckers before blooming and also by leaving the spurs longer, so as to spread out the vine a little more.

Suckering.

That these suckers must be taken off is admitted by all, but very few growers go further than to pull off the ones at the base of the vine, although some take off all sprouts starting out of wood older than one year, and a great many do not touch their vines between pruning and grape-picking. Still, this suckering is one of the most important parts of grape-growing.

Although it is my experience that grapes will not mature well if the tops of the canes are removed to such an extent as to leave practically no foliage beyond the clusters, I also know from experience that all the leaves on the bearing cane are sufficient for the purpose, and that the removal of all sprouts except the ones wanted for bearing is a great saving of the strength of the vine. I have personally removed at times as many as 100 long, heavy canes in winter pruning from vines which had not been suckered during summer. If grapevines were only intended for a year or two, this would, perhaps, not be so detrimental, but when it is taken into consideration that vines are expected to live for hundreds of years, and that scientific viticulturists tell us that the growing of wood, which is completely removed from the vineyard, is a greater drain on vines than the fruit production, it will be seen that every ounce of wood allowed to grow unnecessarily is simply taking that much off from the existence of the vine.

I have seen many vines die off, and again sprout from the ground, where I am as sure as any one can reasonably be that the only cause was general debility occasioned by over-production of either wood or grapes.

The time required for removing all superfluous sprouts is no excuse for not removing them. It is a great deal easier to remove them when it can be done with the fingers than it is to cut them off later with shears and saw.

The greatest trouble is to find hired help to do it as it should be done. It requires more study and a better knowledge of the general principles of pruning to do this as it should be done than to prune in winter, as a vine properly attended to in summer leaves the pruner no choice whatever in any respect as to which canes he will keep, his only work being to judge how many buds he will leave on each spur, and occasionally to cut off a cane which is getting too far out in the row away from the stump.

The proper time of the year to remove all superfluous sprouts and grapes is after the grapes have set and are about the size of heavy shot. I have never yet seen anything which would make small grapes drop off the bunches after they were once set unless it were physical force, a heavy frost, or some similar disaster; and any one who has had a little experience can tell just as well how many pounds of grapes his vines will yield when the grapes are first set as he can when they are ripe.

One trouble in this thinning out is that the canes with the heaviest buds will always be found to grow out of the last bud on the end of the spur, and after instructing a man so that he will know how many canes with how many bunches to leave on each vine, he will invariably leave only those extreme canes so that the vine will each year spread out several inches in all directions and would soon stop up the rows so as to prevent cultivating. Just here is where the most judgment is required, so that when a branch begins to grow out too far, a sucker without grapes on it is left as near the body of the vine as possible, which will be the fruit-bearing wood for next year, when the branch must be removed at the place where this cane sprouts from it.

Where a branch runs too far out and no cane is left, the branch can be cut off in winter, leaving a three or four inch stub from which sprouts will invariably start, one of which can be kept by the summer suckerer; but the or-

dinary hired man will be very apt to pull them all off unless he is very careful.

Pruning Systems.

In this article I have avoided advocating any of the different systems of pruning in vogue "and which have each and all been so clearly proven the only and the right system of pruning by their respective defenders or inventors," as the foregoing remarks apply to all of them. I for myself consider them a mere matter of taste. I have never yet seen a style of manipulating pruning-shears so as to make vines bear more than the strength of the soil and the atmospheric conditions would permit. I remember a case of a professional pruner who came along with knife instead of shears, who showed me how to prune one vine so that it would bear 75 pounds of grapes; the next vine he could allow only 45 pounds. It was a good year for grapes, and in picking I put all the grapes from the 75-pound vine in a small bucket, and the 45-pound vine also had a small bucketful.

In my opinion, the main object in pruning is to leave the right number of fruit buds and to keep the vine in the shape required according to the rules of your own pet system. If I were to make any choice it would be in favor of pruning varieties which set only under favorable circumstances with long canes and easy-setting varieties short, but as this would subject most climbing varieties to short pruning and several varieties of table grapes to long pruning, it would seem a hopeless undertaking to get any one to think this the right way.

In finishing I will only once more say that in my opinion nearly all the diseases of grapevines are caused by exhaustion, and that by allowing vines to overbear grape-growers only help to kill the goose that laid the golden egg.

Forestville, Sonoma Co. L. C. CNOPIUS.

THE FIELD.

The Watsonville Sugar Factory.

The *Pojaronian* gives notes of the progress of the new sugarie at Watsonville, which will interest many of our readers:

W. C. Waters, architect of the Western Beet Sugar Co., is here this week and has instituted active work on the factory tract. For two weeks past teams have been hauling gravel for the concrete foundation and sand for use in making mortar. Mr. Waters has had Mr. Wetherill boring for water near the factory site, and at the same time has been able to determine the character of the land for a foundation. The borer passed through a deep stratum of stiff yellow clay, and Mr. Waters feels much pleased at the discovery, for he considers it an excellent stratum on which to rest the foundation. The soil above the stratum will be taken out for an area sufficient for the factory site. When this has been done a concrete foundation of at least two feet in thickness will be put down. From this foundation the brick walls will arise to a height so as to be even with the floor of the freight cars when on the side track at the building. Also upon this foundation will be built the brick piers to serve as bases for the iron posts that are to support the upper floors. After this work is done the concrete will be covered with dirt to about the height of the brick walls, and after this dirt has been well tramped down in the construction of the factory it will be covered with bitumen flooring even to the top of the brick wall.

The dimensions of the buildings have been somewhat changed since our previous report, and it is now settled that the main building will be 28x65 feet, two stories high at the ends and 4½ stories high, exclusive of tower, in the middle. Above the brick walls the building will be of wood and iron, with corrugated iron roof. The beams and girders will be of iron, and the building will be so constructed that the pressure of the immense weight of machinery will be greatest at the center and graduated therefrom. About 24 feet from the main building, and of about the same ground dimensions, will be the boiler-house and storage-room. Between the two buildings will run the main railroad switch. The boilers, 10 in number, are now being made in San Francisco. The evaporating plant was shipped from Germany on the 2d inst. Adjacent to the factory will be a large cistern 16 feet in diameter and 20 feet deep, with concrete sides, from which the water for the factory (about 2,000,000 gallons daily) will be pumped. It is supposed that this cistern can be supplied from small wells bored from the bottom. A fire-pump will be ready for use at any time, and the factory will be well supplied with hose. The office will be located at the corner of the Peckham lot, where there is now a dwelling-house. Adjoining it will be the weighing scales, and extending therefrom to the factory will be three immense beet sheds or bunkers V-shaped. Each of these bins will be about 900 feet long. Under each will be a concrete ditch, into which the beets will drop and be swept by water to the factory, and from thence taken to the cutting machines.

The factory will have a capacity of 700 tons of beets per day, but for the first season it is not expected to handle over half that amount daily. Mr. Waters feels confident the factory will be ready for operations before September 1st. The beet seed was shipped from Germany on December 13th, and is expected to arrive before the end of the month.

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Debris Evil.

The text of the bill "for the investigation of the mining debris question in the State of California," introduced in the U. S. House of Representatives by Hon. Marion Biggs and referred to the Committee on Mines and Mining, is as follows:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the Secretary of War is hereby authorized and directed to detail three officers from the Engineer Corps of the United States Army as a commission for the purpose of making a thorough examination and investigation of the mining debris question in the State of California, and for a complete examination and survey of the injured river channels, its tributaries, and lands adjacent thereto, with a view to their improvement, and to devise some plan whereby the conflict between the mining and farming section may be adjusted. And that the sum of \$10,000, or so much thereof as may be necessary, is hereby appropriated, out of any money in the treasury not otherwise appropriated, for the purpose of carrying into effect the provisions of this Act, the said sum to be expended at the discretion of the Secretary of War; the said commission to report as early as practicable to the Secretary of War the result of their investigation."

The word "its" above italicized, should evidently be "their."

In the course of a long editorial on the bill the Marysville Appeal remarks: "There is just one good thing in this bill, and that is the clause providing for 'a complete examination and survey of the injured river channels, their tributaries and the lands adjacent thereto, with a view to their improvement.' An appropriation for such examination and survey would be all right, and is, in fact, highly desirable. But no investigation of the 'mining debris question' is called for—there is no such 'question.' The only debris question that ever existed was long ago settled in the courts. A debris evil remains in the choked condition of certain river channels, as the result of past hydraulic mining, and this Congress may properly attempt to remedy by engineering, at the same time prohibiting, under severe penalties, the continuance or resumption of such hydraulic mining as caused the mischief."

"The interests injured by hydraulic mining have no reason to apprehend unfavorable results from the investigation called for by the Biggs Debris bill. The more fully the facts of the situation are brought to the attention of Congress, the more hopeless the case of the hydraulic miners will appear. But the passage of this Biggs bill, as a whole, would be decidedly objectionable, for the reason that such a reopening of the subject would tend to make outside capital shy of investment in the region liable to be injuriously affected by the resumption of hydraulic mining. Strangers would perceive the extent of the injury caused in the past, and would be fearful that ignorance or corruption at Washington might result in the general resumption of hydraulic mining and the infliction of further injury. They would say: 'The question is still unsettled, and we cannot, as home-seekers, afford to take any chances.' And some such fear would likewise be apt to creep over the people of the valley and paralyze progress as hydraulic mining did in the past."

"The people of the valley have fought their own battles, and have paid dearly for the security they have gained. That security should be left undisturbed, and Congress should confine its efforts to the improvement of the rivers and the punishment of hydraulic miners who may be proved responsible for further damage to the channels."

LODI had her installation exercises on the 18th, conducted by the Worthy Master of the State Grange, aided by Sister C. P. Allison. The Sentinel of above-named date says: "Mr. Overhiser, who has recently returned from an extended tour through the Eastern and Southern States, was welcomed home by the Grange, the members of which are old-time friends of his. At the conclusion of the installation ceremonies the members partook of a feast which had been prepared by the good sisters of the Grange. The collations served by the Grange are always 'something extra,' and this was no exception to the rule."

TEMESCAL GRANGE had a very pleasant meeting last Saturday. W. M., Overhiser of the State Grange gave a highly entertaining account of his recent trip Eastward. The tariff question was discussed by Bros. Thos. Paulsen of Oregon, Amos Adams, W. C. Blackwood, S. T. Coulter, and S. Goodenough. Two applications were made for membership.

BRO FLINT, Worthy Lecturer of the State Grange, is up and doing. He writes the Patron that he will go to Merced on Wednesday of this week to help them confer the third and fourth degrees upon a class of 12 and install officers, and is to be in Auburn the 23th to do the like for Eureka Grange.

WOMAN SUFFRAGE.—Gov. Sample signed the bill, whose passage we noted last week, giving the ballot to women in Washington Territory.

Shiftless Farming.

The Territorial Enterprise had some observations and reflections the other day intended especially for Washoe county, Nevada, but suggesting wholesome hints for dwellers in many another region. Readers may make their own application of what we quote:

A reporter, while in Reno last week, noticed several ranchers buying at the stores such articles as butter, eggs, ham, bacon, potatoes, wheat for chicken-feed, and other articles that can be raised abundantly and profitably throughout the valley. Inquiry of the storekeeper revealed a wretched and shiftless condition of things on the part of the ranchers. They raise scarcely anything but alfalfa, and this they sell in the stack, principally to California cattlemen, who, in fact, make about all the profit represented in the alfalfa by loading it inside of their cattle's skins.

To a man up a tree all the poetry of farm life is knocked into a cocked hat in contemplation of the fact that their fresh eggs come from the store and they have to drink black coffee or use condensed milk, but such seems to be the case with Washoe county farmers.

It would seem that with such a market as Virginia City affords that Salt Lake stale eggs would be at a happy discount, but it is lamentable to say that they are not, and if a man wants to buy a chicken within a radius of 30 miles of the city, he is politely referred to Mormonism.

That there is a big field in Washoe county for men who will follow farming right "up to the handle" is a self-evident fact, and they will get along without plasters and mortgages on their farms, too.

Presentations at Santa Rosa.

The Republican of Jan. 19th makes friendly mention of recent doings among Sonoma county Patrons. We quote the greater portion of its account, as follows:

Saturday was a day long to be remembered in the annals of Santa Rosa Grange. The occasion was the installation of officers in their respective offices for the ensuing term. P. M., Nelson Carr of Bennett Valley Grange having been invited to act as installing officer, performed the ceremonies, ushering the newly elected into their respective stations to execute the government of the Grange.

After these ceremonies were concluded, the Grange dinner with all its bounty, as prepared by the matrons and maids of the Order, was awaiting the members and a few invited guests. The appetites of all were fully satisfied, and it was found that the proverbial twelve basketsful were still remaining.

As a testimonial of the high regard in which the Grange held its Worthy Master, E. W. Davis, with appropriate words C. E. Gamble, in behalf of his fellow-members, presented him with a beautiful gold scarf-pin, which was accepted with an apt reply by the surprised recipient. The secretary, Miss Martha Lumsden, was presented with Shakespeare's works in appreciation of her valuable services, also calling forth a well-delivered response, notwithstanding the young lady was genuinely surprised.

OUR COUNTRY NOT FOR ANARCHY.—We find this terse paragraph among our clippings uncredited, but it can go on its intrinsic merits: "There is no room in America for anarchists. They should not be allowed to parade the streets of great cities as they do, and make speeches in defiance of our laws. This is, and should be, a free country; but the right of a lawless people to organize for the purpose of tearing down our institutions and abolishing all right to the ownership of property, is entirely beyond the meaning of personal or political liberty."

DANVILLE GRANGE purposes celebrating the birthday of Washington. It is a good idea, which other Granges will do well to catch, thus to do special honor to his memory and improve the occasion for arousing a patriotic and humane ambition in the breasts of our young men and women.

BENNETT VALLEY GRANGE'S MEETINGS, on the 1st and 3d Saturdays of every month, are always well attended, enjoyable and instructive. Bro. J. B. Whitaker adds to this the cheering news that they have a class of six to initiate February 4th, and invites all Patrons in good standing to be there at 10 A. M.

THE officers of Woodbridge Grange were publicly installed on the 17th by Worthy District Lecturer, J. D. Hoffman, Bro. Wm. Treadway assisting. After this business had been duly attended to, a fine collation and an hour of social converse were enjoyed.

ENTERPRISE GRANGE had installation exercises on the 7th, Bro. G. W. Hack of Sacramento officiating and adding some good suggestions about the work. They also conferred the first degree on a class last Saturday—so writes Bro. Geo. Wilson.

GRASS VALLEY GRANGE meets every Saturday night, weather favoring, and is gaining new members besides welcoming back into the fold many who belonged to the Order years ago.

Petition to Congress.

At the last meeting of Temescal Grange the following petition was signed by all but two of the members present:

To the Honorable the Senate and House of Representatives of the United States.

Your petitioners, citizens of the State of California, most respectfully, yet urgently and solemnly, protest against any legislation by which any reduction will be effected in the tax now imposed by law on the manufacture, importation or sale of either spirituous or malt liquors or tobacco.

Other Granges are invited to cut out this form and paste it upon suitable writing-paper or copy out a similar petition, secure as many signatures as possible, and send them to the secretary, Mrs. Nellie G. Babcock, North Temescal, Alameda Co., Cal., to be forwarded to Washington.

Grange Elections.

NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

ELK GROVE.—James Caples, M.; J. S. Williamson, O.; Gillis Doty, L.; John D. Hill, S.; Frank Graham, A. S.; Mrs. McConnell, C.; F. Stelter, T.; Mary Kerr, Sec.; John Winkelman, G. K.; Ruth Le Boyd, Ceres; Nellie Andrews, P.; Hattie Caples, F.; Mrs. Hill, L. A. S.; Hattie Foster, Org.; Z. L. Garwood, Trustee.

SAN JOAQUIN COUNTY POMONA.—[Corrected list.]—T. C. Shaw, M.; S. Ferdun, O.; Sister S. L. Aldrich, L.; C. W. Norton, S.; R. Pixley, A. S.; A. A. Gurnsey, C.; F. M. Smart, T.; J. D. Huffman, Sec.; C. P. Allison, G. K.; Sister Alida Allison, P.; Sister C. W. Norton, F.; Nellie Hutchings, Ceres; Sister J. D. Huffman, L. A. S.

TWO ROCK.—S. L. Barlow, M.; W. Church, O.; Sister E. C. Hinchshaw, L.; C. Nisson, S.; J. C. Purvine, A. S.; Sister S. Q. Barlow, C.; W. D. Freeman, T.; A. P. Martin, Sec.; S. H. Church, G. K.; Sister L. Martin, P.; Sister M. H. Doss, F.; Minnie Church, Ceres; Sister J. C. Purvine, L. A. S.

SOUTH SUTTER'S officers for 1888 are nearly all new. This Grange appears to be prosperous and hopeful.

The Tariff.

EDITORS PRESS:—In the PRESS of 14th inst., W. H. Aiken makes the following affirmation: The policy of protection to American industry has been steadily maintained since 1861, and a change in that policy, which is now threatened, means a large and permanent reduction in the wages of American labor and of capital invested in manufacturing. The value of a protective policy to this country can be clearly demonstrated.

Now, I deny that the policy of our Government has been such as to foster the general industry of the country, or that a change in that policy threatens a large or small, permanent or temporary, reduction in wages of the American laborer, or of capital invested in manufactures.

But upon the contrary, the policy (or the effect of the policy) of the Government during this period has been such that labor has received less than it would under free trade, and that the laborer will receive the maximum of wages under a policy of minimum restriction upon foreign commerce.

Now, this is affirmation against affirmation, neither of which in my opinion has any real value. Nor do I consider the long list of authorities he quotes but little better, for a number of reasons, one of which is that many of these men have under other circumstances given utterance to opinions the opposite of these, e. g., one of the greatest speeches Daniel Webster ever made was in behalf of free trade. Clay circumscribed the time to which he would grant assistance to manufacturers. For an illustration of change of opinion, from change of conditions, see Senator Evarts' opinion as to the constitutionality of the Oleomargarine bill, when given as a paid attorney and as a Senator.

But if the affirmation of protectionists, free-traders or political celebrities are not convincing evidence, are we at the end of investigation?

If tariff taxes are beneficial (as you say), or if they are injurious (as I say), is it not possible to explain them by known laws? It would be a strange machine that would convert raw material into a finished product—say wool into a hat—but that we could not trace the stage of progress.

The reason, and the only reason, that I have taken up my pen at this time is to request Mr. Aiken to explain to us the economic mechanism by which tariff taxes benefit us.

If Mr. Aiken will undertake to show us how the farmer, mechanic and laborer are benefited, I will (if I am not convinced by his argument), if an opportunity is afforded, endeavor to show that these classes are injured thereby.

W. S. CUNNINGHAM.

Lemoore, Jan. 6, 1888.

[As we have already said, we fear being swamped by a discussion of this subject on general principles. Statements of this nature are available to those who desire information. Let the argument be upon local interests or at least with illustrations drawn from local industries.]

—EDS. PRESS.]

Managing a Rabbit-Drive.

Toward the close of our illustrated article on driving jack-rabbits, in the RURAL PRESS for January 14th, we mentioned a dispatch from Bakersfield reporting the slaughter of 5075 of them. It appears that all these were killed in a single afternoon. The account of the affair given in the Echo of Jan. 12th is so sprightly, and contains so many valuable practical hints as to how a drive must be managed in order to secure the greatest success, that we quote it bodily:

In accordance with posters generally circulated about Bakersfield, a second rabbit-drive took place at H. L. Borgwardt's ranch, the same place as the former one. At 1:30, the hour set for the meeting, at least 500 people had assembled on the grounds, and after partaking of the generous lunch prepared by Messrs. Swain and Borgwardt, proceeded to the place where the drive was to be held.

Preceding this, Commander McCord had sent a large delegation of horsemen to "round up" the rabbits in the field west of that where the principal work was to be done, so that by the time the crowd was ready to move in a body to the place where the drive was to commence, hundreds of rabbits had been driven out before them.

Companies were rapidly organized, 20 men on foot being assigned to each captain who was mounted. Eleven companies of men and boys were given positions, and two of ladies and girls under command of lady captains; and it is claimed by those present that more enthusiastic hard work was done by the latter than by any one else. Two large companies of men and boys on horseback, commanded by competent captains, were placed at the extreme right and left wings. The whole command formed a semi-circle.

When all were in position, the commander raised his handkerchief, the signal for the start; this was repeated by his assistants and the captains, and simultaneously the whole line began a quiet work toward the corrals. At first the rabbits trotted slowly ahead of the drivers, but soon the horsemen on the left wing opened up a general shout, contrary to the program, which so excited the rabbits that they turned toward the right wing and ever so hard work of those in charge of that wing could not keep half of them from passing the line.

As the circle gradually closed, the drivers made a more compact body, so that when they reached the rabbit-tight wings there was little chance for a rabbit to go back without encountering one of the clubs in the hands of the foot-men; hundreds of them were killed in this way.

Just before the gate to the corral was reached, there was a general disposition on the part of the rabbits to turn toward the crowd. Had the latter been held in check for a minute, so as to give the rabbits an opportunity to see the gate, every rabbit would have been captured; but there was no such delay, and the result was that nearly half of them went through the crowd.

It was estimated that 2000 were corralled this drive. They were speedily killed with clubs, and a second drive ordered. Commander McCord sent a large force of horsemen into the field north of the one where the main drive was held, to drive the rabbits in front of the companies, and it proved to be an excellent move, as it increased the count in the next drive by at least 1000. Aside from the shouting by those on horseback, the last drive was as near a success as any one could wish. At the close, when fully 3000 rabbits were massed in front of the gate, undecided which way to turn, the commander and his assistants held the crowd in check until the rabbits started for the gate, when a general rush was made, and in an instant 3000 more rabbits were in the corral. After the killing, a count was ordered and the number was 5075 in the corrals, and it was estimated that at least 500 were killed on the outside. This would total over 5000 rabbits killed inside of one week on a field of less than 300 acres.

Sericulture.

The State Board of Silk Culture held a meeting at 21 Montgomery avenue on Saturday, Jan. 21st; present, President Price, Secretary Sellers, R. H. McDonald, Jr., and Isaac Trumbo.

Nine varieties of Japanese tinted cocoons were exhibited, and it was announced that eggs from which such cocoons are generated are ready for free distribution.

The Filature Committee reported that everything was working smoothly, and that there were vacancies for two more pupils to learn the art of reeling silk.

Several thousand mulberry trees have been received by the Board and will be distributed judiciously among the silk-growers of the State. Letters from a number of persons were received asking for trees and about sericulture, and the secretary was directed to furnish correspondents with the necessary information as soon as possible.

WEATHER REPORTS.—The reports of Pacific Coast weather, kindly furnished us every week by Serg't Gorom, will be extended in our next issue to include Eureka, Fresno and San Luis Obispo.

AGRICULTURAL NOTES.

CALIFORNIA.

Contra Costa.

RAISINS.—*Martinez Gazette*, R. C. Terry of the well-known Glen Terry vineyard, near Clayton, left at the *Gazette* office on Thursday a sample-box of his curing that would challenge the admiration of an epicure. In size and flavor they are about perfect, and the neat and tasty manner of packing is in harmony with the delicious quality of the fruit itself. Mr. Terry has found a ready demand for all the raisins he has made, and next year will double the amount of his product.

DANVILLE ITEMS.—*Cor. Gazette*, Jan. 20: The weather has been very cold here for over two weeks, but for the last 48 hours has been moderating. Grass and grain have been growing backward, but now have a more healthy color. Farmers, as a rule, have been unable to plow before 10 A. M. since the snow, and some who had land on north side of the hills have had to suspend operations entirely until the ground thaws. A gentle rain commenced falling about 4 o'clock this morning, and by 6 o'clock we were having a rapid downpour, which melted frost out of the ground in better shape than a week of sunshine could have done. Tree-hole digging has commenced, and this season bids fair to add a large acreage to our orchards, and many comparatively new varieties of trees for this valley are to be planted. We have had severe cases of sore throat among horses in this vicinity, but the epidemic seems to have subsided and stock is improving.

Humboldt.

PERSIMMONS.—*Ferndale Enterprise*, Jan. 13: Si. Morrison of Bear river informs us that his persimmon tree was loaded down this season. He pulls the persimmons before the frost nips them and lets them ripen off the tree. He says this plan works to perfection. He intends planting more of these trees this year.

A FAT CHICKEN.—*Mrs. Cutler Hatch* called us in while we were passing her residence Monday and showed us a quantity of fat taken out of one chicken, which weighed exactly 2½ pounds.

Los Angeles.

FORESTRY.—*L. A. Times*, Jan. 20: H. R. Lee, superintendent of the forestry experimental stations, has been at work at the forestry park at Santa Monica for some time. The land is now cleared and the planting will be done immediately. Mr. Lee is an energetic worker, and will take every advantage of the rainy season to get his trees out in good shape. The station at Santa Monica will be a complete climatic contrast to the one to be established in Hesperia.

Mendocino.

LIVE-STOCK AND THE WEATHER.—*Mendocino Beacon*, Jan. 21: Chester Woodruff of Usal dropped into the office Thursday. From him we learn that the late cold weather has not been very disastrous to sheep on the coast. Out of nearly 2000 sheep and lambs on his range only a few have died. Both the sheep and lambs are frisky and seem to be doing well. Mr. T. McGimpsey of Anderson Valley was in town this week, and reports everything looking pretty well in Anderson, although the weather has been very cold, as low as 16°. He says stock there has weathered the storm and cold weather well, very few dying.

Napa.

IN THE WARM BELT.—*Register*, Jan. 20: Mrs. Samuel Lake yesterday brought into our office a branch of raspberry vine measuring eight and one-half feet in length, taken a few hours previous from her mountain ranch in the Napa Redwoods. This was wholly the growth of last season. The numerous leaves on the vine were as fresh and green as if it were early summer. The thermal belt of the Redwoods is rarely affected by frosts.

Placer.

CITRUS STOCK BROUGHT IN.—*Newcastle News*, Jan. 18: Mr. J. E. Cutter of the firm of Twogood & Cutter, Riverside, arrived here on Saturday with a carload of young orange trees for the Newcastle Fruit Co. The trees are very fine looking, and were completely disinfected by dipping in kerosene emulsion as they were unloaded from the car—a practice universally adhered to by that firm, whether there is any sign of scale or not. During transit the roots of the young trees were completely covered with native soil, and as a consequence the trees look as bright and fresh as when taken from the nursery.

Sacramento.

VALLEY APPLES.—*Record-Union*: It is not generally claimed that apples grown in the valley sections of the State are of as high a standard as those from the mountain altitudes, but some of most excellent quality are raised in Sacramento county. Samples of Spitzenbergs were yesterday shown from Geo. W. Hancock's orchard, on the Cosumnes, which in size, color, firmness and flavor, equal any in the market. Such apples will bring high prices in any market, and their culture cannot be otherwise than profitable.

San Joaquin.

EDITORS PRESS:—What has happened to our California climate—this "Garden of Eden"? During my residence of almost 15 years, I have never experienced such cold weather. We may have had days and nights nearly as cold; but

never days and even weeks when one night's freezing was added to the last, making horse-troughs almost solid ice. A friend suggests some items as worth recording, such as a heavy horse falling on the ice without breaking it. But I fear our Eastern visitors are already inclined to take wing. One day our windows showed considerable work of frost-fairies—a thing our California-born children had never seen before. Upon touching the glass the picture was found to be outside instead of on the inside as I had expected. I do not remember having seen this before. Can any young California scientist explain the philosophy of this? The freezing weather is hard on growing crops. A welcome change has come at last in a warm rain. If the weather clerk will send along a few weeks of sunshine and showers we will soon forget the unaccountable behavior of the past. At present farmers are not very hopeful; old settlers say cold weather and poor crops keep company.—*Mrs. J. M. K., Tracy, Jan. 21st.*

JACKS AND JENNIES.—*Stockton Independent*, Jan. 20: I. R. Mickey and Supervisor Snow of Stanislaus county, who are partners in the stock-raising business, yesterday purchased one of L. U. Shippee's fine San Joaquin jacks for \$1400. The animal will be taken to Milton tomorrow morning. This jack is two years and ten months old, and 15½ hands high. He was raised by Mr. Shippee at the stock farm on Cherokee lane. The sire and dam were imported from Kentucky, and are now on the ranch. The youngster is said to be one of the finest animals in the State. His color is black with a tan-colored nose, and he is of perfect form. He has been exhibited at the State and Stockton Fairs and carried off a premium at each exhibition. Mr. Shippee has three more young jacks of the same age and qualities. He owns a band of 30 jacks and jennies, nearly all of them being importations from the best Kentucky breeds.

Shasta.

CITRUS ASSOCIATION.—*Redding Democrat*, Jan. 18: The certificate of incorporation was received from the Secretary of State last Saturday, and the same afternoon an election of officers was held with the following result: Pres., S. J. R. Gilbert; V. P., R. M. Saelzer; Sec., Dr. J. H. Miller; Treas., Bank of Shasta County; attorney, F. P. Primm. Previous to his election as attorney Mr. Primm resigned as director and Mr. Edward Frisbie was elected in his place.

Sonoma.

EDITORS PRESS:—All early-sown grain is looking well. Vineyard pruning in our section is about half done. We have had a very cold spell of weather, but it is raining now and is quite warm. Anywhere within eight miles of the new railroad, land has doubled in value. A great many are planting table-grapes and orchards, and our nurserymen cannot supply the present demand for trees.—*J. B. W., Santa Rosa, Jan. 21st.*

PAVING HORSES' STALLS.—*Petaluma Courier*: John A. McNear of this city, owning several horses whose feet were injured by standing on the usual floors provided in stalls for them, concluded to try a new experiment. He had his stalls properly graded, and then laid the floor with basalt blocks so arranged that the horses could stand or lie down comfortably, and at the same time afford proper drainage to carry off the surplus water. The beneficial results were beyond his calculations. His horses' feet improved right along, and the advantages otherwise were so good as to recommend it to other owners of horses. He claims that the feet of the horses are better preserved, it is easier for them, and the drainage is more perfect than by any known system of building stalls in a horse-stable.

SUGGESTION ABOUT CHERRIES.—As it appears that the Tartarians and other black cherries have outgrown the market, are unfit for canning, and too tender for Eastern transportation, we suggest that the most salable and popular varieties, such as the Rockport and Napoleon Bigarreau, be grafted into them. The Bigarreus are a No. 1 shipping cherry and good for canning purposes. We know from the experience of some of our oldest and most extensive orchardists that they can be grafted, as suggested, as easily and successfully as the apple or pear, and in three years from time of grafting the trees will be in full bearing. By changing the cherries mentioned the growers will have first-class fruit for the local trade for canning or shipping purposes. We advise our readers who have more of the black varieties of cherry trees than they can make profitable, to try this experiment. Several whom we can name, if necessary, have tried it with the most satisfactory results.

FIRE-WOOD SCARCE.—*Santa Rosa Republican*, Jan. 19: There is almost a wood famine in this locality and the price of wood is already unparalleled. Several years ago the great activity throughout the county in planting vineyards caused a great deal of wood to be cut, and for some time the market was glutted and the best wood brought only a nominal price. Then a reaction followed. Every one who had timber land left his trees untouched, as the price of wood would not pay for the cutting and hauling. This inactivity is now having its effect upon the wood market, and it is almost impossible to obtain wood, although this is considered a well-timbered locality. The best quality of four-foot oak wood is readily sold for \$8 per cord. Stove wood is correspondingly high and is hardly obtainable at

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Red Bluff.				Sacramento.				S. Francisco.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Jan. 19-25.																								
Thursday.....	.00	30	Nw	Cy.	.02	40	Nw	Cy.	.T	44	N	Fr.	.T	48	SE	Cy.	.00	60	E	Cy.	.00	58	E	Cy.
Friday.....	.01	24	E	Sy.	.38	40	Nw	Ry.	.56	46	N	Ry.	.55	46	Nw	I.R.	.20	50	E	Ry.	.T	60	S	Cy.
Saturday.....	.33	28	E	Cy.	.14	42	Em	Ry.	.42	46	S	Cy.	.83	56	S	Cy.	.14	56	E	Ry.	.19	62	SW	Cy.
Sunday.....	.26	32	N	Ry.	.02	50	N	Cy.	.28	50	N	Cy.	.28	54	N	Cy.	.02	58	S	Cy.	.00	58	W	Cy.
Monday.....	.46	46	S	Ry.	.18	52	E	Fr.	.10	54	SW	Cy.	.04	53	S	LR	.84	58	SE	Ry.	.04	64	W	Cy.
Tuesday.....	.90	38	Nw	Ry.	.10	48	N	Cy.	.02	56	N	Fr.	.08	55	SE	Cy.	.09	58	SW	Fr.	.04	60	Nw	Cl.
Wednesday.....	.46	58	S	Cy.	.16	52	S	Cy.	.01	58	S	Fr.	.00	53	W	Cy.	.00	68	E	Cl.	.00	58	W	Cl.
Total.....	2.42				1.00				1.39				1.78				1.20				.26			

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature. Wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

any price. Considerable coal is being brought to this city and used in the place of wood.

FERTILE.—*Santa Rosa Democrat*, Jan. 14: From about a quarter of an acre of land, at the County farm, the following products were harvested this season: 2½ tons of pumpkins, 1 ton of beets, 5 dozen muskmelons, 1 dozen watermelons, 400 lbs. tomatoes, 700 lbs. corn, 75 lbs. potatoes, and 50 lbs. summer squash.

Tehama.

THE VINA RANCH.—*The Napa Register* of Jan. 20th gives some points in regard to Senator Stanford's big ranch at Vina, got in conversing with H. W. McIntyre, the superintendent. The ranch comprises 55,000 acres devoted to farming—grain and alfalfa fields, the raising of blooded stock, vineyard, orchard, etc. Three thousand acres are planted to vines of the finest varieties. A portion is the old Gherke vineyard, 75 acres of Mission vines 25 years old. The wine-cellar, built for the most part within the last year, is of brick, hollow walls, having a storage capacity of 170,000 gallons, and is provided with all modern improvements and everything that experience could suggest and money provide. A large number of men are of course required to care for this vineyard. The annual pruning is now about half completed, 125 men being engaged. Plowing is under way, between 50 and 70 horses being in use daily. While harvesting the grapes 260 or more pickers are employed. Besides this large force a number of men are constantly at work about the cellar. In the orchard a large amount of fruit of several varieties is grown. Apricots, peaches, plums, etc., do exceedingly well there. The climate is such that fruit is readily dried in the open air. A very fine quality of raisins was cured on the place last year. The climate of Vina is much warmer in summer than that of Napa valley, the thermometer ranging at times from 110° to 114°. Last Sunday the thermometer stood at 16°. Snow fell to the depth of several inches, but immediately disappeared.

Tulare.

A SAMPLE RADISH.—*Traver Advocate*, Jan. 21: There has been on exhibition in Mr. Earl's window a large radish, grown in his garden at Traver. It weighed 8½ pounds and is of the Long Blood variety, which never develops the strong taste usual with that vegetable after it reaches a certain age. When it attains the size of an inch in diameter and begins to get pithy, the plant sends out rootlets, which, as they grow, are tender and of excellent flavor. The specimen shown was full of these "rootlets," which were excellent eating, tasting like young radishes.

Yolo.

CANNERY FOR WOODLAND.—*Democrat*, Jan. 19: Some months ago a company of our own citizens purchased the property known as the Woodland winery, being the two-story brick structure near the depot, having a frontage on Main street of 152 feet. This company has determined to arrange the upper portion of the building for an extensive cannery. They will manufacture everything used in the business, including the cans, and give employment to about 60 men. A cannery has been a necessity in this community for two or three years, and will pay from the start. It will also encourage the production of more fruit. It would be well for all farmers having available land to plant for this summer's use corn, tomatoes, peas, beans, and such vegetables as will be required for the purpose of the cannery.

A MODEL BARN.—*Winters Express*: We took a look at S. H. Hoy's new breeders' barn Thursday, and without hesitation pronounce it the most convenient structure for the purpose we have ever seen. It was planned and built by J. P. Steward. It is 36x66 feet, with a hay-loft with a holding capacity of 100 tons of baled hay. On the ground floor are six box and two open stalls, a grain-room, bedroom for the men, harness-room, platform for washing buggies, and a place to stand vehicles. On the west side is a corral 50x66 feet, inclosed by an eight-foot board fence. There are two other corrals, for mares and other stock, and a large space which will be planted and used for a small pasture. Water is piped through the building and there are all necessary openings for ingress, egress and ventilation.

Yuba.

THE SMARTSVILLE DITCH.—*Marysville Appeal*, Jan. 20: James O'Brien said yesterday

concerning his irrigating ditch enterprise: "I have let the contract to two parties, and they must have it done by the first of April. There are now 40 men at work, one contractor employing some Chinamen. Before long there will be over 100 men at work. The ditches and pipes will be about 14 miles in length, running from the northeast of Timbuctoo, where I tap the river, to my ranch above Riley Lane's place. I can take 10,000 inches. My ditches will carry 8000, but I do not propose to use over 2000 at the start. This will irrigate the 4000 acres of land which I desire to use. Of course I shall sell water, and at a surprisingly low figure. The lands there now are cheap, but when the water is on them, look out for a big raise. These acres grow sheep now, but within the next few years they will grow anything."

OREGON.

HYBRID POULTRY.—*Rogue River Courier*, Jan. 12: A singular fact relative to imported Chinese pheasants and our domestic fowls has come to the notice of people living in Santiam valley, west of Jefferson. The pheasants introduced a brood of Plymouth Rock chickens to adopt their wild life and assimilate with them. It being against the law to kill Chinese pheasants, they had become plentiful in that vicinity and are not very wild. This hen and her young brood were coaxed away from civilized ways by the pheasants, and her chicks were well grown. The owners of the brood watched the result with interest, thinking that next spring the two kinds of fowls would mate together, and wondering what the hybrid product might be; but some "pot-hunters" came across the mixed flock and shot all the chickens but one young rooster, which manages to fly as far as any of his adopted brothers and is as wild as they. The whole brood had become wild and took wing for long flights just as the pheasants did.

THE FREIGHT BLOCKADE.—Nearly 2000 freight cars are said to be blockaded on the lines of the Union and Central Pacific, and Denver & Rio Grande railroads. On Monday and Tuesday of this week about 250 freight-cars arrived here over the Central Pacific railroad, and that road is getting every engine it can obtain from other lines to move the enormous amount of merchandise which is reported to be pressing in at the farther end of the route in volume quite equal to that now discharging at San Francisco.

COTTON FROM PLACER COUNTY.—On Thursday of last week Mr. Oliver Hyde brought us specimens of cotton grown as a test at Lincoln, Placer county, from seed obtained last year at the Oakland cotton-mills. The plants, we understand, received no irrigation, and the bolls are well developed.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

F. B. LOGAN—Santa Clara Co.
JOHN G. H. LAMPADUS—San Benito Co.
G. W. INGALLS—Arizona Territory.
WM. WINSTON—San Joaquin and Stanislaus Co's.
A. F. JEWETT—Tulare Co.
E. H. SCHARFFER—El Dorado and Amador Co's.
C. E. WILLIAMS—Yuba and Sutter Co's.
R. G. HUSTON—Montana Territory.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.



A Modern Drinking Song.

Fill high your bowl with Fusel Oil!
With Tannin let your cups be crowned!
If Strychnia's generous juice abound!
Or, animated atoms brew—
And fill your arteries, hearts and veins,
With glee—and Infusorial Glee!

Ab-h-h! fragrant fume of Kreosote!
Bewitching bowl of Prussian Blue!
Who would not cool his parching throat
With your bright offspring, Mountain Dew?
Stronger than aught that wrecked the frame
Or shook the mighty brains of Burns!
Surely, you'll set our heads aflame
When'er this festal day returns!

Bring on the beer! Fresh Copperas foam,
With Alum mixed in powder fine!
How could my foolish fancy roam
In search of whiter froth than thine?
Thine Indian berry's essence, spread
Through amber wavelets, sparkling clear,
Benumbs dull care, strikes feeling dead
And narcotizes shame and fear!

Far down thy bubbling depths, Champagne,
Drown'd Honor, Love, and Beauty lie;
They fought th' unequal fight in vain,
Shall we, then, merely drink and die?
Sweet Acetate of Lead forbid!
To ev'ry drink add pangs, and tell
What tortures in thy bosom hid
Anticipate the stings of Hell!

Then drink, boys! Drink! We never can
Drink younger—and we never will
Remember—or aught resembling man—
While poisoners have the power to kill!
Amen! From Frenzy's screech of mirth,
To maudlin Sorrow's drunken flow,
Let's rave through scenes unmatch'd on earth!
And not be surpassed below!

—George Sennott.

A Day in a Kindergarten.

[Written for the RURAL PRESS by JOAQUIN MILLER.]

Kindergarten? You ask what it is. You ask, above all things, what in the world I want to take up this sort of work for? You refuse to follow me to one of these little Babels for babes? I admit it is not quite as ponderous a subject as a brain of a Moltke or a Grant might be amused with; but still it is a matter that lies mighty close to the nourishing roots of this nation. It is the father of the fatherless; it is the great big broom that sweeps the streets of its motherless and unclaimed children; to the great comfort of the children and to the prodigious advantage of the street.

Less than a century ago a German, a queer-looking man with long hair parted in the middle, a most kindly looking man, began to teach babes. He was the first man, it seems to me, who took to his noble heart and tried to teach the simple and sublime lesson of the lowly Nazarine, "Suffer little children to come unto me."

I spent the best portion of to-day in the Silver-street Kindergarten, and I am a better man for it. I think if I were a woman and had no work nearer home and wanted to do some solid good, I would go and teach in one of these lowly little schools for babes.

This is the largest of the many full schools of this kind in California. Yet in the center of the wide and roomy hall known as the Crocker Class—because the building is owned and the school endowed and supported mainly by Miss Crocker of California—in the center of this room, I was going on to say, stood a pretty hobby-horse, all saddled and ready for the rider. Over yonder in a big box was a big heap of sand for children to play with. Flowers all about the walls; humble walls, mind you, a humble place indeed, the piteous signs of poverty all around. And yet cheer, content, comfort, even a hilarious hobby-horse with tow-tail to the breeze and wooden nose high in the air, as if ready for the gayest of gallops away out over the blossomed hills. The hundreds of little people here are not much more than knee high; some of the little men in petticoats; some sweet little ladies might be still at the breast in their mothers' arms, if mothers they ever had.

The admission for all these little folk is free. I found twelve young teachers here, only two of whom draw any salary. They are strong, healthful and happy young women; and strange to tell, eleven of the twelve are, and each one after her fashion, singularly beautiful. I think I never in my life saw so many pretty women engaged in humble and—commercially speaking—unprofitable work, in any one city before. And even the one who, at first glance, seemed the least beautiful of the twelve, was so kind, so patient and so attentive to the little weary, sleepy and slipshod waifs before her that ere I came away she began to blossom out and shine forth as the fairest of the whole fair flock of twelve pretty little missionaries.

Each child has a seat to itself, with a common

little table running along before the children. On this low little table with its continuous rows of checkerboards, for blocks, the babies play, or work, or rest their hands or heads when weary; and now and then a little head sinks lower and lower till finally it lies quite still. And then some sweet woman, whom God has made childless, that these babes may call her mother, comes forward, lifts the little one out from behind the low checkerboard table, carries it away and lays it to sleep on a sofa along with others that may have been overtaken by sleep at times before.

And what is the first lesson at a Kindergarten? Well, I must tell you in the first place, there are no books. And indeed there are no lessons. The duties, or rather the objects to be studied, are called "gifts." That is, a child is given some sort of toy or present. And this "gift," or toy, or present, is used as an object of instruction. For example, the first thing given a child is a little red ball of yarn. This teaches it color, texture, motion, many things. After this first little red ball of yarn comes a little ball or globe of wood. Now comes a square block of wood. Then little bricks of wood, and with these the children build, and build, and build on the little checkerboard tables before them, till they tranquilly drop to sleep from their pleasant and instructive toil.

At this Kindergarten there is no compulsion. There is no thought of harshness or hardness anywhere, or in anything here. And what a curious mixture of little humanity to be sure! The tow-headed little Saxon, and the black-eyed little Italian, the Kanaka, and the Mexican. And yet kindness to, and from, all, as if the gentlest blood of the land flowed in the veins of these little waifs that have been thrown up on our shores here by the four winds of a stormy world.

"This little man comes five miles every morning," said the motherly but young and pretty principal, as she laid her kindly hand on the black, matted hair of a strange and half-wild little creature; "his father is a bootblack, who works near here and brings the boy when he comes to his work."

I spoke to the little lad in Italian, for they told me he had not yet learned to speak English, and he clutched at my hand when he heard his mother tongue, and wanted to follow me about and stay with me. His great black eyes were full of tears, but he said no word at all.

These little people are not left long at their blocks or at any other of the many and always instructive "gifts." They are called to their feet every sixty minutes or so and then marched out into the yard to the sound of cheerful music. Here their teachers are still with them, directing their plays, and picking up the little men or little women as they fall asleep in their first little battle of this life.

To see this Lilliputian army march out, or march in from their recreation to the sound of music led by their drum-major in petticoats and wearing a big red paper cap, would make you laugh and shout with delight; so dignified is the drum-major; so certain are these hundreds of little people of their importance. And you are glad, glad to the heart. The step is a long one above the gutter; and from the pride, the joy, the exultation which they feel as they march in and around, and take their places again like little soldiers, you are certain they will not easily let go and recede to the low walks to which so many of them were unhappily born.

Games they have too, every day, almost every hour. There is a great big circle around the center of the hall; here, with much effort, they manage to set their feet; and then out of this wide and crowded circle are chosen the brightest and promptest to take the lead and play their pleasant, instructive and exhilarating little games. They may build a bird's nest; this may take twenty children. Then there are half a dozen little birds in the nest; there is much noise and fluttering and flopping of wings, especially if the bird is the American eagle.

There is a great deal of singing at this big baby school, also. There are tears in the little eyes now and then, too; maybe some one is thinking of mamma, who sang for her once but will never sing for her any more. But be that as it may, if you can sit and hear this strange, weird cry, coming up from out the earth as it were, coming up from these baby lips that lift so curiously, plaintively—I say if you can see and hear all this without moistened eyes, then you are less the man or woman I would wish you to be.

Joseph, poor little Joseph, was here at this Kindergarten on Silver street, San Francisco, in all his early Egyptian rags and wretchedness. He surely had been stripped by his brethren of his coat of many colors and sold into slavery. But his father had found him and clothed him very curiously in all his former extravagant glory. And if this little knee-high Joseph here had not a coat of many colors now, he at least had many coats; for he was so laden down with garments that he could hardly march to the music or move around at all. He had only about one shoe and a half, and no stockings at all to the weary little feet that have wandered away up out of Egyptian darkness and slavery. He had a dozen pretty American ladies for his nurses and his mother. But coats!

he had coats enough for his whole tribe; as if his father had, maybe, been moving his second-hand clothing store and loaded down little Joseph to save cartage.

And "Roland" was here also. "You are an Englishman, are you not, Roland?" said the kindly lady who led me about among those who loved her. And little yellow-headed Lord Roland gave her a courtly bow in answer, that Lorne himself need not have been ashamed of. Let me observe that Roland's soft Saxon hair was neatly combed and cared for; and his rosy face was very clean. He is still in petticoats. And his long, checkered dress, reaching almost to his heels, reminded me somewhat of an English ulster that had not yet got its growth. But I must admit that it was very clean, even to its ragged strings. Dear, pretty, dimpled little Lord Roland of the San Francisco Free Kindergarten; maybe he at least has a mother. I hope so, for he is as loving as a lamb.

"These are our two favorites," said the principal finally as she led two curious little creatures before me. I think she must have at that moment dug them up out of bed, they were so small, so wee, wee, as the Scotch would say. And one was a Kanaka, as brown as a nut, and as sweet as a nut I should say. The other had a tousy and tossy head of flax. Both were very clean, but neither big enough to walk. They could barely toddle. It did not take a very wise man to see that the "favorites" were favorites simply because they were so small and helpless. Oh, what a glorious good world this is, and always will be, so long as woman remains in it to help the helpless, to give all her strength to those not strong enough to stand alone.

"What do you think of these Kindergartens?" I asked of the only policeman I met in the vicinity of this place. For I have known the man of old; and I remember the time when drunken men, brawling women, and dissolute children made many policemen, instead of only the one now, necessary in this quarter.

He now walked quietly down the street with me and said, after much praise and most favorable comment, "If I could open plenty of Kindergartens, sir, I could almost shut up the penitentiary, sir."

I think the man with the club and buttons is about right.

A dear, sweet friend of mine, or rather of humanity, the wife of President Diaz, has opened a house in the City of Mexico, where working-women may leave their children through the day while out to service. I am going to write her at once to turn the place into a Kindergarten. And if some one, two, three, or ten good, patient and stout-hearted American girls will only go down there to the City of Mexico and show her how!

I here append the printed report of this sort of work in California. And I must beg your pardon, dear reader, for getting down out of the clouds and the sweet air of the Sierras, into the dirt and back streets of San Francisco. But if you could see the heart that these women put in their work, if you could see the big work and the small reward, the great praise, and the little pay, why, you would love them, and you would go and see them and help them, if only as I help them, with best wishes and a kind word. And you would love and adore Adolph Sutro, Miss Crocker, and all these other good and great people in the background, who pay the bills and make these big-little free schools possible. But here is what the head of this largest school of the kind has to say of the work in California generally and her own place of work in particular as well:

"The era of free Kindergarten in California began with the year 1878, but something had been done for the introduction of the system into San Francisco a few years previous.

"There may have been various efforts made to teach the Kindergarten system in California by persons possessing some knowledge of Froebel's educational methods; but I can obtain no information covering any successful attempt previous to that of Frau Bertha Semler, who came to this coast in 1873, and had for some years a large and flourishing German-American Kindergarten. She interested many persons in the project and a society was formed which purchased a property on Turk street for school purposes, and otherwise aided in the endeavor to plant this system on California soil. This society, however, was dismembered at the end of the year, and since then Frau Semler has taught smaller classes in her own house. She has now retired from active work, although she is much interested in all that pertains to the Kindergarten.

"As a pupil, in her younger girlhood, of Froebel himself and as a friend and pupil of Froebel's widow, Frau Semler has been a most worthy exponent of the Kindergarten method; and any woman who indulges in a personal adoration of the undeniably great, as well as sincerely good, educator can talk with her without having her high ideas of the man disturbed or changed.

"This school on Silver street was the first free Kindergarten west of the Rocky mountains, and the Directors of the San Francisco Public Kindergarten Society, who were its sponsors, were most wise and efficient. On being called by them to organize the new institution, I came from private teaching in Southern California, and had the rather difficult task of endeavoring to build, wisely and well, a foundation plan for future work of this character among poor and neglected children. The first trustees of the society were mostly German and Jewish ladies and gentlemen, progressive in their ideas, energetic in their labors, and generous in their contributions. It was their wish, from the begin-

ning, to interest the general public, and not to fetter their work with any narrow distinctions of class or sect. So the society grew in strength and efficiency, month by month, its members coming from widely differing sources, but all animated with so much good-will toward the beautiful and generous charity which was their common care, that there could not fail to be entire harmony. This society is still in active service, though retaining only two of its original officers, Judge Haydenfeldt and Miss Emma Marwedel. Its Kindergarten is now located on Seventh and Market streets.

"All our first attempts, doubtless bristling with the faults of inexperience, were kindly accepted by the public with far more enthusiasm than they deserved. Indeed, from the very beginning, Kindergarten work in California has had the most signal success. The people have given their money freely and gladly, the Kindergartners have been thoroughly in earnest and devoted to their calling, the children have flocked by tens and hundreds to every door that has been opened."

Oakland, Cal.

Humane to Beasts.

"Hope Arlington" preached a sermon to the people of Fresno, which, notwithstanding its local references, is full of suggestions that will bear applying in many other places. She says:

In Saturday morning's *Republican* occurs the following notice: "A horse suffering from glanders and a gunshot wound was running around loose on Mariposa street yesterday morning. Some one had evidently attempted to kill the animal and failed, but it was criminal carelessness to allow the beast to get away and come among other horses." The reporter of the item says not a word in regard to the brutality of the inhuman scoundrel who shot and wounded the already suffering animal, and then let it wander away to suffer, and die of the wound and disease, or to starve to death. Poor, faithful horse! Man's best friend, if only rightly treated.

If the officers who kindly led away and killed the poor beast, in order to end its suffering and avoid the spread of the disease, will do their whole duty they will soon search out the man who committed the "criminal carelessness," and punish him to the extent of the law. I will give \$5 myself to know who it was, and have him held up to the gaze of the public. We are supposed to be engaged in a mad race after the god of mammon, but I do not think we are so lost to humanity as to care nothing for the suffering of the dumb beasts about us. We hear a great deal about "man's inhumanity to man," but too little is said about man's cruelty to the useful animals which were given to us by the Great Creator for our use and not abuse.

Is cruelty to animals to be allowed to go on without a word of protest, and the children to grow up in the belief that it is man's right to abuse the dumb beast entrusted to his care? What will be the result on the mind and disposition of the child thus taught? I knew a woman who allowed her little child, two years old, to take a stick and beat to death a little kitten on the kitchen floor, and she laughed about it as she told it. I remember yet the thrill of horror that ran over me when I listened to this story, and I never saw the child afterward without a shudder of repulsion. If that child grows up to be a murderer, think you that mother will not remember the act of the baby and too late reproach herself for cultivating in it the disposition to murder?

A fountain in the court-house grounds will be a beautiful thing, but would not the ladies who are interested in this fountain have done a better and more humane thing had they planted a row of shade trees about the edge of the court-house grounds where in the hot summer days horses could be tied in the shade, while they rest after hard labor? A watering-trough placed in some suitable location, arranged in such manner that it should be always full of fresh water, so that a teamster should have no excuse for not properly watering his team, would be also a most desirable thing. This matter of trees about the edge of the court-house grounds (if it is the intention to allow the tying of horses to be continued there) should be looked into at once by the proper authorities, and unless it is absolutely necessary for the growth and success of the city and county, that the county property should be used as a place to advertise, there should be a double row of quickly growing shade trees planted inside the fence, all around the grounds. Aside from the benefit to the horses tied there, in the awful heat of the sun beating upon the dry sand at 110 degrees in the shade, tied there, some of them from early morning until late in the night, without water and without feed, the master—what a misnomer!—lying in the back yard of a saloon, in a condition not to be described; it would also add greatly to the beauty of the court-house grounds.

They say a man's sincerity is only tested by his willingness to put his hand into his pocket and so, financially, help out a project which he advocates. Well, I am not a man and consequently have not a pocket, but I can testify to my sincerity in the cause in which I am deeply interested, and will give \$15 to aid in the planting of the trees and the expense of a watering-trough, and will also agree to put my hands in my husband's pocket, or in other words, to induce him to give as much more, which I know he will do willingly. Can we not have a society for the prevention of cruelty to animals in Fresno, and show to the world that we are as humane as our sister city, San Francisco?

YOUNG FOLKS' COLUMN.

Nellie.

[A TRUE INCIDENT.]

(Written for the RURAL PRESS by MRS. M. F. ROWE.)

"Who is this little girl?" asked Miss Grace one Monday morning, as she glanced around the ring of happy faces and noticed a little stranger.

"That's the Nellie Sullivan," spoke up little Tim O'Donnell, "and please, Miss Grace, can she come to school to-day? for her mother must go out to work."

"Yes, indeed, she may come; not only to-day, but every day, if her mamma is willing. Where does she live, Tim?"

"In the same house with me, only on the floor above."

"Well, I will see her mamma and ask her to let Nellie come every day. Will you bring her, Tim?"

"Oh! yes, ma'am."

"And would you like to come, Nellie?"

A bright little face raised to the teacher's, and an eager little nod was a more eloquent answer than words.

That same afternoon Miss Grace accompanied Nellie home and met her mother, a pleasant-faced, hard-working woman.

"Sure, Miss, it's too bad to be sending such a baby to school. She's not four yet until next month; but some of the ladies where I work don't want to be bothered with a young one 'round, and I can't leave her alone. She's the only one that's left me of five, and it's very dear to me she is."

Miss Grace explained that the kindergarten was intended for just such little ones as Nellie, and asked that she might come every day.

"Indeed she can come, Miss, and thank you kindly. I shall be glad to know she is safe while I am out at work."

"Have you no husband?"

"Indeed I have, Miss, and a good one, too, when he's himself; but what with the strikes and the drink it isn't much Mike brings in, and if I didn't work it wouldn't be long we'd have a roof over our heads—not that I'm complaining, for there's many worse off than me, but I want to keep a bit of a home together for Nellie's sake."

"Then when you are away working you may feel that Nellie is as safe as she would be with you. Send her with little Tim downstairs and I will see that he brings her safely home again."

"I will. Thank you, Miss, for your kindness."

So little Nellie became a regular attendant of the street kindergarten. No matter what the weather was, she was always there. Miss Grace learned to expect to see the faded and patched gingham apron—not always overclean, for who amid the drifting sand and black coal smoke of San Francisco alleys can keep little ones always clean?—but the little face was always smiling and happy. A casual observer would have said, "What a homely child." Indeed there seemed in her face no "redeeming feature" save the unconscious grace of happy childhood; yet, in spite of the plain features, there was the bright mind that attracted even strangers. Very few of the visitors to the kindergarten left without noticing little Nellie.

So the days and weeks went by, and the child became more and more attached to the pretty room, and more than ever in love with her dear Miss Grace.

Several months had passed when one Friday afternoon Miss Grace noticed as she bade the little ones good-by that Nellie's face was unusually flushed, and that she had a sharp, croupy cough.

"Hurry home with her, Tim; she is not well," and she pinned the little shawl more closely around the child's throat, and with a kiss on the hot forehead, she sent her away.

Monday morning as the teacher entered the room the children flocked around her, saying: "Oh, Miss Grace, Nellie is dead; she died this morning."

Dead! how that word sends a chill to the heart when we hear it spoken, of only a stranger, but when it is said of one whose daily life touches ours, "She is dead," how everything seems to stand still as we try to realize all that little word means. So in the kindergarten that day there were sorrowful little faces, and little ones wept as Miss Grace told them of their little playmate whom the Good Shepherd had taken so tenderly in His arms and carried to the heavenly fold where there was no more sickness or sorrow.

And after the little ones were gone there remained the sad duty of going to the desolate home to comfort the stricken mother. The little room that served for all purposes except sleeping was strangely quiet and orderly. Here and there on the wall were pinned little squares of Bristol-board, worked in bright worsted—Nellie's "sewings," and suspended from nails were festoons of bright-colored chain-papers, also the work of the busy little fingers now still in death.

The father sat beside the little coffin on the pine table, with his bowed head resting in his hands, while the mother at the sight of Miss Grace burst into fresh cries and sobs. Ah, to these parents, plain little Nellie in her faded gingham apron was as inexpressibly dear as is

the dainty, velvet-clad darling to those more favored by fortune, and all the dearer because four other little ones had been laid away before their baby lips had learned to lip that sweet word mother.

"You've come to see Nellie, Miss," said the poor mother as soon as she could command her voice. "Oh, my poor darling is gone and what shall I do without her? It was the school, Miss, that she was talking of all the time and I couldn't keep her home a single day. She was so happy there, and every night she'd have something new to tell me. Many's the night of late that Mike's staid home to listen to her little songs. She would sing so sweetly and make the motions so cute for such a little one. And always at the last she would fold her little hands and close her eyes and sing her little prayer. Oh, it was beautiful to see her, Miss. And, when she was taken with the croup, she still talked about the school and would she be well enough to go Monday, because Miss Grace would miss her. Ah, it was just the way the others went, and I knew she wouldn't live. But she would talk even to the last when she was panting and struggling for breath. And the last words I heard her say, with her poor parched lips, was 'Miss Grace, Miss Grace,' and then she was gone." And the poor mother sobbed and moaned over her child's still form.

The teacher's tears mingled with the bereaved ones as she placed some white buds in the tiny waxen hands and kissed the marble forehead, and as she turned to go the father arose and offering her his hand said:

"God bless you, Miss! I shall never forget you. You made our little Nellie happy." And we too, say: "God bless the faithful kindergarten, who, with loving heart, goes out into 'the highways' and byways of the great city, and from the homes of poverty, gathers the little ones into the bright, pleasant schoolroom and there 'makes them happy'."

And you, to whom God has intrusted wealth, let your charities extend also to this greatest charity and out of your abundance give freely, that the little ones may at least have a happy childhood. The Master hath said: "Inasmuch as ye have done it unto one of the least of these, ye have done it unto Me."

Grass Valley.

A Warning to Young Gunners.

EDITORS PRESS:—I will relate an accident which happened in the spring of 1885, which, though it occurred nearly three years ago, I remember very well. My father had some ground planted to melons about three miles from our house down in the tule in Yolo county, about a mile from the Sacramento river.

As soon as the melons came up, the quails and rabbits began to destroy them, and we had to use "a little pepper and salt on 'em." My brother or I had to go over to the patch every morning. The morning that this accident occurred my brother John went. He got up pretty early that morning, hoping to get some quail which abounded in the brush around the melon-patch. My father did not like him to take the powder, shot, etc., along with him, but this morning he wanted to take them, so my mother gave him the powder and a small cap box of shot, and expected him to say that there was not a load, but he put it in his pocket without saying anything and went away.

He did not see anything when he was going down, but when he got to the patch he saw some quails at a distance, which flew away when he approached them, but he fired at them to give them a good scare. When he loaded the gun he found that he had lost one of the wads, but found some greasy paper which our hired man had his lunch wrapped up in. Taking a piece about eight inches square, he made it into a wad and rammed it on top of the shot. After loading the gun, he shouldered it and started for home, not meeting any game until nearly home, when he saw a large flock of quail run across the road, and as soon as he saw them, he "whipped" down the gun and "blazed away at 'em," firing off the barrel he loaded up with his fine wad and cap-box of shot.

We had just got done milking when Allie said that he had come back with his face covered with blood and the gun broke in two pieces.

Mamma said that when he came on the porch she asked him if he was hurt and he said: "I don't know." But she thought he had had the nosebleed and rubbed the blood over his face, then took the gun apart so that he might scare her, but when he got into the house she found two cuts on his face. The barrel, which he loaded with his Spanish wad and the cap-box of shot (there were four charges of shot in the box, as we afterward found) made the gun kick him senseless. He held the gun so firm to his shoulder that it broke the gun open. How the cuts came on his face I don't know, but I think that the hammers of the gun must have hit him some way when the gun broke. Anyway when he came up to the house he was still senseless, and as he came back to his senses he wanted the quail to eat, and when I went down to get the quail I found the ground covered in three places where he had rolled around.

My mother said that he should not go hunting for a week, but he wanted to go as bad as ever the next day.

I think every one, who has firearms in his or

her possession, should be very careful with them, but a great many persons have firearms in their possession when they have no business with them, and, while some have them to hunt with, others have them just to say they have got some, and I think if they would leave them alone it would be a great benefit to the country.

WILLIE KITE.

[We don't quite see how he could come home and still be "senseless;" probably Willie means "dazed" or that he had but partly regained his senses or something of that sort. We hope all boys will profit by this lesson. —EDS. PRESS.]

GOOD HEALTH.

How to Keep Warm and Avoid Colds.

Some people may not know that when exposed to a severe cold a feeling of warmth is really created by repeatedly filling the lungs to their utmost in this manner. Throw the shoulders well back and hold the head well up. Inflate the lungs slowly, the air entering entirely through the nose. When the lungs are completely filled, hold the breath for ten seconds or longer, and then expire it quickly through the mouth. After repeating this exercise while one is "chilly," a feeling of warmth will be felt over the entire body, and even to the feet and hands. It is important for all to practice this exercise many times each day, and especially when in the open air. If the habit ever becomes universal, then consumption and many other diseases will rarely, if ever, be heard of. Not only while practicing the "breathing exercise" must the clothing be loose over the chest, but beginners will do well to remember, in having their clothing fitted, to allow for the permanent expansion of one, two and even three inches, which will eventually follow.

One might with propriety say that too many people choke or stifle the skin by an excess of clothing, and, as a consequence, take cold easily. Some impurities are thrown out of the system by the skin, as others are by the lungs, the bowels and the kidneys. It is absolutely essential to health that the emanations from the skin pass easily through the clothing. This—which is called "transpiration"—may be interfered with by an excess of clothing, or by clothing of a very close texture. All who wear india-rubber coats know how uncomfortable they cause them to feel after they have been on a short time. On the accession of Leo X to the papacy, there was a grand procession at Florence in his honor. A little girl was made to personate the golden age by being coated, from head to foot, with gold leaf. Before the day was over she died in convulsions, killed because "transpiration," or, in other words, because carbonic acid gas and dead, worn-out matter, which should have been thrown out by her skin, was shut up in her system by the metallic covering. Ordinary clothing will not, of course, prevent transpiration, but an excess will interfere with it; and when too much clothing is worn the same soon becomes foul, unless the outside air can freely mingle with the gases from the body and so dilute them. Some wear the thickest and heaviest under-vests which they can buy, and such people are very generally the victims of frequent colds. Following the rule of light clothing, they would be much safer from the dangers of exposure were they to wear two light under-vests instead of one very thick and heavy.—Ex.

TEA-POISONING, it is claimed, bids fair to become chronic. Dr. Bullard gives in the Boston *Medical and Surgical Journal* the details of 74 cases of chronic tea intoxication investigated by him. His conclusions are that the action of tea is cumulative; its action is more pronounced on the young and on those subject to anemia or physically depressed, although persons otherwise healthy occasionally show toxic symptoms; the average amount of the beverage required to produce poisonous effects in persons accustomed to its general use is a little less than five cups per day. Chronic tea-poisoning, Dr. Bullard asserts, is a common affection, its symptoms being usually loss of appetite, dyspepsia, palpitation, headache, vomiting and nausea, and nervousness, combined with various forms of functional nerve affections, such as neuralgia, hysteria, etc. Besides these, constipation and pain in the left side are frequent.

THE DEATH-RATE.—Modern sanitary improvements, says Sir Spencer Wells in a late address before a medical society in Nottingham, England, have reduced the annual death-rate from 29 in a thousand to 19. He further said that it ought to be reduced to 15 or 12. He then said: "And if we have—as we really have—seen the average duration of human life in Great Britain advance from 30 years (which it was half a century ago—to 49 years (which it is now, according to life tables), why may we not witness a still further advance? Why should 70 or 80 years remain as the usual limit of human life? Why should its natural duration under perfectly healthy surrounding conditions not be at least 100 years, with an occasional extension of some 10 or 15 years more."

DOMESTIC ECONOMY.

Household Hints.

EDITORS PRESS:—Try frying tomatoes with onions and see what a nice dish they make. The tomatoes take away the strong smell that usually pervades a room when cooking onions. For washing greasy and milky dishes a lump of washing soda the size of a walnut in the dish-water is much better than soap for cleaning.

When you boil rice, to two cups of rice add one cup of raisins. It is excellent for dessert with cream and sugar, or a made sauce.

Don't forget to put a good handful of sugar in your pancake-batter some mornings; it makes such a nice change from the usual pancake flavor.

MRS. J. H. Los Alamos.

RAISED DOUGHNUTS.—A little less than one-half cup of melted lard rubbed into one cup of sugar, one cup of warm sweet milk, one-half cup of yeast, one egg, one-half teaspoonful of baking soda, a little salt, and nutmeg or cinnamon; let it rise till light, then turn out on a warm dough board, but do not roll at all; let it rise till light, then fry.

PLUM PUDDING.—One pint of chopped suet, one pint of tart apples, one pint of raisins, one pint of currants, one-half pint of sugar, one-half pint of sweet milk, one cup of citron; beat eight eggs and mix with the above, and add sufficient flour to make it stick together; boil three hours in a cloth bag, and serve with sauce.

MINCE PIES WITHOUT MEAT.—Three pounds of apples, three pounds of raisins, three pounds of currants, 1½ pounds of suet, 1½ pounds of sugar, and a little mixed spice; each to be well chopped, and then mixed together with a little chopped candied peel, a few pounded almonds and half a pint of liquid currant jelly.

CORNEBEEF.—Boil until soft enough to remove the bones; place in an earthen dish and pour over it the water it was boiled in. Place a plate on it and a heavy weight; have sufficient water, so that when the weight is on it will come to the top of the meat. Let it stand until cold, then cut in slices.

STEWED FISH.—Place the fish in a pan of salted water and simmer one hour. Lay the fish, minus the head, on a platter; pour over it drawn butter, then spread with mashed potatoes enough to cover it nicely. Over the potatoes spread the whites of four eggs. Put in the oven and bake a light brown.

DATE PIE.—One pound of dates, one quart of milk and three eggs. Season the same as for squash pie. It needs no sweetening. Put the dates in the milk and heat until they are soft enough to sift. This makes two good-sized pies. Use one crust, the same as for squash.

MACKEREL BALLS.—Let the fish stand in water over night; in the morning pour some boiling water over it; pick it carefully from the bones, and add an equal quantity of cold mashed potatoes, two beaten eggs and a pinch of pepper. Shape into balls and fry in hot butter.

BROWN BREAD.—One pint each of Indian meal and rye meal, one-half pint of wheat flour, one-half cup of molasses, one tablespoonful of salt, two-thirds of a cup of yeast and one pint of hot water; mix, let it rise, steam three or four hours, and brown the top a little in the oven.

PORK CAKE.—One pound of fat salt pork chopped fine, one and one-half cups of boiling water poured over the pork, two pounds of raisins, currants and citron, two cups of sugar, eight cups of flour, one tablespoonful of soda, and cloves and cinnamon to taste.

BUTTERMILK CAKE.—One cup of buttermilk, one large cup of sugar, two-thirds cup of shortening, two eggs, and one teaspoonful of soda. Flavor to taste. By putting in mixed spices it makes a good spice cake, and I sometimes put in a cup of raisins.

CHOCOLATE JELLY.—Take seven spoonfuls of grated chocolate, the same of white sugar, one cup of sweet cream; mix together, and set over the fire, and let come to a boil. Pour it over cornstarch pudding, or put between layers of cake.

COCONUT COOKIES.—Three cups of sugar, one cup of butter, one cup of sweet milk, two eggs, one cup of grated coconut, two teaspoonfuls of baking powder, flour enough to make a dough; roll out, cut in shape and bake.

GRAHAM BREAD.—Two cups of sweet milk, one tablespoonful of sugar, one teaspoonful of salt, one rounded teaspoonful of soda, and four cups of graham flour stirred into the other ingredients.

HAM CROQUETTES.—One cup of ham, two cups of potatoes, one cup of bread crumbs, one tablespoonful of butter and one egg. Make in balls, roll in bread crumbs, and fry in hot lard.

MUFFINS.—One egg, one cup sugar, one-third cup butter, one-half cup milk, salt, spices, one teaspoon baking-powder and flour to make a batter. Bake in a hot oven.

PICKLED FISH.—Spice the vinegar, cooking the spices in a bag; when hot put the fish in and let it boil slowly until tender. Take out carefully and lay away in a stone jar.

MOLASSES BUTTER-SCOTCH.—One cup of New Orleans molasses, one cup of brown sugar, one-half cup of butter. Boil until it snaps when dropped in cold water.



T. DEWEY.

W. B. EWER.

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The Week.

Jack Frost, who nearly a fortnight ago laid hold of California in a way she had not felt the like of in this generation, was already losing his grip when we went to press last week, and the State has since been bathed its entire length with copious and genial rains. The injury to fruit trees seems on the whole to be pretty light, but the limits within which citrus culture may be deemed a reasonably safe venture are established better perhaps than ever before. Now is the time to apply the pruning-knife promptly and thoroughly to frost-bitten wood, whether in orchard or flower-garden, that no poisonous sap may descend into and harm the healthy parts.

A LARGE EDITION.—We print this week an unusually large edition of the RURAL PRESS, to be distributed at the Citrus Fair in San Jose by F. B. Logan, our agent for Santa Clara county.

THE STATE BOARD OF FORESTRY held a meeting in this city on Monday last, but a report of their proceedings is temporarily crowded out of our columns.

What Civilization has Done for Man-kind.

Civilization is derided by some men as though it were a crime. Men speak of progress and poverty as though they went together, and great wealth meant also great poverty and suffering.

It is all error, all a delusion, sophistry, misrepresentation. Civilization has lifted man up from a mere localized animal, contending with wolves and bears, into a god that enjoys the entire earth and makes the elements his slaves. Civilization has extinguished poverty at every step, and made it almost impossible, and promises in the near future to make it entirely so. Let us illustrate. Take a square mile of land of average fertility. In savagism it contains and supports two poor, miserable human beings. In the finest seasons they get plenty to eat. At other times they starve. Their home, a brush tent. Arms, tools, animals, or stores, none. Life is a battle for life, and extinction almost as likely as increase. There is no value, no rent, interest, profit or wages. This is the original first stage.

In the pastoral age, the land sustains five persons, an advance truly. A tent appears, clothing of skins, milk, meat, and stores for winter. Three of the five never know actual want. The other two are slaves, and yet not near so poor and wretched as the two savages in the savage state.

Then comes the simple farmer. The square mile has 20 people. One is the landlord—the chief, judge, director, above all want. Four are renters—think, work, direct, have a homely plenty, with pains and care. Ten others are skilled laborers—always employed, with homes and above want. Three others are unskilled—often unemployed, and poor, but never so poor as the two were in savagism. Only two remain. These are, perhaps, drunken, idle or criminal, and almost down to the level of the savage. The land has value, and pays rent. Farms and workshops bring profits.

Another advance! Work animals, improved implements, orchards, gardens, and the simple arts raise the population to 100 on the same square mile. Fine houses appear; dress becomes showy as well as useful. The proprietor is a fine gentleman; he is well supported by ten substantial renters. Ten tradesmen have come; 60 skilled laborers have cottage homes in humble plenty; 15 are rather pinched at times for work, but still live and thrive. Three shifty vagabonds manage to live by crime. And still the two downright poor are there! They are not as poor as the savages, but still they are there very poor.

We rise again to the highest civilization. Now there are 300 people on that square mile, where before the two, the five, the twenty and the hundred dwelt, as we have described. The land is worth \$500 an acre. The improvements as much more. Those 300 people average \$2500 each when all their possessions are summed up.

The dwellings are solid and costly. The land is drained or watered at will by pipes laid all through. Gas, heat, steam and water are furnished in the same way. The streets and roads are perfect. Libraries and newspapers are there. Schools, churches, theaters, halls, baths, music, statuary, pictures, flowers, are all there. Moving from place to place, up or down, is in palace cars or gorgeous steamboats.

The people! Look at them! Really they all look like gentlefolks. All are clad, shod and even ornamented. You cannot meet one naked in a week. Out of the whole 300 there is not one to be found as poor as those two savages. True, that some are very poor as compared to others, very poor, but not when compared to the two savages. At times their pride may seem to make them even poorer. All the soil is owned. They have no right, save upon the streets and roads. They cannot hunt, or fish, or dine on locusts or grasshoppers as the savage could. But it cannot be denied that there is the almshouse, the hospital and charities open for all. No one is denied.

And that almshouse! Pride does not like it! Granted! But pride is not poverty. Why, it is a palace compared to the lair of the savage. Its food is a feast, a daily feast, compared to his habitual fare. Its shelter perfect, compared to his rude shelter. The two poor are still there, and there may be four, or ten, but their poverty is wealth in comparison to that of the

savage. Yet men talk of progress and poverty, of progress making poverty. It is all a mistake. It makes wealth, ease, plenty, elegance, mind, art, literature, travel, and constant lesson and advancement. Where it leaves one poor it makes ten rich.

The improvement that has made that square mile support so many people so grandly, is a matter of accumulation. It does not come in a day. It is the saved-up labor of many persons and of many years. We find it now worth \$2500 to each person, in all \$750,000. The interest of this sum at five per cent per annum is \$37,500. This makes at least 40 people able to live without labor. They have nice houses; they travel. They see what others are doing in other lands, and they return home to introduce all manner of improvements, till that square mile presents all the advanced ideas of the world. Their homes are models for the rest to copy, to work up to. They show how science can add to comfort.

Now, who does all this accumulated value belong to? Naturally to those who have made and saved and invested carefully. Some have reaped tenfold and others only two; but all who make and save and invest reap some profit.

Now, mankind has always been divided into three classes:

1. Those who make and save, invest wisely, and leave the world richer and better for their having lived in it.

2. Those who are content to spend all they make, and die as poor as they were born.

3. Those who tend to idleness, vice, crime and depredation, and tend to keep the world back and make it poorer every day.

The last are a constant cost to all the rest. As paupers, incompetents or depredators, they have to be supported mostly by the rest. A nation of such would soon make famine, pestilence, anarchy and destruction. They have been a dead weight on human progress from the beginning. They resist every step in advance. They are the objects of all our criminal law and most of our charities.

The second class is better. It works, but eats, drinks, and is merry and dies. It saves nothing. Not because it cannot so much as that it will not. The drunkard, for instance, you might increase his wages in vain. He will die poor. Then there are many good, honest people in this class who labor diligently and skillfully, and make wealth for others; but for themselves they make no accumulation. They want none. They pass through life useful indeed, but only for what they leave in the hands of others. A nation of such would always be poor, weak, helpless, and a prey to the first invader, for they would have neither guns nor munitions of war when the battle came.

The accumulators are the evangelists of civilization, the builders of progress, the patrons of science, of art, home, comfort, elegance and strength. They have made this square mile support 300 people. They have urged the workers to industry and directed their efforts. And they have continually labored to reclaim the depraved and useless, and to repress where they could not reclaim.

Do you doubt it? Behold the churches, schools, asylums, and all manner of charitable and instructive efforts voluntarily supported by the rich, and wholly directed to the benefit of the poor.

Still these poor and these depraved, who are worse than poor, will hang upon the outskirts of society, howl and growl at progress, and forever make war on a civilization in which they refuse to take a part. Where our fathers became herders, these refused and remained savages, preying upon the fold. When we became farmers they refused to till the soil, but stole the fruits. And now we have become capitalists, scientists, artists, travelers, and men of ease and leisure, they disdain to follow in our footsteps and want to divide our fortunes.

It is not to be denied that in the Great Republic we have perhaps been a little too careful of the interests of capital and too unmindful of those of our common humanity; but it is certain that no state of society can prosper where thrift cannot enjoy its reward, or idleness and vice are not made to feel all the consequences of their own acts.

When we have made it certain that no honest citizen willing to work shall lack bread or his children be raised in beggary, we shall have done all that justice may demand. Vice and crime have no claims upon us, while those who

build up the nation and give it wealth and strength must forever be the objects of regard and protection. This is civilization. Any other course would result in anarchy and savagism and make paupers of us all.

The American Horticulturists in California.

[Editorial Correspondence.]

SAN JOSE, Jan. 24.

Before beginning an account of the opening of the meeting of the American Horticultural Society in San Jose, it will be proper to allude briefly to the advent of the delegates to the State. After receiving the welcome greeting of Riverside, in the shape of fruit and cordial words, at Indio, the course continued westward to Los Angeles. From this point a day's excursion, arranged by the enterprising people of the Santa Ana valley, was taken and thoroughly enjoyed. Afterward the delegates received ovations en route at Tulare and Fresno. At each place there was a most cordial demonstration—carriage rides over the beautiful country adjacent thereto and public receptions at which pleasant words were spoken both by Californians and their guests. These wayside visits were a decided benefit both to the visitors and the State, for the result is a much better acquaintance with the resources and development of some of our leading districts which could not have been gained by a hurried-through ride.

After experiencing these pleasant diversions, the delegates arrived in San Francisco on Saturday and Sunday, and were cordially received by the officers of the State Board of Trade. An informal reception was held, at which addresses were made by A. T. Hatch, president of the State Board of Trade, Prof. Hilgard, president of the State Horticultural Society, M. M. Estee and others. A trip to the Cliff House and Sutro Heights, and another reception at the State Board of Trade rooms, filled the time well until Monday afternoon, when the delegates departed for San Jose.

On arrival at San Jose, they were met by Messrs. Barbour, Goodrich, Cadwallader, Adel and others and assigned to the hospitality provided by the citizens at the hotels and private residences. The expression of the visitors, as we have heard it, is one of appreciation and gratefulness for the kind and generous reception which has been tendered them ever since they entered the State, and they came to their

Opening Meeting

This morning in the best of spirits. Much pleasure was produced at the opening by the presence of President Parker Earle of Illinois, who had been delayed from the journey with the excursion train, and by the appearance of the secretary, Prof. W. H. Ragan, who was obliged by illness to stop for rest at Santa Ana. Thus full officered, with a most excellent place of meeting in the Baptist Tabernacle on Second street, and with the warm sun streaming through the windows to assure them that they had really escaped the land of blizzards, the opening session began at about 10 o'clock on Tuesday morning. This session was preparatory in its character. It gave opportunity for friendly greetings and for enlarging the membership by the enrollment of many Californians. The following Committee on Order of Business was appointed by President Earle: Messrs. Hubbard of New York, Goodman of Missouri, Wilcox of California, Smith of Wisconsin, Evans of Missouri, Avery of Iowa, and Ragan of Indiana. A program was laid out for the afternoon and an adjournment taken.

The afternoon was given to grape culture East and West, opened with an interesting essay by Prof. Hestmann of Napa. Then followed a discussion showing clearly that grape culture at the East in many States is a most profitable and rapidly growing industry—far more so than Californians usually know, and because of the interest in such information we shall take more time than we can now command to write out our notes taken during the discussion. Both Eastern visitors and Californians took part freely in the conference and gave each other good points, fully showing in this one meeting how important it is for fruit-growers from all parts of the country to compare notes.

On Tuesday evening was the formal reception to the society by the citizens of Santa Clara county in Horticultural hall. This excellent

(Continued on page 77.)

Health Homes on the Desert.

While there is little doubt but the invalid class is on the increase in the United States, and perhaps also in most other civilized countries, it is notoriously the case that the victims of consumption are being everywhere multiplied at a very rapid rate. Of the deaths that occur in the Atlantic States 20 per cent or more are caused by affections of the respiratory organs, pulmonary or bronchial, both being in most cases involved. There was a time when the notion obtained among the practitioners of the healing art that this disease could be cured, or at least palliated, by drug medication—an idea that has become to be so thoroughly exploded that it can hardly be said to hold any longer a place in the therapeutics of even the most conservative school of medicine. It is now admitted by the profession everywhere that about all that can be done for this class of ailments is to place the sufferer under the most favorable conditions and leave nature and natural remedies to work a cure or stay the ravages of the malady as far as may be. To this end, the first thing to be done is to supply the sufferer with fresh air and plenty of it. The next thing to be done is to keep him as much as possible in the sunshine. Then come in good water, suitable diet, judicious exercise, bathing, and such other auxiliaries as in every disease tend to a restoration of health, the air and the sun being the agencies most to be relied upon for cure or relief in cases of consumption, though there are numerous other bodily ailments in which these will be found almost equally effective.

If then the theory above advanced be correct it becomes pertinent to inquire after the country or locality that to the largest extent meets these requirements—where shall we find the purest air conjoined with the least intermitted sunshine. In our opinion this condition of things will be found in the barren region that

occupies the southeastern angle of California—anywhere on the Mohave or the Colorado deserts. There is not in this region, covering an area of 20,000 square miles, an acre of malarial land, there being here more than 300 absolutely clear days in the year. As the annual rainfall hardly ever exceeds six or eight inches, the surface of the earth is nearly all the time warm and dry, and everywhere as clean as a well-kept park. While the summer months are extremely hot, the temperature during the rest of the year is moderate, and the climate in all respects delightful. No snow falls here except on the mountains, nor is ice to the thickness of an inch ever seen. The doors and the windows may be kept perpetually open, nor are there a dozen of nights in the year but what a man under a pair of thick blankets can sleep in the open air without peril to health or the least discomfort. Even the most delicate invalid could, if so disposed, keep out of doors nearly the whole time; and thus would the consumptive patient be able to avail himself of the best possible means of recovery. While this region would offer to every person of impaired health an incomparable winter resort, it would be to those afflicted with cutaneous and pulmonary complaints especially well adapted.

From what has been said the reader will infer that this great southeastern Sahara is not a very attractive country as regards soil, scenery or natural productions, as indeed it is not. It

is what its name implies, an arid, sterile waste, so barren of even the lowest forms of life-sustaining foods that the Digger Indian, least dainty of mortals, has never been able to subsist there. It is, in fact, an almost rainless, treeless, waterless region, yet withal so clean and pure, so free from mists and clouds and insect pests, so sequestered and quiet, that it ought to form a welcome retreat for those in search of health, rest and peace.

A race is coming on—a race has already arrived—who are so far gone and effete that they require not so much exercise or recreation as absolute rest—rest, not only from work and the worry of business, but rest from the excitements and the excesses of a too active or a too luxurious life. If we could confine them in a vacuum or temporarily suspend animation, it would be the proper treatment for them. It is just because there is nothing or so little on these deserts that they would constitute the most suitable asylum for a class of patients whose vitality is so nearly extinct.

Exercise if needed could, of course, be taken here. There are mountains that might be climbed, while the pedestrian so disposed might start out and walk a hundred miles in almost any direction without impediment. The most

Insurance and Mutual Benefit Humbugs.

In view of some cruel frauds that have lately come to light here in San Francisco, we last week warned our readers against the "half-interest" swindle which has been worked here, in one form or another, with considerable success.

To this and the Louisiana lottery, and the entrapping of "local agents" for burners, hay-forks, etc., and other games for fleecing the credulous, against which we have tried from time to time to put our patrons on their guard, we must add the "mutual benefit" and "life-insurance" tricksters who appear in a place with some pretentious plan for making something out of nothing, talk "confidentially," glibly and mystifyingly to such as can be found verdant enough to listen to their specious stories, collect all they can in the way of premiums or assessments (whatever they may call them), and then, after they have reaped about as large a crop as the credulity of that neighborhood seems likely to yield, hie off to pastures new—for instance to California—and start afresh in the nefarious business of working a new set of dupes up to the point of tak-

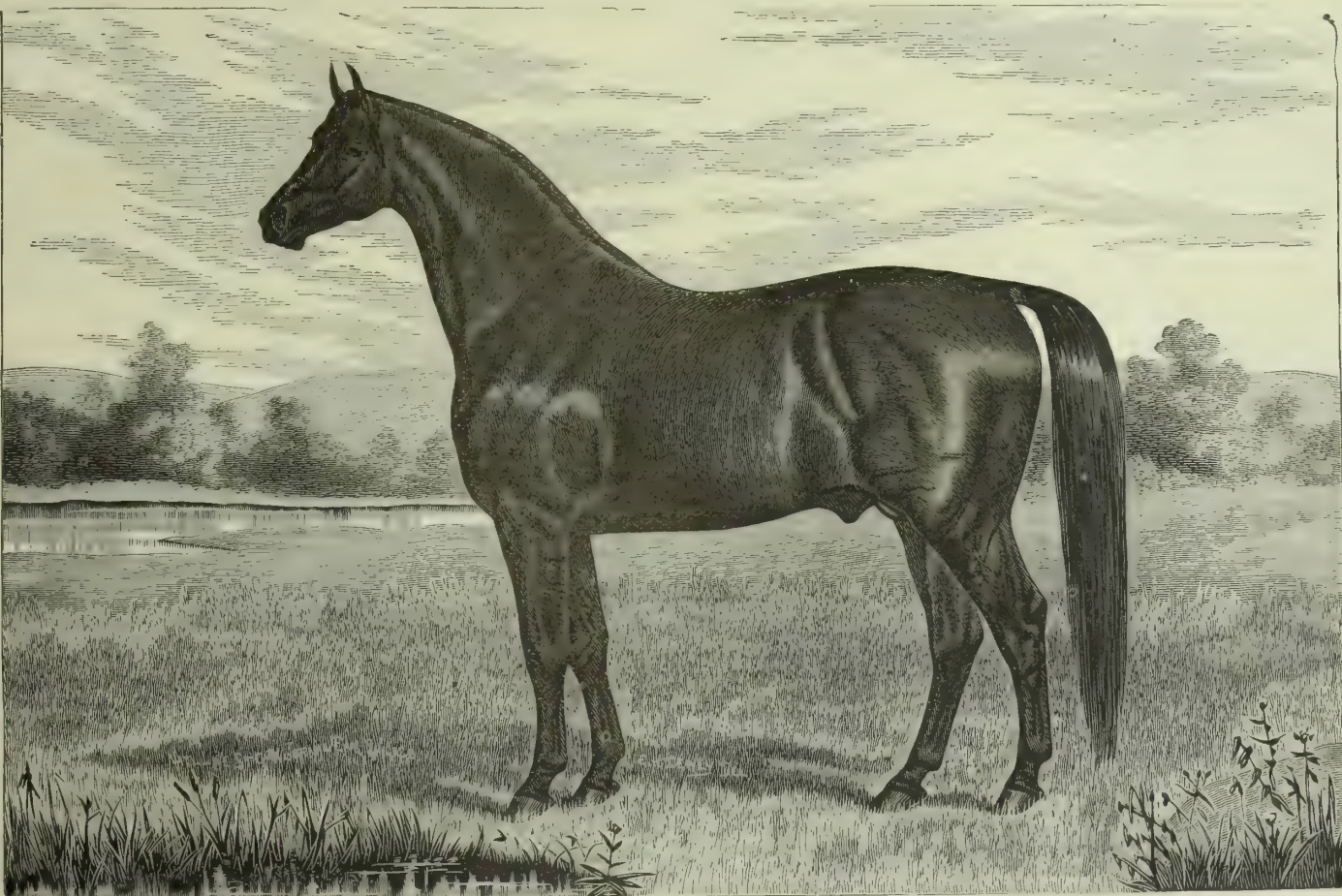
Cleveland Bay Horses.

These fine horses are winning popularity for the uses to which they are especially adapted in this State as at the East, and their career here is destined to be honorable. We shall need other horses than the majestic drafts and others than the airy racers. There is great need in fact for a quick-walking horse of medium weight in all our lighter field work and for the vast amount of orchard and vineyard cultivation which is to be done. And then for fine carriage-horses, why, we shall all have them as we get rich and are blessed with leisure.

The picture of a Cleveland Bay on this page is enough in itself to win all to admiration of the breed. This fine animal is True Briton, imported and owned by George E. Brown & Co. of Aurora, Ill., the well-known live-stock men. True Briton was foaled in 1882, imported in 1884, and has proved himself a sure and valuable foal-getter. Sired by Baronet, dam by Pride of the North, and with a long line of grand horses in his pedigree, his breeding fully justifies the superb style and handsome finish which placed him a close second in a strong string at the recent American

Horse Show at Chicago, being only beaten by his stablemate, Marlboro, also owned by Geo. E. Brown & Co., who, by the by, seem to have things pretty much their own way in spite of the very strong competition, having won first, second and third in "four-year-olds or over," first, second and fourth in "three-year-old stallions," first and second on "four-year-olds," and first on "two-year-old mares;" also first and second for pairs of mares. Such an array of prizes would indicate that this firm is maintaining its reputation for being in the lead, particularly so as the show of Cleveland Bays was undoubtedly the best ever seen in this country.

Cleveland Bays have a special local interest just now



CLEVELAND BAY STALLION, TRUE BRITON, IMPORTED AND OWNED BY G. E. BROWN & CO., AURORA, ILL.

of the country being level and the surface hard, riding on the bicycle could be practiced to good advantage, the opportunities for locomotion by other methods being equally good. Being traversed by several railroads, this region is easily accessible from every quarter. That there will in due time be established here a sanitarium for that class of valetudinarians who require most to bathe in the sunlight and to plentifully breathe the pure air, and for those who need mere abatement more than anything else, we verily believe.

It should be stated that water can be obtained in most places on these deserts at inconsiderable depths. It is apt to be soft and pure, and, while the flow is not always heavy, it would, in most instances, suffice for the uses of a large establishment, baths included, provided the number of bathers was not inordinately large or their ablutions unreasonably frequent. The practice of hydropathy might not always be feasible. The disciples of that school might, in some cases, have to forego the pleasure of the plunge bath and the douche, though the dripping sheet and the wet compress would be luxuries in which they might occasionally revel. In the sun bath all could indulge without let or limit, and in the atmospheric sea, charged with the life-giving ozone, lave themselves to their heart's content.

SYDNEY, N. S. W., celebrates a centenary.

ing stock in their make-believe scheme of beneficence.

We have especial reason at this time for uttering these words of caution. It would avail nothing to give names, however, for aliases are easily assumed; but we say to our honest friends who (just because they are honest themselves, and would not knowingly misrepresent) are apt to be too easily imposed upon by the misrepresentations of dishonest "confidence" operators—we say to them again: beware of trusting the slick, affable, open-mannered, taking stranger who—however agreeable he may make himself for awhile, and whatever pretense he may skulk behind—is merely after your money.

THE COMING OF THE TEACHERS.—The local Executive Committee of the National Educational Association appears to be wide-awake and active in preparing for the great convention of teachers to be held here next July. It is thought that 10,000 people will attend, and nine of the principal halls in this city have been engaged for sessions of the different sections.

THE RENO GAZETTE says there are not so many cattle in the U. S. by 10 per cent as there were in 1882, when choice Texas steers sold for seven cents per pound.

ONE sheep-owner in Colorado has a flock which is said to number over 30,000.

because of a recent importation under the auspices of Seth Cook, owner of the famous Cook Farm at Danville, Contra Costa county. A sale of these horses has already been announced in our advertising columns. The lot is a small one and there will not be probably more than enough to whet the appetite of our people for these horses. The announcement also in another column of the retirement of George E. Brown & Co. from business is also of interest in this connection.

Probably a few facts about the Cleveland Bay which we take from a catalogue recently issued by Mr. Cook will be of interest:

This breed of horse takes its name from the district of Cleveland, in Yorkshire, England, and from their prevailing color of bay. The most reliable writers say the Cleveland Bay was a well-established breed before the thoroughbred or racehorse, as now developed, was known; anyhow, there is distinct proof that, as far back as the middle of last century, they were the favorite coach horse in England, and have continued to be so up to the present time.

Mr. Lloyd, in his description of Cleveland, says the Cleveland Bay horse should stand, at maturity, from 16 hands 1 inch to 16 hands 2½ inches high, have good sloping shoulders, short back, powerful loins and long quarters, head well carried, and general appearance denoting activity and strength combined in a manner not seen in any other breed. His action is not remarkably high, but is the kind of action for getting over the ground. In color he is bay (either light or dark) with black legs, clear of hair and white; nothing except a star or a little white in the heel is allowable, a blaze or white

ankle proclaiming at once the admixture of foreign blood. There is no breed of horse living that so completely "fills the bill" as a carriage or "general-purpose horse" as the Cleveland Bay. He is good alike on the road or in the field, and in breeding he gives color, bone and style to his offspring in a very unmistakable manner; his disposition is good and he is easy to break and handle.

Cleveland Bays are the favorite coach or carriage horses, being more uniform in color, size and form than any other breed. What is more handsome than a pair of well-mated rich bays, with black legs and flowing manes and tails? These can be raised from ordinary mares crossed with a good Cleveland Bay sire.

Wherever bred to any extent the Cleveland Bay has become very popular, and his produce finds a ready sale at remunerative prices. It is a well-known fact that there is nothing more difficult to find than a really handsome well-mated team of carriage horses, of good size, style and action. This is partially accounted for by the great demand there has been for heavy draft horses, and the consequent neglect of the medium or "general purpose" horse. I can show colts from Cleveland Bay sires (from all colors of mares) which speak for themselves of the pre-potency of his breed, as regards color and form.

FRUIT SHIPPING.

California Fruit Union.

Full Report of the Secretary for 1887.

Mr. President and Members of the California Fruit Union:

We present this, the Third Annual Report of the California Fruit Union, for the season of 1887, just closed, to you for your consideration, with a somewhat greater degree of satisfaction than when submitting the record of any previous year's work.

Surely the past season, when all things are considered, has been quite a satisfactory one to the average fruit-grower. Where, possibly because of exorbitant freight charges and the failure on the part of the railroad companies to live up to their promises of a year ago, made to us at a similar meeting, growers have lost money on their Eastern shipping, the deficit has been much more than made up by the phenomenally high prices which have ruled for dried fruits during the season.

Our canners have taken largely increased quantities of fruit over former years, at moderately fair prices, and have been so successful in placing on the market the result of their season's work that from all sides we learn of new canneries being started and the capacity of established ones greatly increased.

Our people are fast awakening to the fact that they are well repaid for all the additional attention they may give to carefully drying and packing their fruit, and the past season has seen rapid strides toward perfection in both particulars; while the universal verdict of those who have spared no pains is that they have been more than proportionally repaid for their extra labor.

Preparing Fruit for Shipment.

When the same care is taken in selecting and packing for Eastern shipment, and when we can convince the railroad people that our interests are identical and that while they are assisting the one they are only increasing the profitability of the other—should this time ever come—then can we look forward with pleasure to the report of a successful year's business, as we have found these two factors the most important of all and entering largely into every case of unsatisfactory returns.

Were any of you to happen at Sacramento on any day when a fruit train of ten or a dozen cars stands there ready to start on its five to eight-day trip and take a hurried inspection of the fruit in the different cars, at the same time being careful not to acquaint yourself with the brand on the ends of the various boxes, you would involuntarily exclaim: "This certainly is not my fruit;" "This man evidently does not know what he is about," etc., opening the boxes and crates on all sides and finding here one even now not over seven-eighths full, then one so full that the fruit is badly bruised by the cover, here a box with the fruit perfectly ripe and soft, in perfect condition for the table, there a box with the fruit wrapped in newspaper or common brown wrapping paper, while the next might possibly be a crate of fine-looking grapes, but on taking up some of the bunches you find that as a consequence of not being allowed to wilt, but having been packed immediately on being gathered, the packer has loosened a great many berries from the stem and the juice from these is damaging the entire crate. It would certainly be a revelation to many.

They would thereafter not be so prompt in condemning the commission-men and would go home and resolve at least to be very careful in selecting nothing but perfect fruit, and to give the greatest attention to the proper packing of the same, and in all probability they would exercise the greatest care for a time; but let one of our friends secure space for say 200 boxes in a car to leave on a certain day, and then on the day of packing let several of his hands unexpectedly leave and the work drag or possibly

MOVEMENT OF GREEN FRUIT, DECIDUOUS, SEASON OF 1887.

	San Francisco.	Oakland.	San Jose.	Stockton.	Sacramento.	Marysville.	Los Angeles.	Totals.
								Lbs.
Boston, Mass.					524,981			524,980
Burlington, Ia.			21,300					21,300
Cheyenne, Wyo.					291,770			291,770
Chicago, Ill.	105,980		2,129,540	42,600	10,781,920	87,520		13,146,660
Cincinnati, O.			67,800		21,150			89,040
Council Bluffs, Ia.	24,180				720,830			745,010
Denver, Colo.	41,540		947,320		5,462,590	20,100	95,100	6,566,650
Des Moines, Ia.			43,650		20,650			64,300
Houston, Tex.			206,130	20,000	66,500			292,630
Kansas City, Mo.			369,250		779,520		21,200	1,199,970
Leavenworth, Kas.			21,000					21,000
Lincoln, Neb.					49,900			49,900
Louisville, Ky.					922,920			922,920
Minneapolis, Minn.			505,610					505,610
New Orleans, La.		25,150	344,080	120,000	1,640,850		42,750	2,258,210
New York, N. Y.	197,600		111,350		1,122,240			1,611,470
Omaha, Neb.			202,140		1,782,350			2,001,300
Ottumwa, Ia.			42,190		1,583,090			1,785,230
Philadelphia, Pa.					104,100			104,100
Pueblo, Colo.					149,050			149,050
San Antonio, Tex.		20,520	84,380	200,000	230,020		65,300	660,220
St. Paul, Minn.			264,880		274,400			539,280
St. Louis, Mo.	41,600		861,300		951,420			1,857,320
Sioux City, Ia.			21,100					21,100
Totals.	410,900	45,670	6,835,960	442,000	27,476,950	107,620	224,350	35,342,850

a cool spell has been experienced and the fruit has not ripened as fast as expected, and in order to fill the required number of boxes cannot be so closely selected, and we are afraid that the result would be that we should soon learn that the Omaha or the St. Louis agent, who, as the case might be, should chance to receive the car containing his fruit, were certainly swindlers.

We would strongly urge on every grower that they take a great deal more care in thinning, which is the first step in properly selecting, and then use the greatest care in packing their fruit, and we feel convinced that they then will be much better pleased with the Union or any other organization which essays to forward their product for them.

The annual meeting of last year found us with 217 stockholders, who had paid the four calls of 25 per cent each made upon them, and represented 5186 shares of stock.

Membership in the Fruit Union.

We feel extremely gratified in saying that we now have 486 stockholders who have paid up in full the stock subscribed by them, and the books of the corporation show that they hold 12,323 shares of stock, a gain for the year in numbers of 269 members, and in shares outstanding of 7137, which is certainly a very creditable showing of increase. At the same time we have on the delinquent list 217 members, who hold 3415 shares, on which about \$1500 is still due.

The appended table shows that we have the largest representation in Solano county, where 3325 shares are taken, which, together with Sacramento county with her 2349 shares, aggregates in the two counties nearly one-half the total amount of stock subscribed. Should we include the 1760 shares of Alameda county and Santa Clara county, 1638 shares, we should have, as subscribed in the four counties, 9072 shares of stock—three-fourths of the entire issue—the other 19 counties representing, all told, only 3151 shares. Very little new stock has been subscribed for during the year, the large increase in number of members and outstanding stock being due chiefly to the paying of delinquents and their thereby having their names again enrolled among the members.

We are sorry to say that the representation from four of the counties, originally included in our membership, has, through lack of payment of installments when called, dropped entirely out.

COUNTIES.	Original Number of Shares Taken.	Original Number of Stockholders.	No. Stockholders Meeting, Jan. 18, 1888.	No. Shares, Annual Meeting, Jan. 18, 1888.
Alameda	2,338	149	72	1,760
Amador	110	2	2	110
Butte	275	3	3	275
Colusa	40	2	2	40
Contra Costa	493	13	11	280
El Dorado	233	29	24	198
Fresno	70	6	3	65
Kern	5	1	1	5
Napa	329	20	17	249
Placer	1,234	57	35	797
Sacramento	2,716	96	70	2,349
San Benito	50	5	5	50
San Mateo	15	2	2	15
San Luis Obispo	10	1	1	10
San Joaquin	110	2	1	10
Santa Clara	2,305	129	92	1,638
Santa Cruz	212	18	13	162
Solano	3,825	120	92	3,325
Sonoma	270	16	12	235
Sutter	60	2	2	60
Tehama	22	1	1	22
Tulare	175	11	7	115
Yuba	645	24	18	590
Marin	260	2		
Santa Barbara	8	1		
Shasta	10	1		
Ventura	10	1		
Totals.	15,728	703	456	12,323

The total number of shares at the annual meeting January 19, 1887, was 5186, and the number of stockholders at that time was 217.

Financial Statement.

Financially the affairs of the Union are in a very satisfactory and prosperous condition.

There has been paid in on stock subscriptions during the year \$5408.75, and we have had reported a total amount from the various agents of \$17,017.06, which would make the gross receipts \$22,425.81, of which we have on hand in the form of office furniture, box brands, claims against members for freight which we have been

obliged to pay for them and will now have to carry over to another season, commission yet due from agents, bank account and cash on hand, a total of about \$11,300, showing that the entire disbursements for the year aggregate about \$11,000, of which amount \$1720 was expended in liquidating the indebtedness as reported a year ago. The following balance taken from the books gives the itemized receipts and expenditures for the year:

January 13, 1888.

Expenses	\$361.77
Office Rent	330.00
Office Fixtures	480.45
Stationery	47.75
Telegraphing	1,367.03
Printing	169.90
Salaries	7,689.50
Advertising	21.40
Discount and Exchange	19.48
Postage	166.24
Fuel	15.00
Stock	\$14,021.50
Traveling Expense	1,161.77
Telephone Rent	152.40
Received from Agents (Com.)	17,017.06
Freight Due from Stockholders	272.14
Commission Due from Agents	2,689.97
Profit and Loss	8,238.19
Cash	63.38
Nt. Bk. of D. O. Mills & Co., (Treas.)	8,460.02
Totals	\$31,035.56

A more extended explanation being due the stockholders, we would say that in the account headed "Expense" is included among petty amounts the charge for legal services in drawing up the form of bond and contract used with the different agents the past season, and also the amount paid for collecting a portion of the delinquent subscriptions.

The office fixture account is largely increased by the purchase of a safe, which was found to be an absolute necessity, as books and papers were continually accumulating which must be preserved.

It is needless to mention that the salary and traveling expense accounts show the amounts paid to and by the Eastern manager while on his mission in the interests of the Union in the Eastern States as well as the amounts paid out here, while the salary account is also increased by the payment of \$1566.50 which was owing to the officers at the time of the last report.

Disposal of Earnings.

The profit and loss account represents the balances given in the statement of last January. You will see by the above figures that we have in the bank about \$8500, and we would add that \$100 will pay all our outstanding indebtedness.

It has been suggested by some, inasmuch as the stock of the Union, as such, is not supposed to be a money-making investment, that it might be well after paying a six per cent dividend on the stock issued, this being the maximum rate as provided for in the by-laws, and after reserving from the remainder funds enough to pay all expenses which may be incurred between the present time and the opening of the shipping season, the period whence our revenues are derived, to then divide the remaining portion among those who have shipped in proportion to the amount so shipped by each one. This would be manifestly a just way to dispose of the surplus, as the money would then return to those by whom it was brought into the treasury.

On the other hand, there are quite a number who favor using the money on hand in developing new markets, establishing new agencies, etc.

Need of Wider Distribution.

We found repeatedly during the past season that the ten agencies which we had were wholly inadequate to handling the proportion of the fruit which the Union shipped. According to the figures most kindly furnished us by General Fruit Agent Gray of the S. P. Co., 1700 cars of green deciduous fruits, destined for Eastern markets, left the State during the past season. To the agents of the Union in the following cities, Boston, New York, Philadelphia, Minneapolis, St. Paul, Chicago, Omaha, Carson City, St. Louis, and New Orleans, we shipped 760 cars. These same markets received from others not working with the Union 435 cars, while to other cities in which we had no agencies established we find that about 500 cars were dispatched.

Surely, when we consider that Cheyenne took

during the season 15 carloads, Council Bluffs 37, Denver 286, Houston, Texas, 14, Lincoln, Neb., 46, Louisville, Ky., 16, and San Antonio, Texas, 12 cars, and that we had no representative in any of these cities, it would certainly appear that the work for another year was not alone that of educating the people in the markets already occupied, but a large area of new territory is yet to be surveyed and arrangements perfected for introducing Union fruits.

According to the figures furnished us, there has not, during the season, been a full carload billed direct to Cleveland, a city of 250,000 population, while Cincinnati presents a record but slightly better, with four cars as the consuming capacity of her 275,000 inhabitants; while in direct contrast, Houston and San Antonio, Texas cities, neither of them having over one-ninth the population of the Ohio cities, have received 14 and 12 cars respectively, and this, too, despite the fact that their fruit must necessarily go by the southern route, across the hot plains of Arizona, New Mexico, and Western Texas, a trip which, all who have had to do with fruit shipping know, means an equivalent to several days' travel by the cooler passage.

The matters of the establishment of an agency at Buffalo, N. Y., from which point fruit could be shipped into Ontario and the Canadian country, and now that the railroad is completed, so doing away with the ever-disastrous ocean voyage—the making of Portland a point of distribution for the Northwest and mountain districts, are subjects which present themselves to every one who, being interested in the past season's business, noticed the frequency with which the telegrams came in, "Market full; hold up a little," etc.

From this table of the total shipments of deciduous fruits by the entire State we learn that which may be unknown to many, namely, that the competition offered us by our southern co-workers amounts absolutely to nothing, as the total shipments for the season from that section aggregate only 11 cars, or 1-155 of the entire output. True, we have the figures from but one of the railroads, but even after allowing the other road the same number of cars, the total is truly insignificant. The figures as furnished us, will be found in the table at the top of this page.

Peculiarities of Distribution.

It might be a matter of surprise to some to note that, according to these figures, while Chicago received from all sources for the season 657 cars, Denver 286, Minneapolis 113, New York takes the fourth place in the list, receiving 105 cars, or nearly one-sixth as much as our oldest and best developed market—nearly one-half the amount sent to our nearest and consequently most accessible market, and is but barely outranked by Minneapolis, which is certainly a very creditable showing for a market which last season averaged one car per week. Nor has the enlargement of the other markets in which we had representatives been neglected.

Messrs. S. G. Palmer & Co. of Minneapolis wrote us that in the season of 1886 they handled in the neighborhood of 20 cars, while this season we have sent them an equivalent to about 45.

Messrs. B. Presley & Co. of St. Paul make a similar showing, having doubled their previous sales the past season.

From Messrs. Macluca & Bros. of New Orleans we learn that two years ago they handled nearly 20 cars, while this season they have increased the number over 50 per cent.

B. M. Tanner of Kansas City says that six cars at the outside would represent the receipts in his city two years ago, but for the season just closing he alone has secured 22 cars; while in Boston, which two years ago averaged less than one-half a car per week, Messrs. Blake & Ripley have this season very successfully disposed of 40 carloads which the Union has shipped them.

We might go on and show how the other markets have nearly equally as well increased their consuming capacity, and this too, in nearly all cases, not by forcing the fruit on the market and selling it for little or nothing, but as a rule making quite satisfactory returns, so that were we to take the average of the entire season's business of both green and dried fruits it would make a very good showing when we consider the abundance of the crop just harvested, and despite the excessive freight rates under which a large portion of the green product has gone forward.

But referring to the table showing the shipment of the 760 cars made by and through the Union, a radical change from the manner of the previous season's operations is at once seen. While in that year all our fruit was sent to Chicago and from there distributed, this season only 422 cars, or about one-half, has been sent to that market.

We have furnished St. Louis 55 cars, New York 52, Minneapolis 53, New Orleans 42, Boston 40, Omaha 39, St. Paul 28, Kansas City 22, and Philadelphia 7 cars. These cars have been received from the following points: From Sacramento 241 cars, from Vacaville 186, San Jose 126, Natoma 41, Davisville 38, San Lorenzo 25, Newcastle 19, Winters 18, Suisun 16, Wrights 13, Marysville 12, Malaga 12, Woodland 7, Cordelia and Chico each 2, while Berkeley and Napa complete the list with 1 each.

As an evidence of how the cars have been scattered let us take the total shipments from

Sacramento and we find that of the 241 cars, 75 were sent to Chicago, 20 to St. Louis, 32 to New York, 28 to Minneapolis, 15 to New Orleans, 32 to Boston, 18 to Omaha, 10 to St. Paul, 7 to Kansas City and 4 to Philadelphia.

Distribution by Carloads.

For the benefit of those who may examine this report when printed, we give below a table setting forth the facts in detail as stated above:

	Chicago.	St. Louis.	New York.	Minneapolis.	N. W. Orleans.	Boston.	Omaha.	St. Paul.	Kansas City.	Philadelphia.	Totals.
Vacaville.....	120	4	14	11	17	2	11	3	3	1	186
Nat. ma.....	35	3	1	1	1	1	1	1	1	1	41
Wright.....	13	1	1	1	1	1	1	1	1	1	13
San Lorenzo.....	20	1	1	1	1	1	1	1	1	1	25
Winters.....	15	1	1	1	1	1	1	1	1	1	18
Marysville.....	2	1	1	1	1	1	1	1	1	1	12
Davisville.....	37	1	1	1	1	1	1	1	1	1	33
Newcastle.....	17	1	1	1	1	1	1	1	1	1	19
San Jose.....	52	26	12	7	12	10	10	10	10	10	126
Sacramento.....	75	20	32	28	15	32	18	10	7	4	241
Suisun.....	15	20	32	28	15	32	18	10	7	4	16
Malaga.....	12	1	1	1	1	1	1	1	1	1	12
Cordelia.....	2	1	1	1	1	1	1	1	1	1	12
Berkeley.....	1	1	1	1	1	1	1	1	1	1	1
Napa.....	1	1	1	1	1	1	1	1	1	1	1
Woodland.....	1	1	1	1	1	1	1	1	1	1	1
Chico.....	1	1	1	1	1	1	1	1	1	1	1
Totals.....	422	55	52	53	42	40	39	22	22	7	760

The shipping season of 1886 lasted six months, the first car starting May 19th and the last leaving Nov. 18th, while the season just closed was one week longer in duration, extending from May 18th to Nov. 24, 1887.

From the statistics in the office we find that the total business of the year foots up as follows: Number of boxes shipped, 328,296; number of crates, 169,268; or a total of 11,363,020 pounds net of fruit. The gross receipts have been \$675,864.44, freight \$283,033.80, cartage \$6002.35, commission \$67,254.40, causing the gross charges to aggregate \$356,289.59, which leaves as net returns \$319,574.85, or about 2 8-10 cents per pound.

The Auction Plan.

At the beginning of the present season all anxiously awaited the result of the contemplated new departure—that of shipping our fruit in large quantities direct to the Atlantic cities and there selling it at auction.

By far the larger portion of our growers doubted its practicability; a few thought that in the end, after successive seasons and the enforced liberal distribution of a large amount of fruit at nominal prices, it might be a success; while a very few were enthusiastic believers in the auction plan and declared that it was the only solution of the problem of how to successfully ship in a green state the abundant fruits of our State.

We had certainly arrived at a very critical period. With the amount of fruit which was produced in 1886 the canners were almost buried; carload after carload was piled into our local markets and sold at prices which would not pay for boxes alone, and the information was received from the East that the limit had been nearly reached at which their people would take our fruit at paying prices to the producer.

There was not only the production of the present acreage to provide for, but thousands of acres would soon be sending forth their quota also.

But while it might justly be termed a venture on the part of the consignors, and certainly there was a great lack of the almost necessary experience on the part of those to whom the consignments were made, as any whom might have been selected as agents would alike have been but novices in the handling of our fruits, nevertheless all must say that the results have well repaid whatever may have proved a loss financially. While in many instances, notably in the Boston market, have the returns been highly remunerative, and with reasonable freight charges and facilities, which are the great essentials, we can look forward to another year's dealings with these heretofore untried markets with the perfect assurance that a very profitable business can be carried on with them.

The auction plan with them has certainly proved a great success, everything being considered. There are many on all sides who heartily commend its methods. The fact that on the seventh day, even when sending to the most distant market, a shipper can be informed exactly what his fruit brought; that he also knows that every box is sold and the entire shipment accounted for; and, finally, that within two weeks from the day of loading he will receive the net returns for the consignment—these facts will always cause this manner of handling our fruits to be popular.

With but two exceptions, all such of our fruits as arrived in anything like first-class condition sold extremely well, and had there been no delays in transit, which not only affected the condition of the fruit, but also, through repeated postponements of the time of sale, destroyed the confidence of the larger purchasers, and especially had not the low freight rate been so hedged in by the railroad company that it was only a very short time that we could avail ourselves of it, and that at the expense of a day's time on all cars destined for points other than New York, the number of cars sent them would most certainly have been doubled.

Apricots and Muscats.

The two exceptions noted above are those of apricots and Muscat grapes. Some of our

fruit-shippers have found to their cost, this season, that the fruit-lovers of New York and Boston do not materially differ from those of all the other Eastern cities, and it matters not though these fruits be presented to them in perfect condition, they will, even then, consume them in very limited quantities.

This will doubtless continue to be the case with the apricot from the fact that this fruit, when picked in condition to stand the trip, does not ripen in transit, as does the peach, but on the other hand becomes leathery and often loses the little flavor it had originally.

But for the Muscat grape, from the experience in the Chicago market, we have better hopes. When our grapes begin to sell on their merits, regarding flavor, as they now do because of their size and color, then we predict this grape will assume its proper position and be one of our best-paying varieties.

Other Fruits.

The prices realized from the sale of peaches in the Atlantic seaboard cities, which lie adjacent to their finest peach districts, have been a matter of surprise to all, as the sharpest competition was looked for in disposing of this fruit.

Plums have seemed to meet with especial favor, while pears have sold remarkably well considering the condition of most of them on arrival, because, as a result of the winter of '86-'87 having less than the usual rainfall, this, generally our best shipping fruit, has, in nearly all instances, arrived overripe; while the same cause tended to develop the best keeping qualities of the peach, plum and grape, and so rendered the year especially propitious for their shipment.

The work was undertaken of preparing a table showing precisely the total amount of each variety of fruit shipped to each market with the net results; but when it came to segregating the account sales as rendered by the various agents, the volume of work was much greater than had been anticipated, and the figures which are now given must necessarily be somewhat changed before they are absolutely correct, as the work is barely two-thirds complete. But by taking a portion of the earlier and later, as well as shipments during the height of the season, the result will be a very fair approximation.

This table shows that consignors have received an average net per pound in the various markets and for the following varieties of fruit the following prices:

	Chicago.	St. Louis.	New York.	Minneapolis.	N. W. Orleans.	Boston.	Omaha.	St. Paul.	Kansas City.	Philadelphia.
Apricots, boxes.....	\$2.70	\$2.88	\$3.05	\$3.22	\$3.40	\$3.57	\$3.75	\$3.92	\$4.10	\$4.27
Cherries, boxes.....	\$4.44	\$4.61	\$4.78	\$4.95	\$5.12	\$5.29	\$5.46	\$5.63	\$5.80	\$5.97
Plums.....	\$1.50	\$1.60	\$1.70	\$1.80	\$1.90	\$2.00	\$2.10	\$2.20	\$2.30	\$2.40
Peaches.....	\$3.05	\$3.22	\$3.40	\$3.57	\$3.75	\$3.92	\$4.10	\$4.27	\$4.44	\$4.61
Grapes.....	\$1.80	\$1.90	\$2.00	\$2.10	\$2.20	\$2.30	\$2.40	\$2.50	\$2.60	\$2.70
Nectarines.....	\$2.00	\$2.10	\$2.20	\$2.30	\$2.40	\$2.50	\$2.60	\$2.70	\$2.80	\$2.90
Pears.....	\$2.30	\$2.40	\$2.50	\$2.60	\$2.70	\$2.80	\$2.90	\$3.00	\$3.10	\$3.20
Figs.....	\$4.08	\$4.27	\$4.46	\$4.65	\$4.84	\$5.03	\$5.22	\$5.41	\$5.60	\$5.79

It is but just to explain that the cause of the low prices obtained in New Orleans has been chiefly the miserable condition of the fruit on arrival because of delays of from 2 to 10 days by reason of the washouts from which the Southern roads suffered during the summer.

We cannot close without saying a word regarding the

Existing Freight Tariff.

From the figures before given it is seen that four-fifths of the gross charges which have been paid come under the heading "Freight." While from the same table we learn that for every dollar the grower gets for taking all the chances of raising the fruit, the railroad company receives 83 cents for simply transporting it, and in the meantime runs no risk whatever, as all freight charges must be guaranteed before a wheel turns.

One of the Board of Trustees, in his address, which doubtless has been read by all, before the State Fruit-Growers' Convention at Santa Rosa, forcibly states our position and clearly

shows the different policies pursued by the roads east and west of Chicago.

What we must have in order to made fruit-raising a success is, schedule time given to fruit trains consisting of not less than ten cars—a \$400 passenger rate, a \$300 train rate and a \$200 slow freight rate to Chicago, with a corresponding tariff to Missouri river points; a \$500 passenger rate and a \$400 rate on the one or more cars of originally a 10-car train to New York, and finally, that the railroad companies make, as common points with New York, Buffalo, Binghamton, Newburg and Waverly, the three latter being points of divergence to Boston and Philadelphia. At all times keeping in mind the fact that time is the essence of fruit shipping.

When we can bring about this much-desired result then will fruit-growing and shipping become profitable and the enterprise will soon place itself in its proper position—at the head of the growing industries of our State.

H. A. FAIRBANK,
Secretary Cal. Fruit Union.

A DOG'S SCENT.—An investigator has discovered that, although dogs can follow a man's trail even after strong perfumes have been sprinkled along the track, yet if sheets of tissue paper are placed on the ground to be walked over and afterward removed, no trace of the scent will lie.

WARM WATER FOR CATTLE.—The Silver State says it has been proved by actual experiment that cattle can be fattened at Golconda, where they have water at a temperature of 75° to drink in winter, in one-half the time and with less feed than where they have to drink ice-water.

THROUGH THE FOREST.

The Old and Young Danced all Night—Our Hardy Ancestors.

Old men live in the past. Perhaps it would be better for the young men of the present if they lived a little bit more in the past and drew less on the future.

The log cabins of primitive times would seem very cheerful habitations to the people who live in the finely constructed, furnace-heated mansions of to-day. But our grandparents took a great deal of comfort in these rude homes.

They were rugged and healthy. The men had stalwart and hardy frames, and the women were free from the modern ailments that make the sex of to-day practically helpless slaves to hired foreign help.

White-haired grandsires frequently took their life partners and on horseback rode a score of miles through the forests to enjoy the lively pleasures of a frontier ball, danced till daylight, rode home again in the early morning, then put in a good day's work. Middle-aged folks of to-day couldn't stand that sort of a racket.

To these mud-chinked log cabins doctors' visits were a rarity. The inhabitants lived to a rugged and green old age.

Sometimes these log cabin old-timers were taken ill. They were not proof against all the exposures to which they were subjected. They found the effective remedies for these common ailments in the roots and herbs which grew in the neighboring forests and fields. They had learned that nature has a cure for every ill. These potent remedies assisted their sturdy frames to quickly throw off disease and left no poison in the system.

The unpleasant feature of modern practice with mineral medicines is the injurious after-effect on the system. May not modern physical degeneracy be due to this feature?

A drug-saturated system is not in a natural, consequently not in a healthy, state. If any of the main organs are clogged with traces of the mineral poisons used to drive out a particular disease, the whole machinery of life is deranged and early decay of natural powers is the inevitable result.

There can be no question that remedies from the laboratory of nature are the best. If they are as efficacious, they have the advantage of leaving no after-sting.

Their efficacy, if properly compounded, and the proper remedy applied to the proper disease, will not be doubted. The experience of ages proves it.

Their disuse has come about principally through the rapid congregation of people in cities and villages, rendering these natural remedies difficult to obtain. Progressive business enterprise has lately led to putting these old-time remedies within reach of all classes.

The proprietors of Warner's safe remedies, in the faith that the people of to-day would be benefited by using the simple remedies of log cabin days, have caused investigations to be made and secured the formulas of a number of those which long and successful use had proved to be most valuable.

They will, we learn, be known under the general title of "Warner's Log Cabin Remedies." Among these medicines will be a "Sarsaparilla" for the blood and liver, "Log Cabin Hops and Buchu Remedy," for the stomach, etc., "Log Cabin Cough and Consumption Remedy," a remedy called "Scalpine," for the hair, "Log Cabin Extract," for internal and external use, and an old valuable discovery for catarrh called "Log Cabin Rose Cream." Among the list is also a "Log Cabin Plaster" and a "Log Cabin Liver Pill."

A Seasonable Topic.

In our grandfathers' days they marked the flight of time by the "Old Farmer's Almanac." Now, the omniscient Calendar is a perpetual reminder of the fleeting seasons.

The days in a year do not outnumber the sizes, shapes and styles in which it appears; and alike in the merchant's counting room, or lady's boudoir, it seems to have become one of the necessities of the utilitarian age in which we live.

The artist's talent, the engraver's cunning, and the printer's skill, combine in this connection to blend the ornamental with the useful; and the result is calendars of every degree of excellence, good, better and best.

The latter includes the one issued by N. W. Ayer & Son, Philadelphia, which will be forwarded to any address, securely inclosed, on receipt of 25 cents.



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Placer County.

EDITORS PRESS:—Our Eastern friend has heard everything of Southern California that would tend to cause his locating in that portion of the State, while of the northern section but little has been written. What stray information reaches him may lead him to infer that the section as a whole differs but little, if any, from the cold, snow-laden sections of the East which he has left. So firmly has this opinion been instilled into his mind by interested parties that he is apt to look upon any statement to the contrary as fancy rather than fact. The late Citrus Fair of Placer county held in Los Angeles has done more than anything else to dispel the doubts and correct the misrepresentation under which this county and the whole northern citrus belt has so long labored. It is not the desire of the writer to disparage the southern section—far from it. She has set the State an example worthy of imitation and deserves nothing but praise for her pluck, perseverance, and success.

Placer county, extending from within a few miles of the Sacramento river to the summit of the Sierras, affords a variety of climate not attainable in the East, save in a scope of country reaching from Key West, Florida, on the south, to Canada on the north. All this is accessible in one day's travel. The Central Pacific may be said to enter Placer at Cisco. The altitudes are: Cisco, 5934 feet; Emigrant Gap, 5221; Blue Canyon, 4698; Towles, Alta, 3607; Dutch Flat, 3395; Colfax, 2422; Clipper Gap, 1759; Auburn, 1360; Newcastle, 956; Penryn, 621; Pino, Loomis, 402; Rocklin, 249; Roseville, 163 feet, and then the track strikes Sacramento county at Antelope.

Placer's resources are as varied as her climate, and the possessor of capital or muscle can be accommodated in almost any field he may desire. In drift mining it ranks with the three first, and is second to one or two in its wealth of gold-mining quartz, which fact has given the citrus fruit belt the appropriate name of the "Warm Gold Belt." Many fine fruit farms yield their owners a double income, and it is not an uncommon sight to see a quartz mill located in the center of a fruit orchard pounding out the yellow metal from the quartz extracted from beneath the trees.

Placer's Lumber Interests

Keep well up with the production of the precious metals. Towle Bros., at Towles, own 15,000 acres of timber lands in Placer and Nevada counties, which is traversed by their narrow-gauge railroad. At Towles is located their stores, pulp-mill, sash, door and box factory. Their pulp-mill turned out 4,000,000 pounds of pulp in the past season. This season they have operated three mills, cutting 13,500,000 feet. Geo. Geisendorfer and H. Carlin, old-time lumbermen, have in the past season been operating near Emigrant Gap, cutting 2,500,000 feet. The almost inexhaustible supply will insure the finest lumber at low prices for many years to come. Present rates are \$12 to \$15 a thousand feet at the mills. Sash and blind factories are located at Alta and Truckee. A box factory turning out 600,000 berry-boxes the past season is located at Clipper Gap. The box sales of Geo. D. Kellogg of Newcastle for the past season amount to \$15,132.04. In wool, the clip for this year amounts to over 150 tons, distributed as follows:

	Pounds.
J. Parker Whitney	100,000
Perry Richardson	36,000
J. Marriner	14,000
Niron Luce	3,500
Henry Noil	4,500
James French	12,000
Albert French	11,000
W. G. Brown	20,000
John Swears	20,000
J. Kaseburg	80,000

In grain no figures are attainable save from the Lincoln district. This district produced 202,000 bushels of wheat, 70,000 of barley, and 42,750 bushels of oats; the production of the foothill section would be as much more.

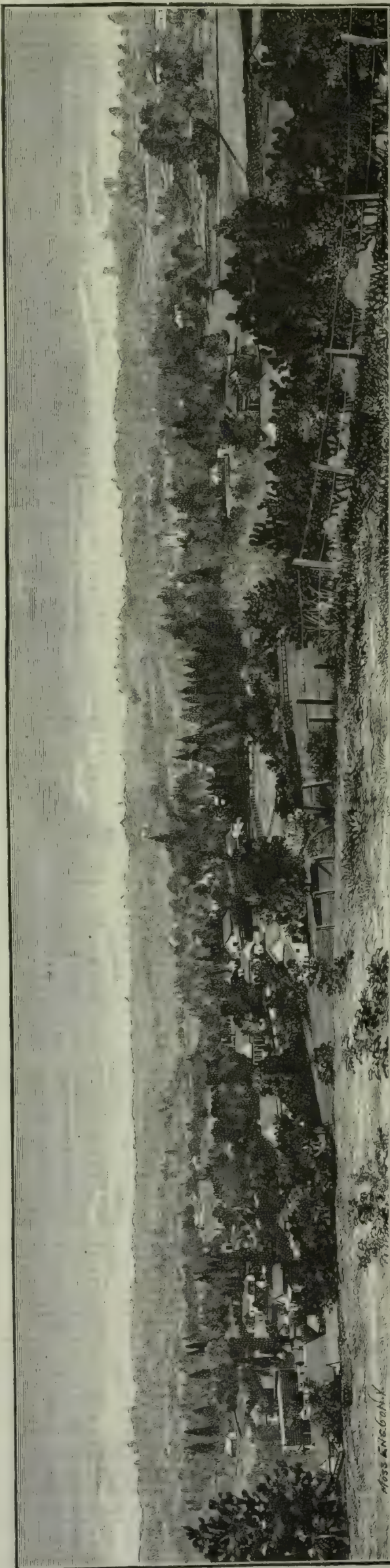
Other Interests.

Granite of fine quality is mined at Lincoln, Penryn, Pino, and Rocklin. From the quarries of G. Griffith, located at Penryn and Rocklin, there has been shipped in the past season 8000 tons. Healey & Co. at Pino furnish the granite for the dry-dock at Mare Island, while J. Taylor of Rocklin supplies the stone for the Courthouse at San Francisco. Byrne Bros. of Lincoln have shipped 300 carloads to San Francisco this season. Lime, sand, brick-clay and slate are plentiful. At Lincoln is conducted the most extensive pottery and tile factory in the State by Gladding, McBean & Co. Lignite coal is found near by. Iron deposits excelling in size and quality are found in various sections of the county.

The Fruit Interest.

Fruit canneries are located at Rocklin and Newcastle, and a large drier at Roseville. Placer county's green-fruit interest has grown from a mere experiment a few years since to the

rank of the producer of one-sixth of all the fruit shipped from the State in the past season. The first fruits to go East in the past season



VIEW OF AUBURN, COUNTY SEAT OF PLACER COUNTY, CALIFORNIA.

ing the amounts of different fruits shipped Jan. 1, 1887, to Dec. 20, 1887;

Kind of Fruit.	Pounds.
Strawberries	23,348
Raspberries	13,832
Cherries	23,500
Peaches	965,816
Plums	82,271
Apricots	57,952
Pears	255,350
Tomatoes	78,370
Grapes	372,750
Apples	120,848
Figs	10,010
Quinces	7,500
Blackberries	38,540
Nectarines	2,300
Crabapples	500
Currants	180
Pomegranates	100
Japanese persimmons	400
Oranges	12,036
Engaged, additional	20,000
Vegetables	131,628
Dried fruits	10,820
Nuts	2,250
Lemons	1,000
Miscellaneous	650

Total.....2,215,983

Of the above, 73 carloads went East.

The Newcastle Fruit Co. shipped the first cherries to New York and Chicago on April 25th, which were the first to arrive from any quarter. This company shipped 83 full carloads of fruit East, containing 67,450 boxes. They also shipped by local freight to different points on the coast 1,900,000 pounds, or a total of 3,726,000 pounds for the season.

The Co-operative Fruit Co. of Newcastle shipped 251,360 pounds; W. J. Wilson & Son of Newcastle shipped 1,593,810 pounds, while the railroad freight shipments East show that 145 full carloads of fruit were shipped East from Newcastle in addition to an average of two carloads a day to local points during the fruit season, making a total of 353 full carloads for the fruit season, representing 7,787,153 pounds. In addition to this, Wells, Fargo & Co.'s Express shipped 49,562 boxes, or 945,321 pounds, so that Newcastle's fruit export for the past season foots up to nearly 9,000,000 pounds.

The shipments from Colfax this year have been 551,680 pounds. Auburn has shipped an average of 1500 pounds a day, or a total of 180,000 pounds. From Penryn the shipments have been 918,060 pounds. Deducting the fruit grown in Nevada county and forwarded to Placer for reshipment, and we have 8,786,468 pounds. These figures carry conviction with them, and are given to show not so much what Placer does do but the great possibilities that are in store when fruit culture shall extend to every portion of the county instead of but a few acres here and there as at present. Throughout the "warm gold belt" can be raised everything that can be produced in temperate or semi-tropical zones; upon the same acre of ground there can be raised oranges, lemons, olives, figs, pomegranates, peaches, pears, plums, prunes, grapes, apples, apricots, nectarines, persimmons, blackberries, raspberries, strawberries, gooseberries, currants, watermelons, cantaloupes, cherries, quinces, almonds, walnuts, chestnuts, barley, wheat, corn, oats, rye and all kinds of vegetables and grasses. Studies of records made here show that the average of temperature at Colfax, the highest fruit point in the county, compares very favorably with similar average at famous Southern points.

Land is cheap; good farms can be purchased at prices ranging from \$15 an acre upward.

How to See Placer.

To those contemplating locating in Placer I would say go direct to Auburn, and when you have satisfied the inner man at the excellent hotel call upon Messrs. Adams, Smith and Murphy, have them show you the attractions of Auburn and the surrounding country, which you will find a most pleasant surprise, for, without intending to disparage any portion of the county, Auburn, with its fine hotels and residences, balmy air and hospitable people, must impress the visitor favorably. Having looked the section over carefully, run down to Newcastle, and after a day spent in her fine fruit ranches, go on to Penryn, where Messrs. Bulter, Parker, Wood and Browning will kindly show you the advantages their section affords. At Pino and Loomis Messrs. Maslin, Morrison & Williams will be found ready to impart any desired information. Then on to Rocklin and Roseville. If you would prefer a higher altitude with very little change in temperature, run up to Weimer, Applegate and Colfax, but go where you will, the conviction will be forced upon you from your own observation, whether you are a resident of the county or, like the writer, but an inquirer, that the county has exceptional natural resources and is enjoying most satisfactory and promising development.

The writer in return for the many courtesies extended to him would suggest for the advancement of Placer that she form a county board of trade with auxiliary boards in each town, agree to sell all real estate, charging \$1 an acre, thus avoiding any tendency to high values for large commissions. With the fund thus realized and a liberal appropriation by the county, advertise the county in every legitimate way, bringing all visitors to Auburn direct and from this point distributing them to the different sections in charge of the home officers. In this way, by all working together for the county's good, by united action, funds to carry on the work, and the assurance to

visitors of kind reception and honest dealing, Placer would soon be put where she belongs—in the lead. E. H. SCHAEFFLE.

[In connection with our correspondent's letter we present a view of Auburn, the county seat of Placer county, for which we are indebted to the courtesy of the *Placer County Republican*, an enterprising journal published at Auburn by Millikan & Tufts. We are assured that the engraving is from a recent photograph and correctly represents one of California's most charming villages.—EDS. PRESS.]

TILLAGE LOSSES AND WOODLAND GAINS.—New Hampshire scientists are mooting whether the destruction of timber in Northern New England is not counterbalanced by the growth on abandoned homesteads. The number of such farms is said to be well-nigh incredible to one who has not actually seen them. It is not unusual to find hamlets which, half a century ago, were inhabited by prosperous Puritan yeomanry, almost entirely deserted, and the houses falling into decay. This wholesale abandonment of the agricultural regions has largely increased the acreage of woodland in certain localities, but the general belief is that timber is destroyed faster than it is growing.

THE NICARAGUA CANAL.—Engineer Menocal of the Nicaragua Canal Company is making arrangements to send out eight engineering parties to locate the canal. He expects the work of excavation will begin not later than July 1st. A syndicate of New York, Baltimore and Richmond gentlemen have the matter in charge. The total cost is estimated at \$65,000,000.

"It was suggested some time since that a successful paper must see its subscribers as often as once a year. Some are slow in shaking hands. An editor's possessions seldom assume such proportions as to assure opulence. His shakels are very scarce. Sabe?" The foregoing did not originate in this office, but it applies here just as well, and possibly it may apply to some of you, O readers.

LOOK at the address labeled on your paper, and if the date you are credited to at this or any other time is not correct, write us at once, mentioning time and circumstances of payment. We wish the credit to every name on the list to stand correct on our printed sheets, and that without delay, too, in case of any error or omission.

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SOLE MANUFACTURERS.
113 N. 8th St., ST. LOUIS, MO.
W. E. CAMPE, AGENT.



Hall's Pulmonary Balsam,

A superior remedy for Coughs, Colds, Incipient Consumption and all Throat and Lung Troubles. Sold by all Druggists for 50 cents. J. R. GATES & CO., Proprietors, 417 Sansome St., San Francisco.

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LIFE SCHOLARSHIPS, \$75.
No Vacations. DAY AND EVENING SESSIONS.
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309 and 311 Sansome Street, San Francisco, Cal.
Agents for Growers and Manufacturers. Charterers of Vessels for all Trades. Agents for the Mexican Phosphate and Sulphur Company's Products. General Insurance Agents.
Have correspondents in all the chief cities of the United States, Europe, Australia, India, China and the principal islands of the Pacific. Purchase goods and sell California products in those countries.
General Agents for the Pacific Coast of **NATIONAL ASSURANCE CO.**, of Ireland; **ATLAS ASSURANCE CO.**, of London; **BOYLSTON INSURANCE CO.**, of Boston, Mass.

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PATENT OWNERS OF
JUDSON POWDER,
The Only Reliable and Efficient Powder
For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.
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Best and Strongest Explosives in the World.
As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.
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FERTILIZERS!

Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

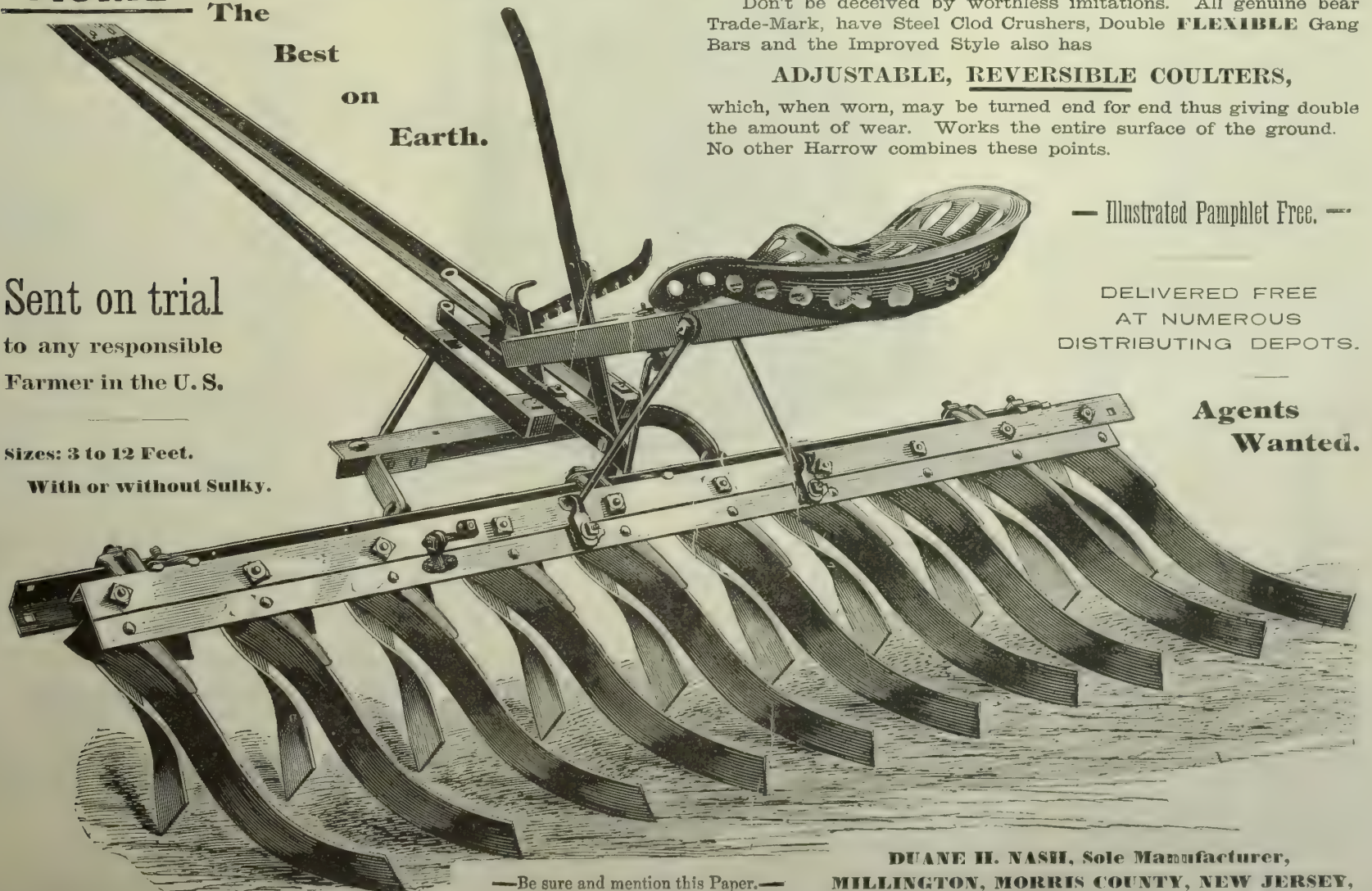
California Bone Meal and Fertilizer Co.,
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"ACME" Pulverizing Harrow, Clod Crusher and Leveler.

The Best on Earth.

Sent on trial to any responsible Farmer in the U. S.

Sizes: 3 to 12 Feet.
With or without Sulky.



Don't be deceived by worthless imitations. All genuine bear Trade-Mark, have Steel Clod Crushers, Double FLEXIBLE Gang Bars and the Improved Style also has

ADJUSTABLE, REVERSIBLE COULTERS,

which, when worn, may be turned end for end thus giving double the amount of wear. Works the entire surface of the ground. No other Harrow combines these points.

— Illustrated Pamphlet Free. —

DELIVERED FREE AT NUMEROUS DISTRIBUTING DEPOTS.

Agents Wanted.

—Be sure and mention this Paper.—

DUANE H. NASH, Sole Manufacturer,
MILLINGTON, MORRIS COUNTY, NEW JERSEY.

SOLD BY
BULL & GRANT FARM IMPLEMENT CO., San Francisco and Los Angeles, and **STAVEL & WALKER**, Portland, Or.

AGRICULTURAL SCIENCE.

Agricultural Experiment Work in California.

Since there has come a new bond of union between the Agricultural Experiment Stations of the country, through the immediate prospect of their being linked together under the auspices of the United States Department of Agriculture, there has been an effort to ascertain just what lines of work are of the greatest importance in the different States. Prof. Hilgard recently received a circular from a committee of Eastern managers of experiment stations asking a statement of this kind of work in California. As the points he makes will be an aid to our own people to understand better the work to be carried on in this State, we give below the points made by Prof. Hilgard in his statement:

1. In view of the great diversity of soils and climates in the State of California, it is of the utmost importance that the experiment station should be in possession of all the data needed to make intelligent recommendations in response to questions and inquiries of all kinds that are continually addressed to it, more especially in relation to the value and adaptation of lands to certain cultures. This necessity having been felt from the very beginning of its work, the original basis of the latter was that properly belonging to an agricultural survey, made with a view to the collection of data for a complete description and soil map of the State. This work is still kept steadily in view, but the pressing demand for special work in elucidation of questions of immediate practical importance has in a large degree overlaid it. Early in its history (1877) the station issued a bulletin giving directions for the taking of representative soil samples, accompanied by accurate descriptions of the natural features of the region concerned. The examination, and when desirable the analysis of samples so furnished (now amounting to over 1000), has served as the basis for the classification of the lands of the State. It is intended to continue and amplify this work as rapidly as the financial resources of the institution will permit, and to practically confirm the accuracy of the deductions so obtained by the establishment of outlying culture-experiment stations in the several climatic subdivisions of the State.

2. Parallel with the investigation of the soils, the examination and analysis of the waters of the State has been pursued with a view to ascertaining their qualities for irrigation as well as domestic and medicinal use.

3. In direct connection with the last subject the investigation of "alkali lands" requires continued attention, with respect to their composition, mode of reclamation and culture plants adapted to their conditions.

4. The examination of samples of rocks, marls, gypsum and other materials connected with agriculture also forms an important portion of this work, while on the other hand, the examination of artificial or commercial fertilizers is but little called for, since as yet these fertilizers are but sparingly used and no fertilizer-control is exercised by the State.

5. The examination (including analysis when necessary) of agricultural products of various kinds, such as sugar beets and the by-products of sugar-making therefrom, watermelons, oranges, lemons, etc., from different varieties and localities, has been, and will continue to be, part of the station-work as occasion may demand.

6. Because of the lack of a State Entomologist to undertake the identification of economic insects, to study the life-history of new insects and of known ones which show variation in life-history because of the different climatic conditions prevailing here.

7. To devise and test the efficacy of insecticides and to test preparations submitted for that purpose by their inventors.

8. To introduce and propagate for distribution fruit varieties and plants of economic value from the various sub-tropical countries of the world.

9. To keep accurate local meteorological records and to conduct investigations to determine the effects of the diverse meteorological conditions which prevail in this State upon the growth of fruits and economic plants.

10. To plant and maintain plantations of forest trees, and to note carefully the growth and character of all obtainable species thereof to determine their adaptations to different conditions of soil, rainfall and temperature, to the end that lists can be prepared which can be commended to planters in different regions of the State.

11. To make special investigation into the adaptation of forage plants and grasses to successful growth in our arid regions, and so far as possible to determine the food value thereof.

12. To determine diseases attacking livestock, and suggest remedies therefor.

13. To study fungoid diseases of plants and determine conditions which affect their growth, and to prescribe remedies therefor.

14. To aid in the identification or correct naming of fruit varieties, by the maintenance of a standard collection, and by the determination of samples sent in for the purpose by

producers. Of particular importance in respect to grapes.

15. To maintain a standard collection of seeds, and to conduct tests of commercial seeds as to purity and germinating power.

16. Of special cultures needing close and extended investigation, viticulture and wine-making is the most prominent. Between 300 and 400 varieties of grapes have been introduced into the State and planted quite indiscriminately; moreover, the processes of wine-making are but very imperfectly practiced. It is therefore necessary

17. To establish vine culture stations in the various distinct climatic regions of the State, with a view to testing their adaptation, bearing qualities and the character of the product.

18. To obtain from these stations, or from the vineyards of residents, samples of the various vines fruited, for experimental wine-making, so as to determine, from the composition and other characters of the must and wine, what varieties produce the most desirable results, in view of the commercial demand.

19. To make experiments upon the methods

Ladies' Costume.

The illustration on this page shows an elegant ladies' costume. The costume is commendable for rich and inexpensive textures, and is here shown developed in havane-brown craped-surfaced suiting, darker brown velvet and white Surah. The foundation of the gracefully hanging skirt is in the popular four-gored style, and the draperies are arranged upon it so as to completely conceal the gores, with the exception of a narrow V at the left side. Upon the front and sides of the skirt are disposed three flat panel draperies, the panel upon the right side gore being of velvet and overlapping the adjoining edge of the center panel at its hemmed front edge, and the panel upon the left side overlapping the adjoining edge of the center panel only at the top. Both side panels are included in the side-back skirt seams, as are also the front edges of the back drapery, the bouffant pose of which results from a gathering



LADIES' COSTUME.

of fermentation best adapted to the several varieties of grapes and (in view of climatic conditions) to the local conditions of each region and upon the after treatment of such wines.

20. To examine and report upon samples of wines submitted by producers and dealers, whether as to purity or the faults resulting from improper treatment, and to suggest remedies for the latter.

COAL OIL VS. WHALE OIL.—Whales were destroyed to such an extent before coal oil was discovered that they seemed destined to be utterly destroyed in all of the seas and waters on the globe where they were found. They were captured for whalebone as well as oil. Cheap coal oil has caused a great increase in the whales in all of the old whaling-grounds. Coal oil has run whale oil out of the market.

"J. H. F." WRITES OF THE RURAL PRESS: "I have taken it on the principle I would entertain an old friend, having started with its first publication and considered it indispensable to the farmer, as well as for its intrinsic worth and its high moral influence."

across its top, downward-turning plaits in its side edges near the top and tackings to the skirt breadth. White silk passementerie ornaments almost cover the front panel, and the brown-and-white combination is especially well brought out.

The fronts of the basque open upon a vest of white surah that is inserted between them in Breton style with buttons and buttonholes in a fly. Double bust darts, narrow under-arm and side-back gores and a well-curved center-back seam are employed in adjusting the body, the back skirt falling in postilion fashion in pleasing contrast with the high arching sides and the triple points of the front and vest. Upon the coat-shaped sleeves are an epaulette and wrist ornament of passementerie, and three passementerie ornaments of graduated sizes are placed upon the fronts above the bust. At the neck stands a high collar formed of two sections across the vest, one being of white surah and the other of velvet.

Braid passementeries are among the garnitures voted strictly a la mode, and are obtainable in an assortment of designs, including plaques, arabesques, pastilles, medallions and

disks. V-shaped portions, collar lengths, epaulettes and gore portions are shaped according to the positions they are to occupy. When gilt or silver passementeries are chosen, their effectiveness is enhanced by arranging them upon a velvet background, irrespective of the use of velvet in the remainder of the toilet. Costumes like this may be developed in any two varieties of dress goods, and sometimes the body will differ entirely from the skirt. Corduroy and velvet basques will accompany skirts of cloth or wool goods, or silk skirts will have dress bodies of fine habit cloth.

The hat is a variation of the Boulanger shape. Its brim is faced with velvet, and its garniture includes a ribbon bow, two wings and a fancy coq feather.

SAGACITY OF A GULL.—A curious incident occurred recently on one of the bridges crossing the river Limat, which flows through the city of Zurich, illustrating the sagacity of the gulls or terns frequenting some of the Swiss lakes. A gentleman who, for amusement, was in the habit of feeding these birds with the refuse of meat, which they are very fond of, had his hat knocked off into the rapid current below by one of the more eager gulls hovering around. The lookers-on laughed at the mishap, and a boat was about to be put out into the stream to secure the trophy, when, to the surprise of every one, a gull was noticed to dart down upon the floating hat, and, after several ineffectual attempts, succeeded at last in rising with it in its beak, and flying toward the bridge, to the astonishment of every one, dropped the well-soaked hat where the bystanders at once secured it for its owner.—Dumb Animals.

Mr. Burke's Belief in Holsteins and the Rural.

EDITORS PRESS:—My advertisement of Holsteins for sale in your stock columns having elicited a number of letters from breeders who thought that I had gone out of the business, and that my advertisement in your columns was merely forgetfulness on my part in not taking it out, I desire to state that I am still in the Holstein business, and have on hand a large recent addition of Netherland and Aaggie bulls.

As heretofore advertised in your columns, I held auction sales in Sacramento and Stockton, with a view of reducing my herd, as owing to the sale of 1050 acres, to Leland Stanford, of land formerly farmed by me, I had to reduce my stock. I have, however, over 80 head now on hand, and as they are calving at the rate of at least one a day, I feel it imperative to name an early date for another sale, which will take place some time during March and will be duly announced in your advertising columns.

I have during the past quarter sent a number of Holsteins, which are gradually becoming more popular with breeders, to men all over the coast, recently sending 4 head to British Columbia, 16 head to Oregon and 5 to Central America. My celebrated prize-winning cow, Lena Wit Menlo, went to Los Angeles, and I would not have parted with her at any figure had I not calves on hand out of her. I have to thank you for her sale, as the magnificent cut of her in your paper of some months ago undoubtedly called renewed attention to this wonderful cow.

Keep my advertisement in, and consider that it is a permanent fixture in your stock columns as long as I have a single hoof for sale. I have advertised extensively, both by letter and daily papers, but consider my few lines in the RURAL as paying me better interest than anything in which I have lately invested, not even excepting the Holsteins. In a few weeks I trust to be able to give you the yearly records of my Holstein cows, both in milk and butter.

Trusting that with the new year the good work of the RURAL may go on with as great vigor and profit to the stock-raiser as it has in the past, I remain, on the advertisement question, your debtor.

Menlo Park, Cal.

FRANK H. BURKE.

Ongerth's Tree Protector.

WOODIN & LITTLE, Agents, 509 and 511 Market St., San Francisco, Cal.—GENTLEMEN: In reply to yours of the 29th ult., as to effects of your Liquid Tree Protector on the tree you treated for me last April, I would say that where the wash was applied the insects of all sorts are certainly killed. The wash is still on the tree, and the bark under it shows a healthy and lively appearance. I was afraid for awhile that owing to its gummy feeling and appearance the pores of the bark might be closed to the great detriment of the tree, but so far I am glad to say there have been no indications of any ground for my fears. I am so well satisfied of this that I shall entirely paint the trunks and larger branches of all my trees with your preparation this winter.

I would add that your Grafting Compound is the best preparation I ever saw for covering wounds on trees, and it is apparently not affected by any sort of weather. Yours very truly,

R. D. FOX,

Proprietor Santa Clara Valley Nurseries, San Jose, Dec. 5, 1887.

Buena Vista Rancho.

This fertile tract of land, containing 7725 acres, has been platted into 60 farms suitable for mixed farming and fruit growing. It is four miles from Salinas City, Monterey County, and will be sold at low prices and on liberal terms. Address J. C. Hoag, 312 Van Ness avenue, San Francisco, or Tyler Beach, San Jose, Cal.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,

T. A. SLOCUM, M. C., 181 Pearl St., New York.

SAN FRANCISCO:
Junction Market, Pine and
Davis Streets.

MANUFACTORY: Benicia Agricultural Works, Benicia, Cal.

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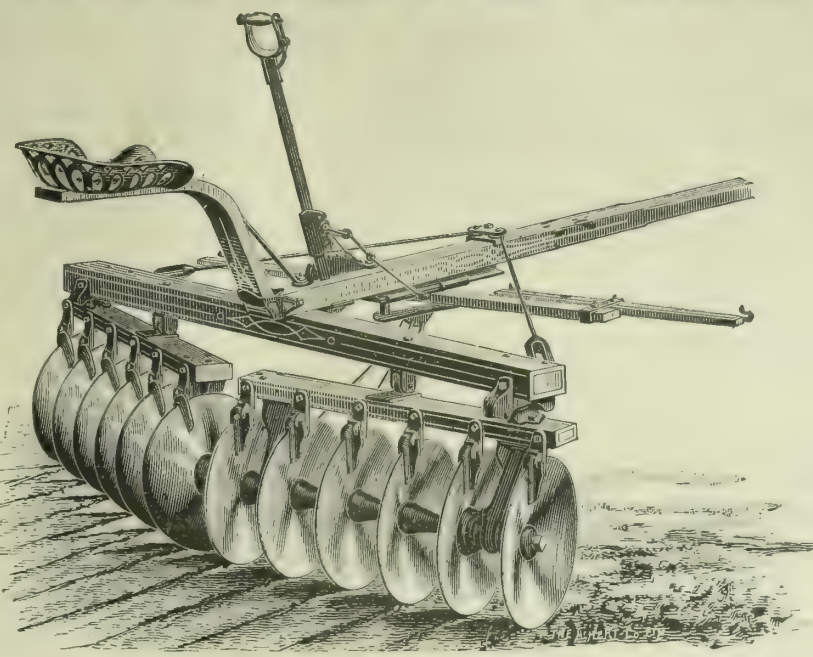
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Nos. 9, 11, 13, and 15
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EASTERN OFFICE: 88 Wall Street, New York.

REASONS WHY THE CLIMAX HARROW IS THE BEST IN THE MARKET.

1. The driver is seated high up out of the dust.
2. The seat is adjustable and the main cross-beam affords a secure and convenient rest for the feet.
3. While the driver is on his seat the gangs can be adjusted to any angle desired, without the driver exerting any power.
4. The power of the horses in starting sets the gangs to any angle desired, so that a child that can drive can operate the machine as well as a man.
5. Either gang can be arranged to set at a greater or less angle than the other gang, so that any side draft upon the pole, caused by using three horses abreast, can be overcome.
6. The gangs are not connected, therefore vibrate independently.



REASONS WHY THE CLIMAX HARROW IS THE BEST IN THE MARKET.

7. It can be knocked down for transportation, in a few seconds, without loosening a bolt.
8. It has the only perfect automatic scraper.
9. It has the best three-horse equalizer attachment.
10. It is the strongest and most substantially built, and the best looking disc harrow in the market.
11. It has more good points than all the competing machines combined and none of their weak ones.
12. It is a perfect success, because it does the most work and the best work with the lightest labor on the team, which, at the will of the driver, use their power, and not his, to adjust the gangs.

Descriptive Price List of the Different Sizes of the Climax Harrow:

No. 7, width of cut 6 ft., No. of discs 12, size of discs 16 inches, price \$60.

No. 8, width of cut 8 ft., No. of discs 16, size of discs 16 inches, price \$75.

FARMERS!

If you have any fall land plowed that you wish to put in the very best condition for seeding, with the least possible expenditure of time, labor and money, don't fail to try the CLIMAX HARROW.

If you have any heavy clay soil that bakes into hard lumps, that you wish to pulverize and make as mellow as any ash heap, don't fail to try the CLIMAX HARROW.

If you have any heavy sod ground that you wish to have thoroughly pulverized without turning up the sod, don't fail to try the CLIMAX HARROW.

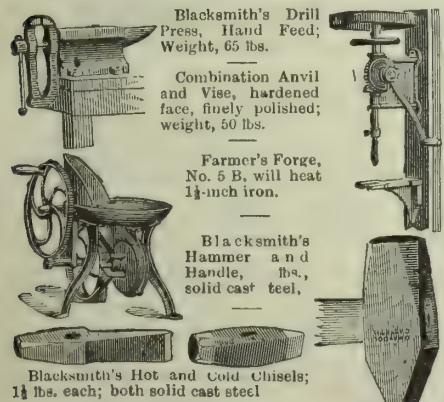
If you wish to put in grain without plowing, on corn stalk or stubble ground, thereby saving much time and labor, and securing a better seed-bed, don't fail to try the CLIMAX HARROW.

If you wish to work your summer fallow in one-half the time that you have done it heretofore, don't fail to try the CLIMAX HARROW.

If you wish to save wearisome miles of traveling after the old drag or cultivator, don't fail to take a ride on the CLIMAX HARROW.

THE SCIENTIFIC KIT OF TOOLS

FOR
Farmers, Dairymen, Stockmen & Machinists



Blacksmith's Drill Press, Hand Feed; Weight, 65 lbs.

Combination Anvil and Vise, hardened face, finely polished; weight, 50 lbs.

Farmer's Forge, No. 5 B. will heat 1 1/2-inch iron.

Blacksmith's Hammer and Handle, lbs., solid cast steel.

Blacksmith's Hot and Cold Chisels; 1 1/2 lbs. each; both solid cast steel.

Blacksmith's Tongs, Wrought Iron, 18 inches.

Screw Plates, 3 Taps, 3 Set Dies, cut 1/2, 3/4 and 1 inch.

Farrier's Knife.

Farrier's Pincers, Cast Steel; 12-inch.

Shoeing Hammer and Handle; weight, 9 oz.

EVERY TOOL GUARANTEED,

And we offer this complete

OUTFIT FOR ONLY \$25.00

Which is hardly half the regular prices, and none can afford to be without this set. Orders by mail promptly filled. Address,

G. G. WICKSON & CO.,

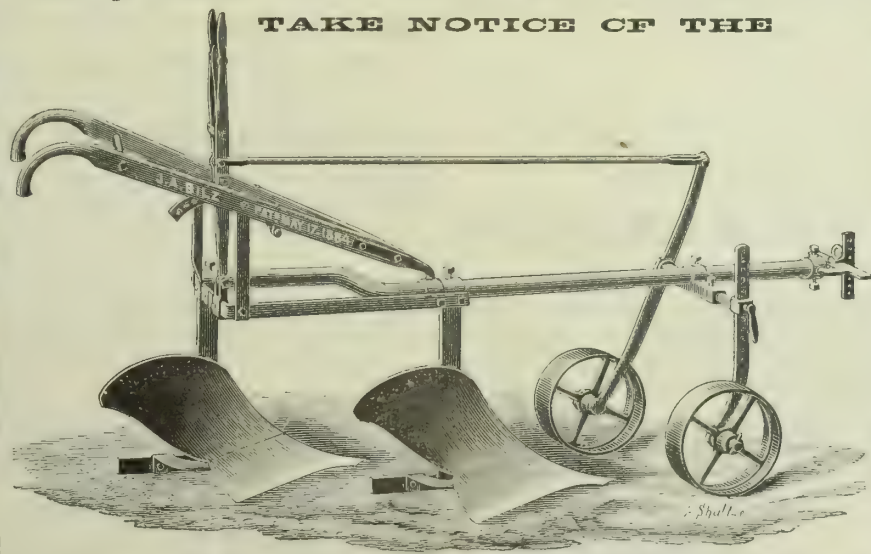
Nos. 3 and 5 Front St., San Francisco

941 HIDDEN NAME CARDS, press pictures, postals, games, etc., album covers, and the largest and finest sample book of new style cards ever issued. All for a 2-cent stamp. Ocean Card Works, Station 34, Cal.

THE DOG in health, habits and disease. All breeds and treatment; 50 cuts; 25c. This office.

Vineyardists, Orchardists & Farmers!

TAKE NOTICE OF THE



J.A. BILZ 2-Horse Gang & 1-Horse Plow

Which the Cuts Represent. Patented October 19, 1886.

First Premium Awarded at Mechanics' Fair, 1887.



These Plows have been in market for the past two seasons, and those that use them would not do without them at any price. All claim to save from \$2 to \$2.50 per day over any other plow. Not only for orchards and vineyards, but also for field plowing, where a two-horse single plow is used.

The Plow cuts 18 inches, weighs 160 pounds, and two horses will pull it as easily as a 12-inch plow, and does better work than a single plow. No trees are barked and sticks in vineyards pulled over where my Patent Double-trees and Singletrees are used. For Extra Shares send to me.

I ALSO MANUFACTURE ALL STYLES OF

CARTS, BUGGIES, SPRING WAGONS, CARRIAGES

AND ALL KINDS OF

VINEYARD AND AGRICULTURAL IMPLEMENTS.

Send for Testimonials and Circulars. Address

J. A. BILZ, Pleasanton, Cal.

AGENTS:

TRUMAN, HOOKER & CO., 427 Market Street, San Francisco, Cal.

M. KIRSCH, Walnut Creek, Contra Costa Co., Cal.

LIGHTNING HAY KNIFE

This OLD and RELIABLE KNIFE continues to gain in public estimation, and is POSITIVELY THE BEST

Hay Knife known for cutting HAY and SPOW from the Mow, Stack or Bundle. It is a rapid, easy cutter, the blade of the best quality of cast steel, spring tempered, and it is easily sharpened by grinding on the corner of a common grindstone. The invention patented by WEYMOUTH is a sword-shaped blade provided with operating handles, the edge of the sword blade being provided with knife-edged serrations or teeth. We hereby CAUTION all persons interested against buying or selling knives bearing above description, other than the genuine "Lightning," as we shall prosecute all infringements to the full extent of our ability and the law.

For sale by the Hardware trade generally.

THE HIRAM HOLT COMPANY,
EAST WILTON, ME.—Oct. 1, 1887.



HORSE POWERS, WINDMILLS, TANKS and all kinds of Pumping Machinery built to order. Awarded Diploma for Windmills at Mechanics' Fair, 1885. Windmills from \$65. Horse Powers from \$50. F. W. KROGH & CO., 51 Beale Street, San Francisco.

CLARK'S CUTAWAY HARROW



Supersedes the plow; beats the world; ground made into a perfect seed bed; has a seeding attachment for sowing all kinds of grain. Send for new circular with full description, FREE. Address HIGGANUM MFG. CO., Higganum, Conn. or 189 and 191 Water Street, New York.

A. F. JONES, President.

FRANK McLAUGHLIN, Vice-President.

E. W. FOGG, Treasurer.

H. C. HILLS, Secretary.

Thermalito Colony Comp'ny

INCORPORATED DECEMBER 31, 1887.

THE HOME OF THE ORANGE, OLIVE, VINE & FIG.

— ONLY —

429 LOTS LEFT. 429 LOTS

In this famous Colony Tract out of 1440 lots offered for sale June 8, 1887, and but 250 lots remaining in the Association in which an investment of only \$360 is SURE to secure you an admirable town lot 50x150 feet, and may secure a HOTEL now being erected at a cost of \$20,000. Eleven chances to secure a cottage worth from \$875 to \$2500; ten chances for 10-acre lots; 90 chances for 5-acre lots; 50 chances for 2-acre lots; 50 chances for 1-acre lots; 100 chances for lots 90x160 feet, and 200 chances for lots 50x150 feet. Terms easy; \$30 cash and balance in monthly installments of \$15.00 per month.

THERMALITO

Offers the following advantages which no other Colony offers:

1. The most healthy location in Butte County, outside of the mountains. This is substantiated by the fact that a location for the Butte County Infirmary was selected there by prominent and well-posted citizens.
2. The soil cannot be surpassed for fruit culture, being a rich, red, gravelly loam, strongly impregnated with mineral and from 6 to 20 feet deep, and has 10,000 flourishing orange trees from one to ten years old on the tract.
3. Its water supply and facilities are unequalled, its supply being 3600 inches, and conducted in PIPES on the tract under a pressure of from 75 to 150 feet, which is sufficient not only for irrigation, but for fire and household purposes. This water is furnished FREE FOR THREE YEARS, and after that at the low rate of ten cents per inch (miners' measurement) for 24 hours.
4. The value of the land is rapidly increasing. It is now offered at \$100 per acre, while much of it has been resold at \$150. The owners of the tract cannot raise the price above \$100 without violating their promise made to the public six months ago, and they have steadfastly refused to break any promises, no matter how the boom may affect the land. Terms of sale: One-third cash, one-third in one year, and one-third in two years at 8 per cent per annum.
5. The Company is spending over \$100,000 in improvements of their own money, and hesitate at no outlay that will prove advantageous, and FURNISH LABOR on the tract for purchasers, and will plant and care for your groves at cost.
6. The location of the tract for scenery is unsurpassed. It has gained the name of "THE BEAUTIFUL," and justly so; it is also called "Wonderland."

All we ask is to COME AND SEE for yourselves. The Company is at all times ready to take you to the tract, and invites inspection. Address

THERMALITO COLONY COMPANY, Oroville, Butte County, California.

PALERMO LAND & WATER CO.

DIRECTORS.

GEORGE C. PERKINS.
C. W. McAFEE.HENRY WISE.
A. S. BALDWIN.

D. K. PERKINS.

Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES
At \$75 per Acre,

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. Maps and further particulars of

McAFEE BROTHERS, Agents, 10 Montgomery St., San Francisco.

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A NEW COLONY

On the new extension of Southern Pacific Railroad, on the lands belonging to R. T. BUELL, Esq., near Los Alamos, Santa Barbara county, Cal. Parties desiring to visit the property now, can go via San Luis Obispo and take the cars from thence to Los Alamos, thence by stage to the Colony. 20,000 acres of the best lands in California, subdivided into 20, 40 and 80-acre farms; \$20 to \$30 per acre. INTERNATIONAL IMMIGRANT UNION, 401 California St., San Francisco

GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, "EXCHANGE AND MART," Santa Cruz, Cal.

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RICH FURNITURE,

ELEGANT UPHOLSTERIES.

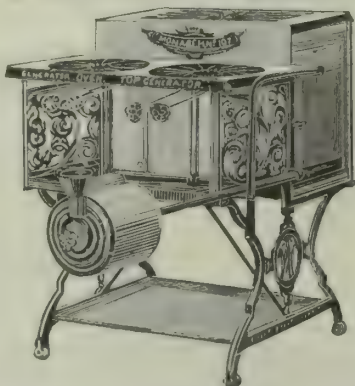
CHAS. M. PLUM & CO.,

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1301 to 1307 Market St., cor. 9th, S. F.

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MONARCH GASOLINE RANGES

ARE THE BEST.

Gasoline Stoves, \$5 to \$35. Gas Stoves, 75 cents to \$35. Oil Stoves, 75 cents to \$30.

WOOD AND COAL RANGES.—Royal, No. 6, \$16. No. 7, \$20. Pacific No. 6, \$18. No. 7, \$25. Lamps, 20c. to \$10. Hanging Lamps, \$2 to \$20. Agate Ware, Tin Ware, and Kitchen Ware at low prices.

JOHN F. MYERS & CO.,

Opp. Baldwin Hotel, 883 Market St., S. F.

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AGENTS: LARGE NEW-STYLE SAMPLE BOOK. (Free.) General Editor: Holden. Name: (Send money, Pictures, Fun, Interest and Transportation Cards with agent's full outline for a Costamp. JONES & CO., CARD, O.

SANTA YNEZ,

Santa Barbara County, California.

THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil. TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for colonies or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

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HOMES and RANCHES!

E. TUCKER,

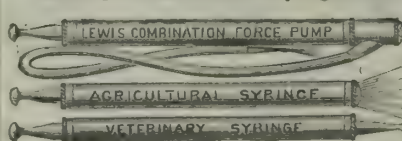
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MYERS ST., OROVILLE, BUTTE CO., CAL.

Improved and unimproved lands to any extent from 5 to 5000 acres with good, comfortable homes and all necessary conveniences, for sale on desirable terms. These lands require no irrigation, Railways convenient, ample supply of water, and the climate cannot be surpassed. Apply as above.

Reliable Agents Started in Business Without Capital!

Write for Particulars. My Agents are making \$5, \$10, \$15, \$20, \$25, \$30 per Day



Selling LEWIS' COMBINATION HAND FORCE PUMPS. It makes 3 complete machines. I have agents all over the United States who are making \$10 to \$30 per day selling these pumps. I give their names and addresses in catalogue. To introduce it I will send a Sample Pump, express paid, to any express station in the U. S. for \$5.50. Made of brass; will throw water from 50 to 60 feet, and retails for only \$6. Indispensable for spraying fruit trees. The Potato Bug Attachment is a wonderful invention. They sell rapidly.

AGENTS WANTED EVERYWHERE. Send at once for illustrated catalogue, price list and terms. Goods Guaranteed as Represented or Money Refunded. Address LEWIS & COWLES, Catskill, N. Y.

The American Horticulturists in California.

(Continued from page 68.)

building was in more gorgeous array than we ever saw it before, which is saying a good deal. In decorative art, in emblematic expressions of welcome and of California's glories and in the display of products, this year's Citrus Fair is a grand success. Of the features of the decoration and display we shall write in later issues.

During the formal reception the large seating capacity of the hall was inadequate, and throngs of people filled the aisles and overhung the gallery railing, presenting a scene as viewed from the stage of rare interest. The stage was filled with the guests and the officials of the city, and local organizations. Hon. Cyrus Jones, president of the Horticultural Hall Association, opened the exercises by announcing Hon. C. W. Breyfogle, Mayor of San Jose, who delivered an address of welcome. He was followed by Hon. Judge Myrick of the Supreme Court in a very appropriate address, continuing the welcome, and making many timely allusions which were duly appreciated. Responses on the part of the visitors were made by Prof. Ridpath of Indiana, and by President Earle, both of which were pointed and well received. After the formal exercises, the delegates became the guests of the people at large and were entertained in conversation and in viewing the exhibits until a late hour.

It must be a matter of general satisfaction that the meeting opens so well. It will be continued in like spirit by visit and excursion until the close at Riverside, which will be a grand finale, and the guests will depart, we doubt not, full of California and its prosperity and prospects, and ready to spread its fame as those only can do who have actually seen that of which they talk and write.

It is now probable that the visitors will pass Sunday at Del Monte, then to Santa Cruz, up the S. P. C. R. R. to San Francisco, thence through the Napa valley to Sacramento, Chico, Red Bluff, Redding, and the territory around Oroville. They will then go to Riverside, where the succeeding session will be held, Feb. 8th, 9th and 10th.

Our subsequent reports will contain the points in essays and discussions which will be of widest interest to California fruit-growers.

W.

Frost Effects in Butte and Yuba.

MARYSVILLE, Jan. 21.—In response to an inquiry, D. J. Perkins, a prominent merchant of Oroville, furnishes the Marysville Appeal the following statement:

OROVILLE, Jan. 20, 1888.

Confirming our promise of yesterday, a committee of three intelligent gentlemen was this morning selected to make a tour of the town and surroundings to ascertain the extent of the damage from frost, if any, to the young citrus-fruit trees recently set out in this locality. Their report is as follows: The young Washington Navel trees are uninjured, save to the extent of the nipping of the tops of the tender shoots of fall growth, and in no other way can the slightest damage be detected. The shoot or growth of the seedlings, the age of which varies from four to twelve months, is not in the least affected, so far as the stock is concerned, the foliage being but slightly wilted. The warm rain now prevailing seems to be drawing out the frost and the foliage is brightening up to its former beautiful green.

The committee report the leaves of lemon and lime trees considerably wilted, but that the body or the trunk of the trees is in no way affected.

The same committee, accompanied by other representative men of this section, this afternoon visited the grove of the Citrus Association and made a careful and critical examination, and report that in no case can they discover where trees have in the least been injured. The Superintendent of the Association confirms the opinion of the committee, and adds that the effect of the frost upon the last growth will be beneficial to the trees, claiming that when the sap rises, it being deprived of its new and natural channels, will go into the old growth and have a tendency to greatly augment the fructification of the trees.

We say unhesitatingly that so far as our examination has been made, we fail to discover any serious damage. Opinions are divided as to whether the fruit remaining on the trees is frozen. We are of the opinion that it is.

We are having numerous inquiries from all parts of the United States concerning our soil, climate, etc., and also have quite a number of strangers here who seem deeply and favorably impressed with our surroundings, and have made purchases of land during the frosted period.

D. J. PERKINS.

In Marysville and the surrounding country the damage to orange and lemon trees from the recent cold snap seems confined to the foliage and wood of last season's growth. Some trees lost many leaves, but in no case, so far as we have heard from, has the old wood been affected. In one orchard of 100 orange trees two years old, when planted last spring by Abbott & Phillips in Sutter county, no protection whatever was given against frost, but not a single tree was killed. The injury is confined to the foliage and new wood.

Thermalito, Butte County, The Western Wonder.

[WRITTEN BY M. C. B.]

On the north and west of Oroville, separated by the Feather river, lies the justly famous colony of Thermalito. The present extent of this grand enterprise is only partially known even to the people of Butte, but the great future of Thermalito is beyond the calculation of even the promoters whose skill, ability and perseverance should command the admiration and commendation of every one interested in the progress of American enterprise.

Here is a large tract of land on which Nature has unsparingly bestowed her choicest gifts, including the three principal elements calculated to enhance the value and desirability of any colony—water, soil and climate. The extent commences at the chief dams of the old Miocene and power ditches fully 35 miles due north, and about 75 miles of ditches carry over 4000 inches of pure mountain water around the base of Table mountain to the well-constructed reservoirs to meet the requirements of nearly 10,000 acres bounded by the hills and Feather river. When we visited the colony, plowmen were engaged in laying out 40 miles of streets and avenues and preparing the soil for a quarter million of orange trees. Active preparations for planting shade trees and erecting dwellings were being made, and on the bluff commanding a full view of Oroville a hotel on a magnificent scale is to be built. Already the work has assumed rapid proportions and must soon be completed and fit for occupation. Considering the location of this colony and the railway accommodation to its door, besides its immediate access to the principal northern railway, thus bringing convenience to the Oregon, Washington and Nevada markets, besides Chicago and the East generally, the importance and success of the colony can be easily imagined.

The soil is unquestionably adapted for citrus fruits, but doubtless other products can and will be raised. In some places we saw fine specimens of soil, and corn and vegetables are produced with less than the ordinary care and labor. The water supply is ample for 10,000 inhabitants, and the plan of placing it in every house and cottage well arranged.

The climate cannot be surpassed, never too hot and never too cold. On the 2d of January, when the storm swept over Mount Hamilton at the rate of 75 miles an hour, not an orange dropped from the trees in Thermalito on that memorable night, and early next morning the sun rose with majestic splendor, casting his golden rays on the oranges growing in profusion, reflecting back in beautiful vividness golden hues in the early morning where calmness, beauty and richness dwell in communion. On the 5th of January, when snow fell heavily in California generally and subsequent nipping frosts, the sun rose in Thermalito with his usual morning smile and warm recognition and set beneath the western sky with all the grandeur common to an Italian scene. Pen and pencil fail to describe this infant wonder, and in order to see and judge, a visit to the place is necessary, when the visitor will be amply repaid and find the half was not told.

The foregoing advantages stand not alone. As remarked, the Feather river only divides Thermalito from Oroville, where schools second to none are found. Churches sufficient for all creeds and denominations and accommodating banks with exchanges over the civilized world. We learned the principal promoters of the enterprise are: G. W. Fogg, manager of the bank, Major L. McLaughlin of New York, and Senator A. F. Jones of Oroville. These gentlemen are popular and deservedly so. With the prosperity of Oroville they have been largely identified, and command the respect and esteem not of the people of Butte only, but those far away beyond the Rockies. Evidence sufficient of this can be seen by the straightforward and manly course taken in the sales of property connected with the colony. Boom or no boom, the price from the beginning will be neither increased nor decreased, and a man with \$2000 has facilities of not only having a home by the generous offers held out, but also of earning a livelihood, according to his skill and labor, at from \$2.50 to \$4 per day. To illustrate this upon the statement of the affable manager, A. F. Jones, suppose a workingman with \$2000 comes and buys his tract of ten acres (quite enough for any home), pays down one-third of the price at \$100 per acre and the balance in one and two years. Workmen on the field in a few weeks will give him a house for \$600, thus leaving him over \$1000 to plant his ranch, etc. If he desires it, employment from the start can be procured, whether he be artisan or day-laborer. From all this can be learned the solid fact that Thermalito offers, in climate, soil and other ways, inducements which are not common even to the Golden State.

The Citrus Fair

Which has agreeably surprised so many, including the people of Oroville, had a faithful exhibit of the

fruit produced and raised in Thermalito. Some may think it strange that a colony of only eight months' existence should be capable of making one of the most remarkable exhibits at the citrus fair in Oroville. This, of course, had been explained to our satisfaction, thus: Forty acres were secured so far back as to give a practical proof that the theory then proposed should be practical, and since then to this day the growth of fruits, vegetables, etc., has been far beyond anticipation, so that before the colony scheme came into existence, the promoters were fully alive to the importance of their discovery, and equally prepared to stake their standing and reputation on the honesty and genuineness of the colony enterprise. Consequently, when the fair opened in Oroville, they were prepared to enter into competition with Butte from one extreme to the other, and from the following such might be easily inferred: In the center of the citrus fair tent might have been seen the Thermalito exhibit displayed under the magnificent plane tree, standing 20 feet in height and growing in full vigor. Under its tropical spread is suspended a hammock into which oranges were carelessly heaped; also lemons, pomegranates and other fruit. The nursery exhibit of about 5000 orange plants from seeds sown last spring was viewed with deep interest and fully appreciated. The citrus ladder erected alongside the palm tree was indeed a human contrivance which reflected marked tact and ability on the directors. There were cocoanut, banana, pepper, century plants, with others too numerous to name, and the general opinion of such men as A. T. Hatch, Hon. W. W. Cameron of Oakland, W. A. Rogers of Los Angeles, Byron Murray Jr. of California bank, Hon. A. Yell of Mendocino, with hundreds of others, was and is that Thermalito by nature's decree is the true home of the citrus fruit in its most indigenous form. To-day may be seen in Thermalito such fruits and plants similar to those exhibited, and a visit to the colony will be profitable—in every way desirable, long to be remembered—and productive of much good.

The Woolly Aphis.

WALNUT GROVE, CAL., Jan. 6, 1888.

Mr. Charles J. Woodbury, 123 California St., S. F., Cal.—DEAR SIR: Yours of the 3d inst. to hand last evening. In regard to the Woolly Aphis, I can only give you my experience. When I came here, my apple trees were badly infested with Aphis, so I washed them thoroughly to exterminate and have not seen any signs of the Aphis since, which has been over two years. Yours respectfully,

L. D. GREENE.

I will remark that I have known of no case where my tree-cleaner has not been perfectly successful as an antidote for the Woolly Aphis.

Full directions accompany its use. Price, 3 1/2 cents per pound in cases, 80 pounds in a case; in 8-pound cans same price, 15 cents extra for can. In barrels, 3 1/2 cents per pound, 10 per cent off, 400 pounds in a barrel. I also manufacture the fine Anti-Gumming Farm Machine Oils and General Lubricating Oils.

Address CHARLES J. WOODBURY, 123 California St., S. F., Cal.

Black Scale.

December 29, 1887.

Messrs. Woodin & Little, 509 and 511 Market St., S. F., Cal.—GENTLEMEN: Referring to Prof. Ongerth's Liquid Tree Protector, I desire to say that about two months ago I found quite a percentage of my olive trees infested with the black scale. In some instances the tree was entirely enveloped by a black smut, while the branches, to the very extreme tips of the tender shoots, were covered with the young scale. I sprayed my trees once only with the Tree Protector. The effect was wonderful. It not only completely and entirely destroyed the scale, but it seems to have invigorated the growth of the tree. It is all and more than all you claim for it.

Very respectfully,

THOMAS BECK, U. S. Appraiser.

Gabilan Rancho,

Containing 7665 acres, situated near Salinas City, Monterey County, is offered for sale. For particulars address J. C. HOAG, 312 Van Ness avenue, San Francisco, or TYLER BEACH, San Jose, Cal.

100,000 Fruit Trees for Sale

At reduced prices, consisting of Apple, Pear, Peach, Apricot, French Prune, Walnut and other trees. Palms, Grevillas, Monterey Cypress, etc. Trees are guaranteed to be absolutely free from scale or other insects. MILTON THOMAS, P. O. Box 304, Los Angeles, Cal.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., room 3.

THE beautiful "Princess Beatrice" in colors, adorns the outside of a catalogue of roses and other plants, small fruits and seeds, issued by Hill & Co., Richmond, Ind., and within are many pleasing floral portraits, some of which we hope to show our readers presently.

COX'S SEED ANNUAL for 1888 comes to us in covers gaily decorated by the art of the chromolithographer. For hints of what is contained in its three-score pages, turn to our "Seeds and Plants" column.

Closing out Valuable Live-Stock

The Aurora (Ill.) Beacon says: Geo. E. Brown & Co. announce that it has been decided to close the present partnership under which they have been doing a most successful business for many years. The "Co.," Mr. Chas. Brown of Portland, Me., finding his large manufacturing interests in the East require his undivided attention, and the managing partner, Geo. E. Brown, not caring to continue the business on the immense scale the firm has been doing, they have decided to close out the large stock by April 1st; and to this end will quote very attractive prices to intending buyers. This firm is too well known to our readers to require extended comment from us. When it is considered that at the time Geo. E. Brown commenced this business 14 years ago, Cleveland Bay and English Shire horses and Holstein cattle were scarcely known in this country; that when locating at Elgin in 1875, one carload constituted his entire stock in trade; and that now the stables and yards of this firm occupy more than 10 acres of ground, and 800 acres of rich prairie afford but little more than pasture for their breeding and growing stock, it will be readily conceded that their selections must have been of the best, and that these now popular breeds have supplied a decided want in this country. Were anything further necessary to emphasize the success of Messrs. Brown & Co., it is found in the fact that their stock has always been at the front when exhibited at agricultural fairs, and in several instances nearly swept the board of prizes in spite of the strongest competition. Shrewd buyers wanting first-class stock will not let this opportunity to supply themselves go by. We advise them to send at once for illustrated pamphlet and full particulars. See their new advertisement.

HEAVY losses of cattle by exposure in the recent severe weather are reported from Idaho and Eastern Oregon.

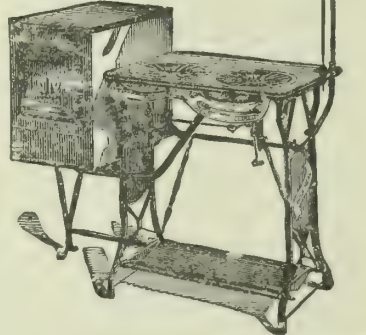
"QUICK MEAL" Gasoline Stoves.

No Smoke, No Soot and Absolutely Safe. Less Expensive to Operate than Wood or Coal Stoves.

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Pacific Coast Agents,
1386 MARKET STREET,
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All Sizes of Stoves. Catalogues Mailed Free.



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44 Third Street, San Francisco, Cal.

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Laundry Free for the use of Families
HOT AND COLD BATHS FREE.

Terms, Board and Room, \$1.00 per Day
And upward.
ROOMS WITH OR WITHOUT BOARD.
FREE COACH TO THE HOUSE
J. POOLEY.

AMERICAN EXCHANGE HOTEL,

319 & 321 Sansome St., San Francisco.
One door from Bank of California.

The above well-known hotel offers superior accommodations to parties visiting the city.

The table is kept at top grade and the prices are within the reach of all.

RATES—\$1.00, \$1.25 and \$1.50 per day.
Free Coach to and from the Hotel.

CHAS. & WM. MONTGOMERY, Prop'rs.

HATCH CHICKENS

—WITH THE—
PETALUMA INCUBATOR.
The Most Successful Machine Made.

3 Gold Medals, 1 Silver Medal, and 16 First Premiums.
Hatches all kinds of Eggs.
Made in all Sizes.

Write us for Large Illustrated Circular Free, describing Incubators, Brooders, Houses, How to Raise Chickens, etc. Address PETALUMA INCUBATOR CO., Petaluma, Cal.

To Dairymen, Fruit-Growers and Farmers!

SITUATION WANTED.

An experienced man, with wife, wants a situation. Understands Dairying, Irrigating, and General Farming. Can give the best of references. Address, H. B., Box 361, San Francisco.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

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P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Pages Station, S. F. & N. P. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Gen. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

JERSEYS—THE BEST HERD—All A. J. C. C. registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands, Angles and Case Strains. Punch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER Saxe & Son, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

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PIEDMONT POULTRY YARDS, cor. Piedmont Ave. & Booth St., Oakland. Wyandottes, L. Brahmas, P. Rocks, Langshans, B. Leghorns, H. B. R. G. Bantams. Eggs \$2 for 13; circular free; Mrs. J. N. Lund, Box 116.

THOS. WAITE, Perkins, Sacramento Co., importer & breeder of thoroughbred fowls of all leading varieties.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, L. Brahmas, Houdans. Eggs, \$2.

H. J. GODFREY, Box 185, San Leandro, Cal. Thoroughbred Plymouth Rocks. Eggs, \$2 per 13.

T. D. MORRIS, Sonoma, Cal. Toulouse and Embden Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

O. J. ALBEE, Lawrence, Cal., breeder and importer.

D. H. EVERETT, 1616 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

E. O. CLAPP, South Pasadena, Cal. Light Brahmas (Williams-Foot stock), Plymouth Rocks (Kieffer-Conger stock). Fowls and Eggs in season. No circulars; write for wants.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

JAS. T. BROWN, 18 Georgia St., Los Angeles, Cal. Breeder of Thoroughbred Poultry of the leading varieties. Send for circular and price list.

SHEEP AND GOATS.

J. B. HOYT, Bird's Landing, Cal., importer and breeder of Shropshire Sheep; also breeds cross-bred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down of Long John Wentworth herd for sale.

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E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

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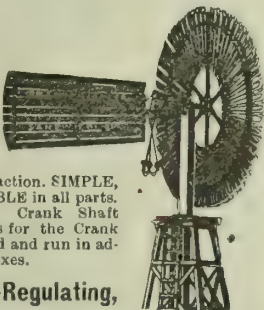
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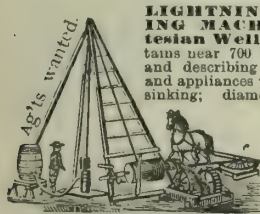
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Soluble Phosphoric Acid.....12.90 per cent
Reverted Phosphoric Acid......95 "
Insoluble Phosphoric Acid.....2.83 "
Potash.....2.23 "
Ammonia.....1.87 "
Nitric Acid.....2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

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University of California, College of Agriculture. BERKELEY, Nov. 20, 1886.

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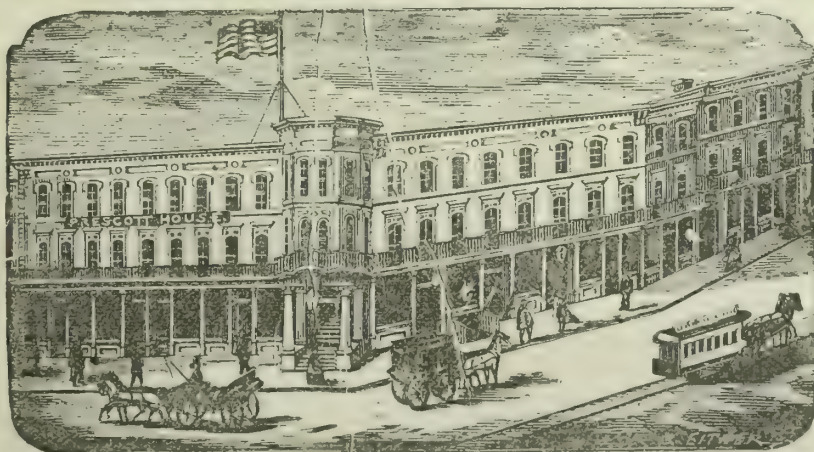
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Jan. 25, 1888.

The long deferred and anxiously looked for rains and milder weather vouchsafed to put in an appearance on last Thursday, and have continued to this writing, although the last two days the sun has been playing bo-peep between showers. Outdoor work is very general and everything has a more cheerful appearance. Trading in farm products begins to show signs of revival as distant orders are coming in. The foreign cereal market shaded off, but closed, as reported by private cable, strong. The following is to-day's semi-public cable:

LIVERPOOL, January 25.—Wheat—Quiet but steady. California spot lots, 6s 6½d to 6s 9½d; off coast, 33s 6d; just shipped, 34s 3d; nearly due, 33s 9d; cargoes off coast, quiet; on passage, buyers hold off, hoping to obtain some concessions; wheat on passage to Continent, 142,000 qrs; wheat and flour on passage to U. K., 1,381,000 qrs; wheat and flour in Paris, quiet.

Eastern Grain Markets.

CHICAGO, Jan. 25.—P. M.—Wheat, easier; cash and Feb., 75 5-8c; May, 81 3/4c. Corn, easy; cash and Feb., 47 3-4c; May, 52 11-16c. Oats, steady; May, 33 3-16c. Barley, nothing doing.

NEW YORK, Jan. 25.—12 M.—Wheat, 90 3-4c for cash, 89 1/4c for Jan., 89 1/4c for Feb., 90 1/4c for March, 91 1/4c for April, and 92 1/4c for May.

Eastern Wool Markets.

NEW YORK, Jan. 24.—There is an active business in Boston and Philadelphia imports—an encouraging feeling to sellers here. Buyers at this point, however, do not seem to have large wants, and do not avail themselves of what all agree to be cheap, safe prices. The sales include 28,000 lbs of spring California at 10c; 100 at 10 1/4c; blood, 150,000 lbs washed combing at 37c; 20,000 lbs at 37 1/4c; unwashed combing, 28c; 1000, 28 1/4c; blood do, 24c; 25,000 XX, 31 3/4c; 5000, No. 1 scoured, 27c; 25,000 Oregon, 18 1/2c; 50,000 Territory, 19 1/2c; 20,000 fall Texas, 14 1/2c; 17,000 scoured do, 45c; 50c; 10,000 super pulled, 35c; 5000, super extra, 31c; 20,000 black pulled, 26c; 16,000 domestic mohair, 24,500 wool, including 34,000 scoured California and 113,000 Canadian, 30 bales foreign on private terms, and 150 bales East India, 13 1/2c to 14 1/2c.

Miscellaneous.

NEW YORK, Jan. 24.—Beeswax sold at 21 1/2c. The raisin market was quiet, but sales of the best marks were very firm.

Salmon sold at \$1.90 @ 2; Columbia, \$1.65 @ 1.75. Mustard seed was quiet at 3 1/2c @ 4 1/4c; Yellow, 4 1/4c @ 5c.

Hops seem to have got into chronic inactivity, and prices remain unchanged.

Some fine samples of crystallized sorghum have been shown, and confidence is expressed in future commercial values.

Local Markets.

BAGS—The pool and also those who are heavily loaded with bags are already crying up the crops so as to get higher prices for bags. The quantity in the country carried over from last season is very large. The pool asks 7 1/2c for June-July delivery, but outside operators ask 7 1/4c @ 7 3/4c.

BARLEY—The market for sample parcels of bright, choice feed and brewing is very strong. There is an overstock of poor which is pressing for sale; even this at the close is in better tone. On Call, trading in futures has been active. The bears hammered prices down, but on Tuesday the bulls turned the tide and the market closed very strong. The following are to-day's sales on Call:

Morning Session: Buyer season—200 tons, 87c; 200, 87 1-8c; 500, 86 1/2c; 700, 86 1/4c. Buyer 1888—500 tons, 91 1/2c @ 1. Afternoon Session: Buyer season—200 tons, 86 1/2c; 100, 86 5-8c; 200, 86 1/4c @ 1.

BUITER—Rains and milder weather have created an easier feeling. Receipts are no larger, but buyers are more offish.

CHEESE—New mild cheese continues scarce. For old, some shading is reported so as to work off stock.

EGGS—Under lighter receipts, prices stiffened some, but the higher range is thought to be only temporary or until receipts increase.

FLOUR—The market is fairly active at unchanged prices.

WHEAT—The sample market did not go below \$1.37 1/2 for fair No. 1, while choice sold higher throughout the week. The market has a strong tone, owing to the lower rates ruling for charters. In options, trading has been fairly active. Prices were hammered down by the bears, but recovered Tuesday, under heavy buying orders. The following are the sales reported on to-day's Call:

Morning Session: Buyer season—100 tons, \$1.42 1/2; 900, \$1.42 1-8; 1500, \$1.42 @ 1. Afternoon Session: Buyer season—100 tons, \$1.41 1/2; 200, \$1.41 1/2 @ 1.41 1/4 @ 1.41 1/2 @ 1.41 1/4.

[COMMUNICATIONS]

Market Information.

Cereals.

The following is the Department of Agriculture's estimate of last year's wheat crop:

States and Territories.	Acres.	Bushels.
Maine.....	39,460	481,000
New Hampshire.....	10,485	110,000
Vermont.....	21,581	320,000
Massachusetts.....	1,080	16,000
Rhode Island.....	.....	.....
Connecticut.....	2,171	37,000
New York.....	666,883	10,137,000
New Jersey.....	143,083	1,459,000
Pennsylvania.....	1,421,151	13,785,000
Delaware.....	94,790	929,000
Maryland.....	502,836	5,797,000
Virginia.....	635,838	4,832,000
North Carolina.....	717,442	5,094,000
South Carolina.....	192,637	1,233,000
Georgia.....	382,094	2,522,000

Florida.....	.....	.....
Alabama.....	207,115	1,305,000
Mississippi.....	41,770	313,000
Louisiana.....	.....	.....
Texas.....	544,977	5,450,000
Arkansas.....	231,357	2,290,000
Tennessee.....	1,199,400	9,595,000
West Virginia.....	302,177	2,840,000
Kentucky.....	1,089,493	11,113,000
Ohio.....	2,740,087	35,895,000
Michigan.....	1,629,467	21,672,000
Indiana.....	2,802,083	37,828,000
Illinois.....	2,425,092	36,861,000
Wisconsin.....	1,268,208	13,063,000
Minnesota.....	3,129,208	36,299,000
Iowa.....	2,683,676	26,837,000
Missouri.....	1,712,603	27,744,000
Kansas.....	792,394	7,607,000
Nebraska.....	1,642,127	10,585,000
California.....	2,761,235	30,429,000
Oregon.....	920,026	16,109,000
Nevada.....	5,570	111,000
Colorado.....	119,709	2,514,000
Arizona.....	303,000	303,000
Dakota.....	3,664,737	52,496,000
Idaho.....	64,015	1,120,000
Montana.....	97,786	1,760,000
New Mexico.....	81,372	1,221,000
Utah.....	103,738	1,971,000
Washington.....	463,610	8,345,000
Wyoming.....	.....	.....

Totals.....37,641,783 456,329,000
Average yield per acre, 12.12.

The yield of this State is placed fully 6,000,000 bu. too high. Referring to the estimate, the New York Produce Exchange Reporter says: We think the California crop was under 30,000,000 bu., and that of Ohio under 33,000,000 bu. The estimates of Indiana and Illinois are too high, also of Pennsylvania and States south of this parallel. Michigan, we think, did not exceed 20,000,000. Opinions from well-informed millers all over the winter wheat States most invariably are adverse to the Government estimates. It is not usual to find business men so generally take exceptions to the Government's crop reports, but a few weeks' time will very certainly settle the question. If the wheat is in the country, higher prices will draw it out freely. The movement at the Northwest this week has fallen off greatly; this is not due to the storms alone, but to the fact of farmers having sold the major part of their surplus in November and December, now hold moderate stocks.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to Jan. 21, '87.	July 1, '87 to Jan. 21, '88.
Flour, qr. sks.....	2,741,510	2,106,981
Wheat, cts.....	9,471,318	5,377,371
Barley, cts.....	1,825,214	1,646,045
Oats, cts.....	109,303	132,845
Potatoes, sks.....	599,409	735,604
Corn, sks.....	58,361	137,807
Rye, sks.....	14,909	14,921
Buckwheat, sks.....	4,707	1,462
Beans, sks.....	372,763	339,297
Bran, sks.....	289,982	292,094
Hay, tons.....	64,631	74,151
Salt, tons.....	14,583	10,260
Wool, bls.....	45,096	38,967
Hides, No.....	65,996	57,712
Raisins, 20-lb boxes.....	130,591	99,408
Quicksilver, flasks.....	9,568	18,365
Hops, bls.....	12,397	14,363

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to Jan. 21, '87.	July 1, '87 to Jan. 21, '88.
Flour, sks.....	59,289	148,346
Wheat, cts.....	308,112	580,472
Barley, cts.....	1,775	75
Oats, cts.....	217,315	144,320
Corn, cts.....	57,542	12,500
Wool, bales.....	9,058	7,254
Bran, sks.....	27,918	41,548
Hops, bales.....	753	290
Hides, No.....	19,634	19,682
Potatoes, sks.....	46,065	7,063

With cheaper money in Europe and at the East, it is not at all improbable that a speculative move will be made in wheat. The season is advanced, but still the light stocks the world over and large consumption are favorable.

The ice blockade in the Columbia river restricted wheat trading in Oregon, but now that it is raised, more activity is looked for. Holders in that State of choice grades are very set in their views.

In this State there is nothing new to report in the wheat situation. The stock of choice grades in the State is light, with the bulk taken for export. The free loading of ships is depleting stocks quite rapidly. Much of this is due to large holders who desire to get their wheat afloat before assessment day. It is also due to the very low charters ruling which have fallen more rapidly than the English wheat market. The daily press have been quoting prices too low by from 1 1/2 to 2 1/2c for shipping wheat. But there is nothing unusual on their part to work for buyers against farmers.

Advices report crop prospects of the most encouraging character, particularly in the counties south of this city. In parts of the central and northern counties alternating freezing and thawing weather did some damage, but how much it is hard to say, as it runs more in spots than otherwise. The clearer weather since the rain allows plowing in sections where the land had not been seeded.

The barley crop of the United States was short last year by over 5,000,000 bushels. The crop was not only short but of a poor average. In Oregon, rains at the wrong time turned the grain to yellow color, which is against it being used by buyers. The same grade was sent overland from Washington Territory to Chicago, but was discriminated against, owing to the off color. Although receipts are fair, yet stocks in this city are being reduced. The bulk here is held against Call Board sales and is virtually out of the market. The consumption in the State is large, while the supply of the better grades is scarce. Eastern advices report a strong market for choice grades, owing to light supplies.

Corn has eased off, under freer offerings and buyers being offish. Bradstreet's, just to hand, reports the Eastern market as follows: "The diminished production of corn in the United States in 1887, equal to 227,252,466 bu., has caused an advance from 44 1/2c in mid July to 62 1/2c at the end of December, with the general expectation of a still further advance. The advance of 18 1/2c per bu. has checked the export movement from the United States to Europe, and has not only diminished the hog packing, but also the weight of hogs and the yield of lard. The price of hog product has in consequence advanced. Glucose is dearer, lard oil is higher. There is also a deficiency in the Indian corn crops of Hungary, South Russia, Roumania and Turkey. The Argentine Republic has, however, a good corn crop, which is being quite freely exported to Europe. It is an unusual feature to have so many corn-producing countries deficient at the same time."

Oats are barely steady. Owing to the relative high price, dealers and lenders do not take them as freely as they do when the price of barley and oats are more nearly equal.

In rye and buckwheat, trading is light.

Feedstuff.

The rains caused an easier feeling in bran and middlings, which was followed by a decline. At the lower prices the market has a firmer tone. Ground barley continues to meet with a good demand at steady prices. Feed corn is fairly steady at quotations.

Choice hay continues scarce and commands full prices. Although the rains and milder weather give promise of better pasture soon, yet the length of time before next hay crop makes it quite certain that the supply will be very nearly exhausted before new comes in. The consumption is large, although buyers take as little as possible at a time.

Fruits.

Apples have met with better sales. The stock here is not large. Eastern continue to have a wide range, running from \$2 to \$5 per bbl.

Limes, lemons and oranges move slowly. Receipts are only fair. With warmer weather and an improvement in the quality of the fruit, a large call is expected to rule. Owing to the short time consumed in sending the fruit to Oregon by rail, that State will draw more freely from this city.

The recent cold weather did not injure the crop of citrus fruits.

In dried fruits there has been a little more doing on distant orders, but outside of this the market is dull. The stock is only fair, barely enough for the home trade.

In raisins there is nothing doing. The Eastern market is almost bare of good stock, as is our market, but buyers hold off and will not purchase until compelled so as to meet their trade call. It is very generally claimed that when the spring trade opens, better values will obtain.

Live-Stock.

The market holds strong for bullocks and mutton sheep that are in choice condition and that cut up well without wastage. The size of an animal has not so much to do with the price as the way in which it will cut up. The prospects of early feed cause less selling pressure. Stalled animals are offering only moderately fair. The loss of cattle and sheep, particularly of lambs, is thought by some to have been larger than claimed. Hogs continue scarce, and in good demand at full prices. Higher prices in the Western States help this market. In milk cows there is more inquiry. Some dairymen have sold off their poorer and older stock at low prices. In horses there is a continued good demand for general utility horses, matched teams, carriage and driving horses. Even for work animals there is a slightly better inquiry.

There are several orders on the market for matched teams, good steppers, well-matched and gentle. Horses going in from 3 to 3 1/2 minutes find ready sales at good prices.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 8 1/2 @ 9c; first grade, grass fed, 7 1/2 @ 8c 1/2 lb; second grade, 7c; third grade, 6c @ 6 1/2c.

MUTTON—Ewes, 7 @ 7 1/2c; wethers, 7 1/2 @ 8c. LAMB—Spring, 15c @ 1 lb.

VEAL—Large, 7 @ 9c; small, 8 @ 10c.

PORK—Live hogs, 5 1/2 @ 5 3/4c for heavy and medium; hard dressed, 7 1/2 @ 8 1/4c per lb; acorn fed, 5 @ 5 1/2c; dressed, 7 1/2 @ 7 3/4c; soft hogs, live, 4 @ 5c. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Vegetables.

The extreme cold weather in this month is said to have frozen large quantities of potatoes, which has materially lessened the supply. The market for choice varieties is quite strong at full figures. The trade call is said to be improving.

Onions have been settling to a lower range of values. The decline is due to free receipts and only a fair call. Now that the weather is warmer, it is claimed that the demand will increase.

Cabbages are firm. With milder weather, distant shipments will be resumed, and as supplies are light, higher values will probably obtain.

In root vegetables, there is nothing new to report, the market being firm at quotations.

Reports from the southern counties state that garden truck is in an advanced state, considering the character of the winter. Some green peppers and tomatoes have been received from Los Angeles.

Miscellaneous.

Poultry has ruled at fairly steady prices during the week. Receipts were light, but an abundance of game kept prices down.

Turkeys, hens and roosters closed strong, with turkeys higher.

In hops there is more inquiry, but buyers want the more choice grades, which are in light supply. They command full prices when found. The market at the East is expected to advance after next month.

The stock of wool is very light. Fine grades, lively, clean, strong and fair length, are wanted, but coarse, defective wools are hard to sell. A leading Philadelphia wool firm says: "Notwithstanding the lack of demand for other Territorial wools, the fine clips of Nevada, which are particularly suited to the present wants of manufacturers in this market, owing to their softness of finish, are inquired for to-day, and command relatively better prices than any other fine Territorial wools. The market has been

cleared of these qualities, and much more could be placed immediately at full quotations."

Hog products are very firm, with an advancing tendency.

Seeds are strong, particularly flax, which are wanted at an advance, owing to short crops and an advance in linseed oils. Beans are steady at full prices. With the spring trade a higher range of values is looked for.

Honey is scarce and high.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way.....	304,738	206,093
In port, disengaged.....	90,938	83,779
In port, engaged.....	39,444	35,728

Totals.....435,699 325,600

To obtain the carrying capacity, add 60 per cent to the tonnage.

San Francisco, Jan. 25, 1888.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS.		WINTERSTAY, Jan. 25, 1888.	
Bayo, cts.....	2 1/2 @ 2 3/4	Brazil.....	11 @ 12 1/2
Butter.....	3 3/4 @ 3 7/8	Peas.....	10 @ 11
Peas.....	2 25 @ 2 50	Peanuts.....	4 @ 5
Red.....	2 25 @ 2 50	Flint.....	10 @ 12
Pink.....	2 25 @ 2 50	Hickory.....	5 @ 6

POTATOES.		BROOM CORN.	
Small White.....	3 1/4 @ 3 7/8	Burbank.....	1 10 @ 1 30
Lima.....	2 1/4 @ 2 7/8	Early Rose.....	30 @ 1 00
Old Peas, bbls.....	2 1/4 @ 2 7/8	Conkey Corn.....	80 @ 1 10
do green.....	1 50 @ 1 75	Pasadena.....	75 @ 1 10
do Niles.....	1 50 @ 2 00	Tonawanda.....	1 10 @ 1 10

SOUTH-PARTON.		JERSEY BLUES.	
South-parton, 50 lb.....	75 @ 80	Jersey Blues.....	75 @ 80
North-parton, 50 lb.....	75 @ 80	Humboldt.....	— @ —

CHICKEN.		TURKEY.	
California.....	6 @ 7	Peachblow.....	8 1/2 @ 1 10
German.....	7 @ 8	Chile.....	— @ —

DAIRY PRODUCE, ETC.

BUTTER.		SALT LAKE.	
Cal fresh roll, lb.....	4 1/2 @ 4 3/4	Salt Lake.....	90 @ 1 05
do Fancy brands.....	4 1/2 @ 4 3/4	Short.....	1 25 @ 2 40

PICKLE AND CANNED.		HONEY.	
Pickle roll.....	— @ —	Honey, doz.....	3 50 @ 3 75
Firkin, new.....	— @ —	Roasters.....	7 00 @ 10 00

CHEESE.		DOGS.	
Cheese, Cal, lb.....	15 @ 17	do Mallard.....	4 00 @ 4 50
Eastern style.....	14 @ 17	do Sprig.....	1 50 @ 2 00

CAL. RANCH, DO.		DO. STORE.	
Cal. ranch, doz.....	34 @ 35	do Gosling.....	— @ —
do store.....	30 @ 32	do Wild, doz.....	2 50 @ 4 70

DUCKS.		TURKEYS.	
Ducks.....	— @ —	Turkeys, lb.....	15 @ 17
Oregon.....	— @ —	do Dressed.....	17 @ 19

FEED.		TURKEY FEATHERS.	
Bran, ton.....	15 50 @ 17 50	tail and wing.....	— @ —
Feed meal.....	20 @ 21 50	Snipe, Eng, doz.....	— @ —

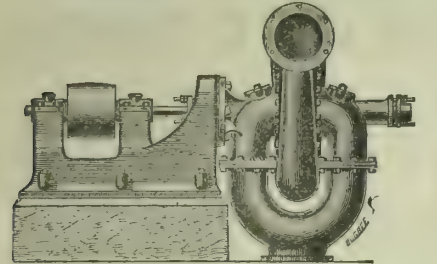
GRAIN.		DOGS.	
Grain, ton.....	10 50 @ 12 50	do Common.....	— @ —
Hay.....	11 00 @ 11 50	do.....	— @ —

Plums lb.....	@	Tomatoes box...	@
Pomegranates, b	@	do choice.....	@
Prunes lb.....	@	Turnips ctl.....	75 @ 1 25
Quinces lb.....	@	Beets, sk.....	75 @ 1 00
Raspberries ch.	@	Cabbage, 100 lbs. 1	00 @ 1 25
Strawberries ch.	@	Carrots, sk.....	40 @ 50
Watermelons, 100.	@	Eggplant, 1/2 bx.	@
DRIED FRUIT			
Apples, sliced, lb	4 @ 5	Green Corn, cr.	@
do evaporated	9 @ 10	do sweet cr.	@
do quartered...	12 @ 13	do large box...	@
Apricots.....	8 @ 10	Green Peas, lb...	@ 1
do evaporated	14 @ 16	Sweet Peas, lb...	@
Blackberries...	12 @ 15	Lettuce, doz...	@
Olives.....	18 @ 25	Lima Beans lb...	@
Dates.....	9 @ 10	Mushrooms, lb...	30 @ 40
Figs, pressed...	5 @ 6	Rhubarb bx...	@

HORACE DAVIS of San Francisco has been nominated for the presidency of the University of California.

It is stated that a number of Eastern capitalists are engineering a corner in raw sugar.

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Also a rebate of six-tenths of one per cent on the total gross receipts of their shipments through the Union was ordered to be made to shippers, payable same as above dividend.
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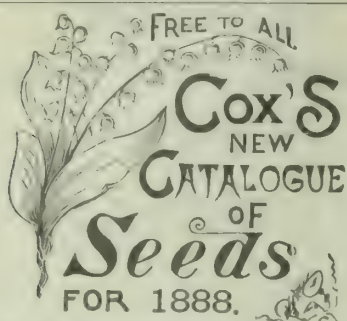
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JOHN ROCK, Manager.

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This is our Fourth Season of Importations of the

SEEDLESS OONSHIU.

See PACIFIC RURAL PRESS of January 21, 1888, page 53.

For circulars and particulars of other kinds of Japanese Trees and Plants, address:

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120 Sutter Street,

San Francisco, Cal.



Healthy,
 Vigorous
 PLANTS.

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A few SHRUBS, a Bed of ROSES,
 CLEMATIS on the VERANDA
 will work a complete change in your premises

PRICES LOW. JUST READ!

14 Continuous Flowering Roses \$1.

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14 Fairy flowered Chrysanthemums, from the wonderland Japan.....\$1.00.

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1000 ROOTED GIANT BAMBOOS.

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Stock of French Prunes and Apricots exhausted.

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And other varieties cheap. Send for circulars.

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Picholine, Mission, Manzanilla, Lezaycanii Nevardillo and other sorts. Blackberries and other sorts of berries in good varieties.

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BARTLETT PEAR TREES.

The best kind for Shipping and Canning.

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Guaranteed, and the NEW LYONS CLING PEACH. We have an immense stock of ROOTED VINES, comprising 86 varieties. We carry also a full line of CITRUS FRUITS, well grown and warranted free from all pests and true to label.

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French Walnuts, Home-grown Oranges and Rooted Grapevines.

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Seeds and Improved Egg Food,
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Established 1858.

A general assortment of healthy FRUIT TREES, VINES and SMALL FRUITS, grown without irrigation, free from Scale Bug and warranted true to name.

Apple Trees in assortment, Crawford's Early, Orange Cling, Salway and other kinds; Royal and Blenheim Apricots or Myrobalan stocks; Bartlett, Beurre Hardy, Beurre Clairgeau, Howell, Winter Nelia and Easter Beurre Pears, Cox's Golden Drop or Silver Prune and other Plums and Prunes in assortment. Rockport, Black Tartarian, Napoleon and Centennial Cherries; Nut-bearing Trees; Grapevines, etc.

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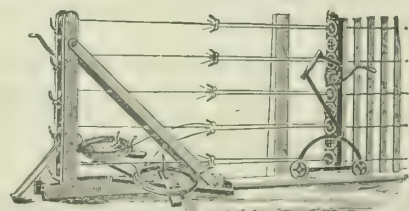
ORANGE TREES.

Plant Trees Grown in Your Own Section. They do much better than others brought from a distance.

THE ALOHA NURSERIES,

Penryn, Placer Co., California,
 Offers a large home-grown stock of Orange Trees, California Fan Palms and Pepper Trees, Limes, Dates, etc., at prices to suit the times.

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The LITTLE GIANT.

The greatest fence loom on earth. Fully covered by patents. A sure impediment to the rabbit. Only weighs 30 pounds. Can be operated by a child as well as a man. You are not compelled to pull a cumbersome track over the rough ground. All that is needed is a common board laid upon the ground. Estimates for material made when wanted. Correspondence solicited with hardware men generally. Price, \$40.

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"Greenbank" 98 degrees POWDERED CAUSTIC SODA (tests 99.3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

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 Manufacturers' Agents,
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SPRAY PUMPS.

Now is the time to buy. Do not waste money on poor pumps with leather valves, but buy the "CLIMAX SPRAY PUMPS," the only pump having all its parts made of non-corrosive metal, and the very best Spray Pump in the market.

Send for circulars and prices. Hose furnished to farmers at wholesale prices.

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FOR SALE BY

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California Inventors

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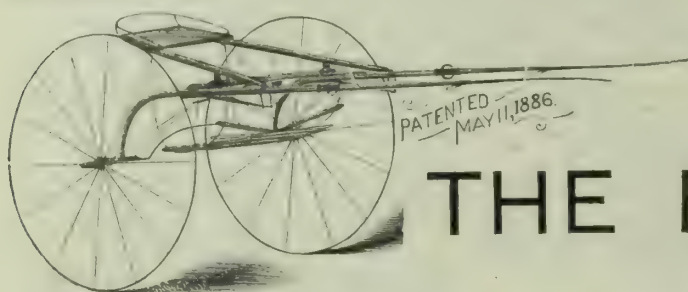
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AGRICULTURAL IMPLEMENTS, BUGGIES AND HARNESS.

Our stock comprises a full line of FARM MACHINERY and complete assortment of BUGGIES, CARRIAGES, CARTS, and HARNESS. We are also Agents for the well-known

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CELEBRATED SPRING WAGONS, which are everywhere recognized as the Standard of Merit, and include every style of Spring Wagon required for city use, by the country merchant, and on the ranch. The name of this concern on your Wagon is a guarantee that you have the very best that can be built for the money. Every detail of construction is attended to, and for general make-up, finish and durability there is no wagon made that will give you equal satisfaction. **INVESTIGATE THIS.**



THE FLINT ROAD CART

IS THE NEATEST, HANDIEST AND BEST.

THE PRINCIPLE OF THE FLINT consists in the spring being attached under the shafts, and connected with each seat arm by outwardly flaring shackles which entirely encircle the shafts and work independently of them.

WHAT THIS PRINCIPLE ACCOMPLISHES.—The weight of the driver in his seat causes no lateral or vertical motion of the shafts. It prevents any galling or chafing of a horse. The driver not only rides with perfect ease and comfort, but absolutely steady. The shafts always balance, regardless of the different weights of drivers, and are not affected by his weight when riding on uneven roads.

THE FOOT REST allows plenty of room and the most comfortable position. At the same time the horse may be hooked much nearer than in any other style of cart.

THE SHAFT ATTACHMENT.—By the use of our patent heel fastener, the shafts cannot slip or loosen. They are also clipped to the axle close to the hub, insuring strength. By attaching our patent adjustable stirrups to seat arms, and removing foot rest, our light three-quarter cart may be converted into a medium weight sulky for speeding purposes. The stirrups may be used with or without foot rest.

FOR MUDDY OR DUSTY ROADS.—We can furnish a twenty-six ounce rubber boot, which completely encloses the foot rest. Any purchaser of a cart will find this a very desirable article.

CONSTRUCTION, MATERIAL, ETC.—Shafts, Cross Bars, Seat Arms, etc., are of the very best selected, seasoned, second growth white ash. Wheels are of the finest quality Finney & Daniels compressed band. Springs, best Swedes steel and oil tempered. Axles, Liggett's double collar interchangeable steel axles. Cane Seats, tipped and leathered shafts, and the best finish and proportions of any cart manufactured.

625 to 631 Sixth St.
149 to 169 Bluxome Street,
SAN FRANCISCO.

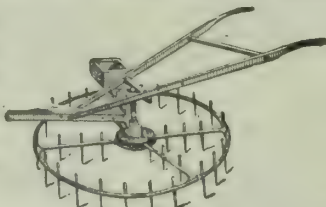
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IRRIGATING PUMPS AND
ENGINES
A SPECIALTY.

JACKSON'S Rotary Vineyard or Orchard HARROW.

PRICE, 5 feet diameter, \$25.

It has half-inch steel teeth, and is made to rotate either way by simply changing the cast-iron weight from one side to the other. The Harrow weighs 170 lbs., and can be taken down and packed closely for shipment.



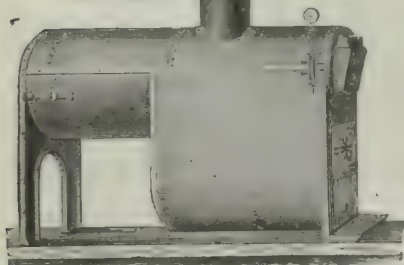
THE JACKSON VINEYARD HARROW rotates either way, at the will of the driver, and by driving the SLOW side next to the vine or tree, there is no danger of hurting it, as the Harrow will roll gently around the tree or vine.

THE JACKSON VINEYARD HARROW was designed especially for vineyards and orchards, where very thorough and careful work is required, and was introduced to the orchardists in 1881, and perfected during that season. It is made of gas-pipe, bent round like a wheel and made perfectly smooth on the outer rim, and presents no sharp corners to the trees or vines to injure them as it revolves. It is provided with handles, so the operator can hold it to or from the row. Every farmer should have one for his garden, and to level any uneven land or to fill up dead furrows. Every vineyardist or orchard owner should have a sufficient number to go over the whole ground in a short time. When the surface is just in proper condition, one day's work is worth a week's out of season.

The Jackson Rotary Harrow is a perfect pulverizer, leveler, clod-crusher and weed-killer. It leaves the weeds on top of the ground—thoroughly shaken—to die.

"ECONOMY"
PORTABLE
BOILERS.

MOUNTED ON
SKIDS.
2½ to 20 H. P.



I carry in stock several sizes of the above design of boiler, and make to order promptly boilers of any desired style and size. Prices upon application. **COMPLETE POWER AND PUMPING PLANT A SPECIALTY.**

I MANUFACTURE

Self-Feeders

FOR THRESHING MACHINES,

Derricks and Forks,
Hay Stackers and Rakes,

**COMPLETE
POWER and PUMPING
PLANTS**

A SPECIALTY.

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Jackson's California Windmill

These mills are constructed from new patterns and first-class material, and there is no better mill made. If you compare my prices with those of other makers, please compare weights also, and notice how much heavier my mill is. The increased weight makes them stronger and cost more. Every added pound increases the cost of manufacture. It has been suggested I make them lighter and compete with cheap makes. I do not consider it desirable.

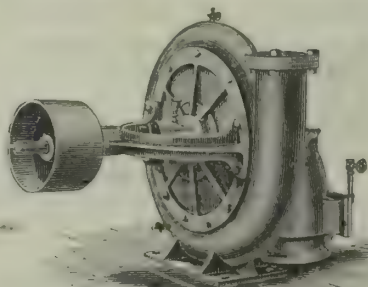
I own for this Coast, the patent on this now justly celebrated Windmill. Since designing and completing the mill as now offered, I have made and sold hundreds of them. It is the simplest constructed mill in the world, yet very strong, very durable, and very efficient. An experience of several years with a large number of them has failed to show the need of alteration or improvement, because they are built on correct mechanical principles, and no experiments embodied in their construction. They have large wearing surfaces, and ample and convenient oil reservoirs. All boxes are lined with babbit—steel pins for connecting rods.

PRICES:

10-ft. wheel	...\$75
Weights 650 lbs.	
12 ft. wheel	...\$85
Weights 700 lbs.	
14-ft. wheel	...\$100
Weights 930 lbs.	
16 ft. wheel	...\$120
Weights 960 lbs.	

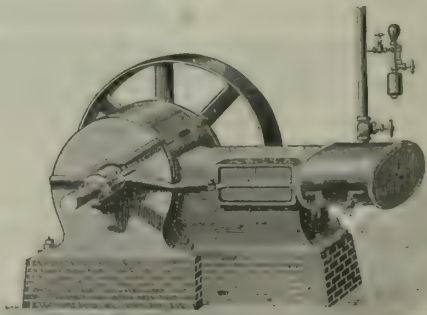
The stroke is adjustable, the castings strong, heavy and smooth. The wheel is solid, dished like that of a wagon, and thoroughly braced in every direction. The whole circle is regularly filled with wings, and no place left out for spokes, they being behind and out of the wind. The turn-table is small and the vane large, insuring it to turn face to the first available wind. It is thrown out of the wind by a hand lever at base of tower or by a severe gale, presenting a wind surface of less than five inches to the diameter of the wheel and defying the fury of the storm.

This Mill is essentially Self-Regulating and will take care of itself in a storm.



Jackson Centrifugal Pumps.

For quantities of water not less than 100 gallons per minute, and for lifts not exceeding 100 feet, there is no better pump than that illustrated in the above engraving. It is very simple, durable and economical. I make them in sizes from 2-inch, 100 gallons per minute, to 24-inch, with a capacity of 14,000 gallons per minute, and am prepared to build larger sizes to order. They must be set within 20 feet of the water; will draw it that far and force it up 90 feet. They are very satisfactory in wells not over 100 feet deep.



JACKSON'S AUTOMATIC EXPANSION SELF-OILING ENGINES.

I make these very superior engines in ten sizes, and carry them in stock for immediate delivery. All working parts are covered, running in oil, insuring constant and perfect lubrication. No skill required to run them. Superior efficiency guaranteed.



TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 5.

SAN FRANCISCO, SATURDAY, FEBRUARY 4, 1888.

\$3 a Year, in Advance.
SINGLE COPIES, 10 CTS.

The Horticulturists.

On another page of this issue we continue our report of the great meeting at San Jose, and in still another place may be found a sketch of the display spread out for the delectation of the Eastern visitors at the Horticultural hall in San Jose.

The people of Santa Clara county and many from other parts of the State who aided them are entitled to the thanks of the whole State for the generous and cordial treatment which they accorded to the distinguished guests of the State. The place of meeting was one of the most comfortable in which we have ever seen a horticultural body assembled, the hospitality of the people in receiving the delegates into their homes was a surprise and was appreciated. The banquet on the closing night of the session was one of the grandest spreads we have ever seen, something like 700 sittings being prepared with generous fare and elegant appointments. The ride through the orchards of Santa Clara on Friday of last week, and the hospitality of the people visited en route, left an enduring impression upon the minds of all.

This week the horticulturists are receiving a continuous ovation throughout the upper part of the State, of which our space will only allow a mere mention. Sunday at Monterey and Santa Cruz, Monday at Oakland and the State University, Tuesday in Napa county and Tuesday evening in the State Capitol at Sacramento, Wednesday and Thursday at Marysville, Chico, Oroville, Red Bluff and Redding and other points, Friday in Santa Rosa and the Sonoma Redwoods, Saturday at San Rafael—such is the record of days filled to the brim with good words and good sights and feastings beyond enumeration.

Next week will see the second grand meeting of the society at Riverside, beginning on Tuesday. No doubt the guests, in spite of all they have experienced, will find at this grand southern center new charms and surprises in the way of horticultural achievements and hospitable welcome. We have not the program for the Riverside meeting, but we know that the officers of the society reserved important papers to be read there and interesting topics for discussion, and all who attend will be edified. The citrus fair at Riverside is also being prepared upon an unusual scale of excellence, and our Eastern friends will depart with their eyes so filled with visions of the beauties of San Bernardino county that they will probably see fine towns and palatial mansions and fruit-laden orange groves all the way across the desert which they will traverse on their homeward way. May such sights and memories never leave their thoughts.

IRRECOGNIZABLE.—A San Rafael reader sends us a pupa of some moth which was found in an apple tree, and asks if it is a pest of some kind. The stamp of the postmaster fell upon the juicy object and the crushing of the case and the stain of the exuding juices rendered it impossible to determine the insect. It is not, however, a common pest, but probably a good-sized moth of which the larva came upon the apple from some other vegetable.

Twigs bearing several oranges and lemons, grown in the open air at F. Ludemann's nursery in this city, were brought into our office on the 19th.

One of the Newer Roses.

The cold weather has given our open-air roses a good rest, and they will probably show unusual vigor and bearing power when they come forward in the splendid growing weather which now prevails. We should like to hear more from our readers about their flowers.



PRINCESS BEATRICE—ONE OF THE NEWER TEA-ROSES.

We should like to have the newer roses and cyprianthems, etc., discussed as intelligently and enthusiastically as our fruit-growing readers descant upon their new varieties. There is something more in life than to sell or to eat, and we would like to show distant readers that California horticulture is not altogether upon a commercial basis. Of course, we shall show forth more of the esthetic and ennobling when we get farther away from the era of enterprise, but it will be just as well to let a little of the "beautiful for its own sake" crop out in our discussions and publications. Who believes in this enough to write us something about flowers—their growth and enjoyment? We could name a number who ought to do it, but we prefer to have them volunteer.

As a reminder we give herewith an engraving

of one of the newer roses which, perhaps, some of our readers have already tried and can report upon. It is the Princess Beatrice, and Hill & Co. of Richmond, Indiana, who are large growers of roses and other flowering stock, name it first in a list which they class as "the cream of two years' importations." They give also a beautiful colored plate upon the cover of

their catalogue, which should be in the hands of all our flower-lovers. They state that the strong points of the Beatrice are its rapid growth, handsome heavy foliage, and brilliantly blending colors. It is a pure tea coloring, after the style of the Perle des Jardines, flower stems stiff and upright, and bright red, carrying large buds of exquisite color, outer petals varying from canary to golden yellow, edged lightly with bright rose color. From its first opening the petals roll their edges backward, displaying the bright apricot center. The open rose is described as exquisitely beautiful, very double and lasting well when cut. It is strongly tea-scented.

Such is the Eastern grower's description. It is enough to make one very anxious to know what Princess Beatrice will do in California.

Our Future.

Mr. Mulhall, the well-known English statistician, says that this country is adding annually to its wealth, nearly as much as Great Britain, France and Germany combined. He sets down the annual increase of wealth in France at \$375,000,000, that of Great Britain at \$325,000,000, and that of Germany \$200,000,000, a total of \$900,000,000. The annual increase of wealth in the United States alone is set down at \$875,000,000, only \$25,000,000 short of the next three oldest and greatest nations of the world combined. These figures are most suggestive. They were made seven years ago. Since that time the proportional rate of improved, of wealth in this country has largely increased, so that it is safe to say that at the present day our annual increase is fully equal to that of the three countries named. Moreover, these results are realized while our people, both among the wealthy and the working classes, are advancing in luxurious expenditure and waste as well, more rapidly than either of the three great European powers named.

It fairly startles the observing and thinking man to realize that things can be as represented, and yet we have the best of authority for believing them. And there is no reason for doubting that this progressive increase will go on indefinitely. If so, what will be the financial standing of this country half a century hence? At our present rate of increase this country will hold a large portion of all the wealth of the world within 50 or 60 years. What then will be the standing of New York and San Francisco among the great commercial cities of the world?

When an attempt is made to base calculations of population and wealth upon our past history, the mind is completely lost in wonder and amazement at the results. Such has been the case for every decade during the last 50 years, and yet our most sanguine anticipations have been more than realized with every successive decade. The evidences of a continuance of our material progress from decade to decade during the next 50 years are fully if not more positive than in the past.

It is safe to say that the time is not far distant, as time is reckoned in the history of great cities, when New York and San Francisco must become the two largest and richest cities of the world. The position of the city of San Francisco is unequaled by any other in the possibilities of the future. Standing, as it does, directly upon the largest and best harbor in the world, and in the most central position for taking and holding the bulk of the immense commerce that is so rapidly growing between the eastern and western shores of the Pacific ocean, it has the advantage of all other locations as the future central metropolis of the world. The world's population and its great commercial centers have been continually moving westward from the earliest historical times. The emigration movement has now brought up upon the eastern coast of the Pacific ocean. It can move no farther west, but will cumulate and pile up here, until the Pacific States become as densely populated as any portion of the world. Our location, climate and resources all favor and point to such a result. The great and final movement of population has already commenced, with every evidence of a continuance, until the anticipated result is realized.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Strollings in Stanislaus.

EDITORS PRESS:—During the late "cold snap" I made quite an extended tour through the southern portion of San Joaquin county, and also traveled over a good part of Stanislaus county.

I left Stockton on the morning of January 9th, and after passing through the pleasant little villages of Linden, Peters and Farmington, at the end of the second day out arrived at the lively town of Oakdale, situated on the south side of the Stanislaus river, in the county of the same euphonious name. This is the present terminus of the Stockton & Oakdale R. R., but parties are now engaged in surveying an extension from this point, to connect with the S. P. R. R. at or near Merced.

From Oakdale I followed the course of the Stanislaus river 12 miles to the eastward, until I came to the picturesque village of Knight's Ferry. Here I found a fine flouring-mill, with all the latest improved machinery, patent rollers, etc., and as the water-power is almost unlimited, the milling business here must certainly be very remunerative to the gentlemen engaged in it.

The most of the town lies on the north side of the Stanislaus, and is of itself quite an attractive village, but the chief beauty of this "nice little, tight little" town is the orange groves with the luscious golden fruit, glistening among the dark evergreen foliage of these beautiful trees. It almost seems as if the golden sands of this once thriving mining camp had been turned, by some subtle process of nature, into apples of purest gold, and I could no longer wonder at the enthusiasm of the Eastern tourist over the orange groves of Los Angeles.

With the exception of an occasional one or two for ornamental purposes, these were the first orange trees in full bearing that I had ever inspected, and I must confess to being both surprised and delighted at this ocular proof of the orange-producing qualities of Central California. The oranges on these trees are large and smooth, and on sampling some of them I found the flavor quite equal to those from the Southern districts.

There are probably 500 bearing orange trees in this village, and several thousand more growing finely in the immediate vicinity, and as far as can be told at present, the severe weather has had no bad effect on either trees or fruit.

From Knight's Ferry I crossed the county in a southeasterly direction to the mining town of Lagrange, a name more suggestive of the farm than of gold-diggings. The mines in the near vicinity of this town are about worked out, but some two miles south of this point hydraulic mining is being carried on with great vigor, and, as near as I could ascertain, with satisfactory financial results. This camp is situated on the Tuolumne river, which is here a very rapid and beautiful stream, and as its crystal waters rush downward over its rocky bed it presents to the eye a series of wild and romantic pictures of mountain scenery well worth the journey to behold.

The next morning I took the river road down stream, and after fording the Tuolumne river several times I came to a belt in a small village on the north side called Waterford, 18 miles northwest from Lagrange. Here I found plenty of "water" but no "ford," and was obliged to keep on down the river for another mile to find a crossing. From here I traveled in a southwesterly course, and struck the S. P. R. R. at the growing town of Turlock, situated in the center of the biggest wheat-field in this portion of the State.

No trees, no fences, and but very few buildings meet the eye, as far as sight can reach. Nothing but a desert of plowed land from horizon to horizon. Here is where the curvature of the earth's surface can be seen similar to looking out on the ocean, and distant objects seem to be huddled down as you approach or leave them behind.

On the ranch of Mr. Clark, near Turlock, I saw 28 horses in one team driven by one man. He had 16 ten-inch plows gauged together, and cut a swath 14 feet wide as he went. This is what might well be called "doing things with a big auger." In several other places I saw from 7 to 10 "eight-horse teams" plowing on one land. Owing to the light rainfall the past year the wheat crop of Stanislaus county was very short, but, from present prospects, the next year's yield will be unprecedented, and this county will, as of yore, again become the banner wheat county of the State.

The long frosty spell of weather has kept the ground frozen, so that many of the farmers here have been delayed in completing their seeding, but for the last week the weather has been more favorable, and the fields are literally alive with men and teams, and the wheat is going into the ground at a lively rate.

I now turned my face toward the "setting sun," and crossed the San Joaquin river, at a point known as "Crow's Landing." There is a splendid bridge at this place, costing about \$40,000 to erect, and it is not only a great convenience to the traveling public, but a credit to Stanislaus county as well.

I am now on the much abused west side,

noted as the region of lightest rainfall of this part of California. Here is a body of land, as rich as any under the sun, level as a floor, and only needing water to render it capable of supporting as dense a population as any territory on the globe.

This part of Stanislaus county is but the continuation of that vast tract of level land stretching from Antioch at the head of the bay to Tulare lake, over 200 miles in length, and from 10 to 20 miles in width, and every acre capable of being irrigated and brought under cultivation.

The S. P. R. R. is already completed from Tracy to Hill's Ferry, and the time is near when this part of the county will be one of the most prosperous sections of the State. After visiting the towns of Grayson and Hill's Ferry, I crossed to the east side again by fording the San Joaquin river just above the Merced, which landed me in the northern portion of Merced county. Not wishing to tarry here, I forded the Merced river also, and passing through Turlock again, took a "bee-line" for Modesto, the county seat of Stanislaus, where I shall take up my headquarters for a few days, and when I have had an opportunity to become somewhat better acquainted with the surroundings, I may, perhaps, give the readers of the RURAL a few of the impressions made upon me in regard to this beautiful and prosperous capital city of Stanislaus county. W. W.

ENTOMOLOGICAL.

Insect Chat.

EDITORS PRESS:—The following extract of an interview of an Eastern agricultural paper with a Mr. L. H. Bailey of Paw Paw, Michigan, is of interest to the apple-growers of this coast, and I would like to hear what Californians think of it:

"In this same talk Mr. Bailey told how he drove all the codlin moths into his neighbor's orchards. He mixed half a tumblerful of ammonia with a pail of water and sprayed his orchard at night while his neighbors were asleep. He did this two or three times during the summer, and was wholly exempt from the depredations of the codlin moth."

If the above is true the method possesses many advantages over the different arsenical preparations at present employed. Arsenic in any form is objected to because it is poison; it is not safe to have it on the premises, and when the fruit is sprayed with it some look with fear upon the apples so treated. The spray that reaches the ground poisons the grass and any fruit on the ground, causing risk of stock eating the same. Now this ammonia spray has no objectionable features, but, on the contrary, is a benefit to the trees, grass and soil underneath, it being a prime fertilizer. Can it be relied on? If so, then our apple orchards will stand. As it now is, many will cut out their apple orchards and plant the other fruits.

A Foe of the Woolly Aphis.

In this connection allow me to call attention to an ant that Mr. T. T. Rodda of Grass Valley is the discoverer of and the only owner that I know of. The ant in question is of medium size, striped, and in color resembling the Italian bee. This ant Mr. Rodda has bred by dividing the colonies until his place is now completely protected. Mr. Rodda discovered that the trails of these anted to his apple trees infested with woolly aphis, and an examination showed that the ants were cleaning the trees of the pest. He carried a part of the colony to an old stump in another part of the orchard where the aphis was very bad, and these ants immediately attacked the aphis. At the close of the season they had completely eradicated the pest. I don't think Mr. Rodda is in the ant business, but I would like you to give us the ant's antecedents that all apple-growers may be on the lookout for it on their premises.

Pear Slugs.

I called upon a pear-grower to-day who said: "My pear crop was ruined last season by the slug. Can you tell me what to do for them?" I gave him the following experience, which he requested me to write out for the RURAL:

When but a boy I killed the snails in my father's garden by sprinkling salt on their trails, the salt dissolving the snails. Noticing one day that my father's pear trees were covered with slugs, I thought of the salt, and by spraying the trees with salt water dissolved and so killed all of the slugs. I could not now give the strength I used, but would advise a weak solution to experiment with, say two pounds of rock salt to five gallons of water. Spray one tree and watch the effect; if not strong enough, increase the quantity of salt. Should the salt affect the foliage, follow an hour after using the salt solution with a spray of clear water, which will effectually dissolve and carry off the salt.

I had the pleasure of visiting the fine fruit orchard of Mr. Geo. Trelkel of Newcastle. He informed me that after a complete failure in removing the scale by all the washes known, the lime, sulphur and salt wash published in the RURAL did the work most effectually. Long live the RURAL! E. H. SCHAEFFLE.

Murphys, Cal.

[These notes are interesting. We should like to have specimens of the insect used so effectively by Mr. Rodda, that we may have it named, etc.—EDS. PRESS.]

THE DAIRY.

Marketing Cheese and Butter in San Francisco.

We find in the *Grocer and Country Merchant* a statement of suggestions concerning preparing dairy goods for this market. As the journal named is the exponent of receivers' views in these matters, it will interest producers to know them. We quote as follows:

Cheese.

In regard to cheese, very much depends on its "style," but very poor cheese cannot be made to present an attractive appearance. Thousands of cheese are sent to this city annually, which, on account of not being properly made, have to be sold at from six to eight cents per pound less than choice qualities. Sales of poor cheese are not uncommon at one-third to one-half the price of a first-class article. Do not attempt economy by employing low-priced cheese-makers. Men who can make an extra article of cheese are very scarce, but whatever you do, get a good cheese-maker, if you have to send abroad to get him. Aim to have your cheese uniform in quality, appearance and weight, and let the shape and general appearance be as nearly perfect as possible.

Cheese should be always shipped in cases, this being the most economical and safest way. Shipped in sacks, cheese are very liable to damage while in transit.

Butter.

Too much stress cannot be laid on the importance of having all dairy produce in an attractive and presentable condition when ready to be offered for sale. The article in and of itself may be unexceptionable as to flavor, color, etc., and yet be slighted by purchasers because of not presenting an attractive appearance to the eye. Assuming that your butter is all it should be in quality, it is essential that it be molded into full edge, clean cut, circular rolls, and that just the right quality of muslin should be used. Much starch or stiffening matter in butter cloths is injurious to butter. Be careful to use cloths containing very little or no starch. Such portions of muslin as have marks of any sort, as, for instance, the manufacturer's brand or trademark, should not be used, as any mark or stain on a butter cloth will certainly injure the butter and reduce its value. For moistening butter cloths, never use anything but sweet, strong brine. In wrapping, the cloth should always fully cover the side and bottom of the roll, leaving no part of the side or bottom of the roll bare; not cut too short nor too long, and folded just enough over the top so as to give the roll a "dressy" appearance. About three-eighths of an inch is the proper length to be folded, and that in regular plaits, equidistant and neatly done. It is very desirable to have a cloth on the bottom of the box, and also a cloth on top, and it is a good idea to tack the top cloth, so as to keep it from shifting. Always have a box well filled, not too tight, but tight enough to prevent the rolls from moving back and forth while the box is being handled.

These minor details may look like small matters, but they are much more important than dairymen are generally aware of. Much of the butter damaged by "melting down" would have been in order had the rolls been properly protected with the cloth—indeed, it is rare to see a box of butter melted down where the rolls are properly packed. Neatness and cleanliness—scrupulous and exact—are indispensable. Butter should be kept entirely away from all foreign odors, especially those of a disagreeable and unwholesome nature.

If a stamp is used, avoid one that gives a roll a "flat" appearance. The stamp should enhance the appearance of the butter. The box should also look bright and clean, especially on the inside. Redwood boxes are not desirable, for besides being liable, when new, to stain the butter, the boards of which they are made split easily, and the dust is certain to find its way through the smallest crack. Boxes should be scoured thoroughly immediately before use as well as immediately after. To give the box a neat appearance, paint it as often as occasion requires, if not made of maple or ash.

Never use a poor box, as the bottom is liable to fall out in handling. Be very careful never to send a box to market that has the slightest crack on the cover, as in transporting boxes are piled five or six high, and should the upper boxes leak, the brine will be sure to find its way into every crack in the cover and leave a dirty streak on the top of the butter.

In preparing butter for pickling, it is a great mistake that it must be made extra salty; if your brine is right, your butter will keep. All pickled roll butter should have a clean, white, unstained muslin sack lining the barrel, and should have a neat frame of suitable wood with galvanized nails to hold the butter down in place and keep the top layer always under brine and in good shape. Never put loose oak or sticks on top to keep the butter down, as they are almost sure to deface the butter. Never put rolls on their sides, as such rolls get mashed and give a poor appearance to butter where the best looks are needed. Make your frame to hold butter in place, even if space seems to be wasted.

Put in your rolls so that they will be tight, but not mashed out of shape. Particularly is

it necessary when butter is pickled in rolls that the cloths should cover all the butter, except the space required for the small stamp on top. A cloth well doubled over sides and bottom will keep on in the brine, while a scant cloth will float off, greatly injuring the appearance of the butter. When the butter is stamped, it is best to put the stamped end down. Be sure you place a cloth over each layer of butter, as it goes into the barrel, so as to prevent rolls from "floating;" this also prevents the top of one roll and the bottom of the other from sticking. Never leave the barrel with the plug out, as it admits dust into the barrel when refilling with brine; if dust settles on the tops of the rolls and cannot be removed, it causes a loss and often prevents a sale that might otherwise have been effected.

Butter which is soft, or anywise injured by weather, should never be put under brine in rolls. The quicker such butter is used the better, as age affects it rapidly.

Firkins should be clean and smooth on the inside in particular, and should be well packed, so that when the firkin is stripped off it may present a neat appearance, with no spaces left in the sides. A space of one-half to three-quarters of an inch should be left between the butter and the head of the keg for brine.

It is not generally known that it is very important that the dairymen should keep his salt in a clean and pure place. Salt absorbs moisture, and with it any bad flavors which it may have acquired. Use only the very best salt obtainable, and never guess at the quantity used. The usual proportion for fresh is 1 pound of salt to 20 pounds of butter; in pickled roll and firkin 1 pound of salt to 16 pounds of butter.

Store packers should very carefully assort the butter that comes to them, so as to have but one color and quality in a package. Butter uneven in quality always sells badly; do not mix new and old, or white and yellow, when avoidable. In packing butter in kegs or barrels, the packages should be numbered or dated by proper marks as they are put down by dairymen, so that the seller may qualify, color, etc., wanted. Use no fresh water to wash your butter or wet your cloths with. It tends to soften it; it extracts the flavor. In fact, it takes out qualities that cannot be replaced. Use only the strongest and sweetest brine you can get.

Finally, send by a conveyance where your butter will be handled carefully and kept out of the sun. Equally as much care should be taken in preparing firkin butter and pickled roll as in preparing fresh butter; and anything that can possibly give a stain or a soiled appearance should be avoided. If you pack poor butter, it will not have improved by keeping, and it will not be reasonable to expect a good price for it when sold.

THE VETERINARIAN.

Medicating the Cow.

EDITORS PRESS:—In answer to the request about how a cow should be treated that was not able to discharge the after-birth, etc., I will tell you how it can be most easily done. Take the cow by the horn, put a rope around them both, open her mouth, put the rope in it, taking a half-hitch around her upper jaw; draw her up to a tree, the fence or any suitable place; stand above, and from a bottle filled with three fourths of a pound of Epsom salts well dissolved in water, let the dose run into her stomach. Do this twice and the cow will be all right in less than a week. One day apart is long enough between times of administration. Few people realize how easily it can be done until they do it. Not one man in 25 will get the rope around the upper jaw. J. T. HOYT.

San Mateo.

Ear Trouble in Horses.

EDITORS PRESS:—Please advise me how to treat the following disease: One of my mares has a very sensitive ear, and will not allow a bride on her head in consequence. The inside of the ear is covered with white granulations, diamond shaped. They cover the inside surface of the ear very closely, resembling, except in color, a mass of cabbage lice as they cling to a cabbage leaf. Granulations rub off easily. It is new to all the horsemen in this vicinity. Shingle Springs, Cal. D. T. HALL.

[Who can explain the trouble and give a remedy?]

ABORTING COWS AGAIN.—A writer in the *Farm Journal* tells how he prevented abortion among his cows, with which he had before been much troubled: I procured some bone-meal and fed a tablespoonful to each cow every other day, and continued to do so until very recently. I now feed two spoonfuls twice a week to each cow.

FOR CAKED UDDER OF COWS an exchange claims that application of warm water, combined with persistent gentle rubbing and kneading, is effectual and not dangerous.

OUTWARD SWINGING DOORS, ETC.—The Wisconsin Senate has concurred in a bill to provide for the punishment of any architect, by a fine of not over \$100, who shall design any public building or factory and neglect to design outward swinging doors or fire-escapes.

THE STABLE.

The Percherons a Distinct Breed.

EDITORS PRESS:—Herewith I hand you marked article in the Chicago Times under the caption "Percherons Triumphant." It contains a synopsis of the report of the special committee appointed by the Illinois State Board of Agriculture, to investigate the French breeds of draft horses, together with the proceedings before that body, and its action in settling the question of distinction of French draft breeds and sustaining a separate class for Percheron horses. As the matter is of great interest to a very large number of your readers, and to every horse-breeder, I ask that you republish this article in your paper, in vindication of the rightful claims for the Percherons, as a distinct breed, to a separate class in fair rings.—M. W. DUNHAM, Wayne, Ill.

Percherons Triumphant.

A committee was appointed by the Illinois State Board of Agriculture in March last to investigate the question of the French breed of draft horses. The object was, if possible, to settle beyond controversy a question which, with each returning year for years past, has been brought up before the board, and which seems to have perplexed the editors of many agricultural and live-stock papers as well.

One party has claimed that the Percheron was a distinct and well-recognized breed in France, possessing a type peculiar to itself; that it had long been established and was recognized throughout France as the leading draft breed of that country; that it has been kept pure for very many years; that there was no great difficulty in procuring good and pure-bred specimens of this breed on the part of American importers if they were only disposed to pay the price asked for them. Those who have taken this view of the question have alleged that the reason their views had been opposed was mainly because of self-interest on the part of importers, who could buy miscellaneous bred draft horses in France, or horses of other breeds than Percheron, at very much lower prices than that at which genuine Percherons could be obtained, and that consequently if they could induce the American public to believe that these horses were just as good as Percherons—that they were in fact substantially the same as Percherons—they could succeed in selling them to American buyers at the same prices as could be obtained for genuine Percherons, for which very much higher prices had been paid.

On the other hand, it has been alleged that all the draft horses of France were substantially of the same breed. Some of those who took this view alleged that French authors in using the term "breed" or "race" used it synonymously with our term "family," and that while there might be separate families of draft horses in France, yet they were all substantially of the same breed, and that whoever bought a draft horse in France, no matter what he might be called there, bought a horse substantially the same in blood as the so-called Percheron.

It was to settle this question and present the State Board of Illinois with authoritative utterances from disinterested persons who were supposed to be able to speak intelligently that this committee was appointed; and to get this information at first hands, without the intervention of interested parties on either side, Mr. Dysart, the president of the board and chairman of the committee, decided to go to France in person and pursue the investigation there.

The questions prepared by the committee were framed with a view to bringing out answers to the controverted points; and the parties to whom they were addressed were Hon. Eugene Tisserand, director-general of agriculture of France; Marquis de Dampierre, president of the Societe des Agriculteurs de France; Viscount de la Mott Rouge, inspector-general of the government studs of France, and Charles du Hays, formerly master of the horse to Louis Napoleon, and at present editor of the government stud-book for thoroughbred horses.

In the questions addressed to M. Tisserand the whole ground of the controversy was minutely and thoroughly set forth, and the positions taken by the various parties in this country were clearly stated, and he was asked to make distinct replies to each inquiry. This distinguished gentleman in his reply thoroughly met every point in the inquiry. After giving at considerable length his definition of the term "breed" or "race," as used in France when applied to horses, and showing conclusively that the term "race" as used there was substantially the same as understood in this country by the word "breed," he proceeds to answer the question as to whether there were distinct breeds of draft horses clearly defined and recognized as such in France by an emphatic yes; and adds that "the two most important breeds are the Boulonnais and the Percheron." Of the Percheron he says: "This breed is one of the most firmly fixed and well-established. It is as much so as the Clydesdale and Suffolk Punch;" and he proceeds at some length to give some account of its antiquity, and to describe its peculiarities. After doing this he adds: "It is the model draft horse; it was formerly the stage-coach horse and the horse used on diligences. The Percheron is active, energetic, and a quick mover. It is the type of draft horse for carrying weight with great rapidity." And in winding up his description of the Per-

cheron M. Tisserand refers to the stud-book Percheronne of France as "a great guarantee for buyers." And he adds: "It is therefore in the country of the origin of the Percheron and Boulonnais breeds that you must go in order to procure reproducers, pure, and possessing guarantees. You must keep away from the doubtful producing districts. Trust to our older experience. It is by selection, by always procuring reproducers pure and guaranteed from the districts of origin, that you establish in your country draft breeds on which you can depend both for the present and the future."

Questions of a similar import, but involving some other points, were addressed to Viscount de la Mott Rouge, Inspector-General of the Government studs, who from his official capacity may fairly be assumed to speak authoritatively upon such matters. The answer received from this gentleman was equally as strong as that of M. Tisserand, and, fairly summarized, is to the effect that there are two distinct types of draft horses in France—to wit, the Boulonnais and the Percheron—although, to quote his exact words, he says: "We have in France three principal breeds of draft horses, easy to recognize by a practiced eye—the Percheron, the Boulonnais and the Breton." But he adds, in parentheses: "When this latter is not crossed by Percheron blood"—he having previously alluded to the fact that it has been the policy of the French Government and the French people to introduce Percheron stallions largely for several years past, for the purpose of crossing upon the Breton to effect improvement in the latter. Speaking of the Percherons the viscount says: "The most popular breed in France—the breed to which the French people have always given the supremacy—is the Percheron;" and further on he says: "The Percheron horse has been at all times considered our best breed; therefore Percheron stallions have been introduced in many other districts of our country for the purpose of improving the draft horses of the locality." He further says: "The Percheron, as compared with the Boulonnais, has more style and finish in form, more bone, stronger limbs, and a better color. The Boulonnais is more square in his hind quarters," and he adds: "I will say that in my opinion it is a fair thing to give the supremacy to the Percheron breed." He also states that "it is the policy of the Government to encourage the distinction of breeds," and "that none but registered Percheron stallions are bought by the Government to be used in the Percheron breeding districts." In reply to a question as to the relative value of the various breeds, he states explicitly: "The Percheron stallion is sold at a much higher price;" and he says: "The best Percherons registered in the Percheron stud-book will sell very easy for double the price realized by the best Boulonnais registered in the Boulonnais stud-book."

The reply received from the veteran historian Charles du Hays, if possible, still more strongly maintains the position of the partisans of the Percheron. He is even more emphatic in his expressions in favor of the Percheron than either of the other authors quoted, and says: "For me, since you have asked me to express my sentiments, the Percheron is the king of draft horses, and you should enact strict rules in America to preserve this breed pure from any foreign admixture."

The report of the committee concludes with a letter from the Marquis de Dampierre, president of the Societe des Agriculteurs de France, and copious extracts from a recently published work by Prof. Andre Sanson on "The Origin of the French Races of Horses." This letter and the extracts from Prof. Sanson are substantially of the same tenor as the letters previously referred to. The report states that these letters and the extracts accompanying them from Prof. Sanson's work include all the reliable information which the committee has been able to obtain upon the subject.

It will be seen that every claim made by the Percheron party has been fully substantiated by the eminent authorities from whom testimony has been sought, not only as to purity of breeding and fixity of race, but as to comparative value in that country. The champions of the other side to the controversy are driven to the necessity of "pleading the baby act" of ignorance, or else must stand convicted of a deliberate attempt at deceiving American buyers and American boards of agriculture to further their own selfish ends. One or the other of these horns of the dilemma must be taken or else they must impeach and overthrow the positive testimony of M. Tisserand, Viscount de la Mott Rouge, Charles du Hays and Prof. Sanson, a task which they will not dare to undertake.

When this report came before the board, the fact that it so thoroughly sustained all that had been claimed by the Percheron party brought out the "Norman" or "French" draft-horse party in force. In fact, all their "talent," whether in this State or elsewhere, was brought into requisition to combat, and, if possible, break the force of the report. But their efforts were promptly met at every point by Messrs. Elwood, Dunham, Thompson and Sanders on the part of the Percheron association, and the result is a triumphant vindication of the position taken by the Percheron party and the establishment of a special class for Percherons by a decisive vote of the State Board. The result has settled, so far as this State is concerned, the purity, as well as the superiority, of the Percheron breed over all other breeds of French draft horses.

HORTICULTURE.

Strawberry Culture.

EDITORS PRESS:—Select a rich, loamy piece of land if you possess it, or, if not so fortunate, the best that you have. See to it that it is free from shade and that it can be thoroughly soaked by irrigation, avoiding land that is wet, cold and boggy. Cover the ground to a depth of six inches with well-rotted manure, and plow or spade it under. If your neighbors grow strawberries, ascertain who has the greatest success and engage your plants from them, as in this way your expense in setting out the patch will be less, your percentage of plants that live greater, and the variety is apt to prove that best adapted to your locality. With a garden trowel lift out the runners and as much soil as the trowel will bring with it, placing the plants in a shallow box, handling carefully, that the dirt may not be detached from the roots, exercising due care to get the runners only, as the old plants have outlived their usefulness. Carry the plants to your prepared patch, with the trowel dig a hole the size of your plant roots and adhering earth. Place the plant in the hole carefully, draw the dirt up around the plant and with the feet press the soil down all around the plant. If the precaution is taken to plant out in the evening, few, if any, plants will be lost.

For convenience in working, make the rows two feet apart, with the plants 18 inches apart in the row. Should the ground be dry at the time of transplanting, or the heat cause the plants to wilt, irrigate, or, if not convenient to do so at the time, give each plant a good wetting at sundown. Cultivate the ground every ten days and irrigate as often, never allowing the ground to become baked. Soon the plants will begin to form crowns and throw out runners. The latter must be pinched off as fast as they appear, that all the growth may be kept in the plant.

The after-culture will depend upon the time when the plants were set out. If at the proper time (July), they will require but little additional care in our open winters, until the following spring, when the ground should be spaded and all the stray runners that escaped your attention the past season removed. Cultivate as in the past season, every ten days, and do not allow the ground to become dry. Pinch off all runners as fast as they appear, which will be found to require as much labor as all else combined.

When the berries are well formed, and before their weight causes the stems to droop and allow the berries to rest on the ground, place straw beneath the bunches for them to rest upon and so keep them out of the soil. A week after, surprise your neighbors and yourself with the size, flavor and quantity of your berries.

It is a mistake to set berries out in the spring or late fall. Those set out in the spring require to be cultivated and irrigated all summer, the blossoms and runners kept down that they may bear well the following season. Plants set out in the fall do not have time to mature their crowns sufficiently for the next season, and bear an indifferent crop in consequence. Where they are transplanted in July or August, a crop of early vegetables can first be raised on the ground, and when cleared off the strawberries set out, and as soon as the berries are done bearing, the following spring, the berry plants may be dug up and some late vegetables planted. The largest returns of berries to the acre, and much the largest berries, grow on plants in their first season. To secure plants for the succeeding year, allow a sufficient number of plants to put out runners, covering the first joint with earth to cause it to root. Select the plants that bear the largest amount of big berries to propagate from. E. H. SCHAEFFLE.

Murphys, Cal.

Canneries and Driers Wanted.

EDITORS PRESS:—Having been requested so to do, I inclose the following for the RURAL PRESS:

Ventura county has many needs, and among the most pressing at present is the establishment of canneries and driers to preserve the large quantities of fruit raised here.

At a rough estimate, in the Santa Clara valley alone, there are from 1500 to 2000 acres in orchard, much of it in full bearing. A large percentage of these are prunes and apricots.

With one or two exceptions there are no canneries or driers here that make a business of buying fruit outside the owner's raising. These small establishments for curing fruit give so little for it when delivered that it hardly pays expense of handling.

The excess of fruit, with such inadequate means of caring for it, causes much to be wasted.

If some one with means and enterprise would locate canning and drying-houses here in this county, and would pay the prices that are paid in the other counties of this State for fruit, it would be a profitable investment for all concerned.

San Buenaventura.

POULTRY YARD.

Ostriches in California.

The January Cackler has an article by E. C. Clapp of Pasadena, on ostrich-farming, from which we quote:

The first ostriches brought into California were from Cape Town, via Buenos Ayres and New York. In 1883 200 birds were started; 22 arrived safe at Anaheim. This farm is owned by a San Francisco firm, and is under the management of Dr. Sketchley. This is the oldest and perhaps the most successful farm on the coast at the present time. A second shipment of 33 birds from Africa has been added to the first installment, also quite a number of home-reared birds.

A second ranch was started at San Diego by Mr. Johnson, with a paddock of 24 birds, and I understand has been quite successful.

Perhaps I should say just here that Mr. Sketchley has divided his flock, and taken a part of them out to the Los Felez ranch, about seven miles northeast of Los Angeles.

In July, 1886, Messrs. Cawston & Fox leased Washington gardens, Los Angeles, for a term of years. Mr. Cawston at once went to Africa and selected 44 fine birds, coming in a sailing vessel via St. Helena, Barbadoes and Galveston, thence by S. P. R. R., landing 40 birds in good shape; these birds are from three to eight years old, just the age to use for breeding, though it is said an ostrich will live a hundred years. A good long life in which to produce feathers and fill the pockets of their lucky owners with coin.

In November, 1884, the Cape Town Government imposed an export duty of \$500 on every ostrich taken out of its domain, so by the time a bird arrives in the United States it is worth a small fortune, but then there is some hope for good returns from the investment when we remember that this country takes half the product of feathers from Africa, paying an import duty of 25 per cent on raw, and 50 per cent on those that are dressed, and it is also said that the California produced feathers are very fine, owing to the abundance of green feed to be had during all times of the year.

Perhaps, at the present time, the most attractive part of Messrs. Cawston & Fox's yards are the nine little two-months-old babies, a sight seen by few Americans, and well worth going a long way to see. The writer saw them when a day or two old, and will long remember their quaint ways and looks, tumbling around like little chicks, but nearly the size of grown hens, with gray down on their backs.

These little ones were hatched by an ostrich hen, but more eggs were at work in an incubator, 27 of them in a 300-egg machine. Messrs. Cawston & Fox expect to do quite a lively business in ostrich chicks for a few months.

There are six places in Southern California where ostriches can be seen; four of them are trying their hand at breeding them. Who can tell what a future may be before us in this line of poultry-raising? What next? Eggs that will feed four persons to the egg; ostrich feathers grown at home.

Feeding for Eggs.

There is little doubt that the production of eggs may be largely increased by a systematic, scientific plan of feeding; and the average poultry-keeper should give this matter a deal of study and attention. The scientific part of it need not frighten any one who is willing to read, study and put into practice what he learns.

Those who are recognized authorities assert that the egg product of a hen in her prime is about three times her own weight yearly, and in view of this fact the importance of supplying her with food rich in all the elements that make the egg is at once apparent. An egg contains all the elements of a living chick—flesh, bone, sinew, blood and feather—besides the shell matter, which is mostly lime. The principal elements in the egg are sulphur, oil, phosphorus, lime and nitrogen. The food that is given the hen should contain all the elements that exist in the egg. These are found in wheat, oats, corn, bran, linseed, crushed bone, mustard seed, sunflower seed, and vegetable matter. A reasonable mixture of all these, varied more or less, with the aid of crushed limestone or gypsum, would afford every element called for to produce a constant yield of eggs.

But there is another point. A prominent writer on the subject rightly remarks that one of the greatest mistakes in feeding fowls is over-feeding. When persons get the chicken fever they get enthusiastic in the cause and stuff their fowls instead of feeding them. If the hens are allowed to run to grain in the barn they eat twice as much as they should, and the result is a short supply of eggs. Where they are confined to yards they are too frequently gorged with food which makes fat instead of providing those elements which go to make up the egg. As a general thing corn is fed to the exclusion of everything else, and while it is fattening, it is a poor one if fed exclusively. No one food contains all the elements, and some sort of variety must be provided.—Texas Farm and Ranch.

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Postal Telegraph.

At the session of the National Board of Trade in Washington, Jan. 19th, the subject of postal telegraphy was taken up. Mr. Thurber submitted the answers to questions he had sent to Kenrick B. Murray, Secretary of the London Chamber of Commerce. Mr. Murray said in substance that the purchase and operation of telegraphs by the British Government had proved successful, so far as service was concerned, but not financially. The quickness, certainty and secrecy of the service were improved under Postoffice management. The increase of employees in the P. O. service had not been productive of political evils. The inducements to invent new devices in telegraphy was not so great under a Government system as in private hands. The recent reductions in tolls have been of great benefit to the public, the number of messages sent having increased 33 per cent, but the revenue increased only six per cent. The almost universal popular sentiment is against a return to private management of the wires.

Mr. Thurber said the British Government had paid for large additions in plant out of the current receipts, and if the telegraphs had not each year paid interest on the bonds issued for their purchase, if they had been credited with these betterments and with the free service of the Government departments, they would have been able to show a credit sufficient to pay the interest on the bonds, and if they were credited with the increased service given the public beyond what private companies were giving at the time the telegraphs were taken over, it would show an enormous balance on the credit side.

Erastus Wyman of N. Y. spoke in opposition to Government control of telegraph wires, claiming that the British reports showed a steady deficit, and to meet it the whole population was taxed, while but few could use the service, which, moreover, was tardy and uncertain, with no redress for gross negligence. If the British telegraph system in a circumscribed area showed \$2,300,000 a year deficit, in the United States, with its great area, the same system would show a deficit of \$10,000,000. If the United States adopted the system it would increase the employees 100,000, and these employees would feel bound to work in the interest of their immediate employers.

A resolution was adopted asserting that the usefulness of the Postoffice Department should be extended in the direction of telegraphic communication, and Congress was urged to favorably consider the question as early as possible.

On the morning of the 20th, Dr. Norvin Green, president of the Western Union, addressed the Senate Postoffice Committee in opposition to the Government telegraph bills. He quoted a decision of the Supreme Court to the effect that the telegraph business is in itself commerce. He touched upon this constitutional point, he said, merely because he did not wish the committee to understand that the company waived it. He claimed that no people on earth enjoyed so perfect a system of telegraph as the Americans. He then compared the telegraph systems of England and the United States, and asserted that the long-distance rates of the Western Union were cheaper than any other long-distance rate in the world. He said the Western Union enjoyed no exclusive franchises nor legislative grants, and that the field was open to everybody who might choose to enter it. He said that rates would be further reduced the present year. The Western Union had to pay from \$100,000 to \$200,000 a year for mistakes.

If the Government did run a telegraph system, it must take the existing lines. No private enterprise could run against the National Treasury setting out to do business for nothing. He wished to say concerning the Western Union that its value as stated by the press would not buy wire at the factory, and the company's other equipments amounted to three or four times the value of the wire. The property of the Western Union could not be duplicated to-day for its capitalization. "I am told," the doctor continued, "that a petition bearing 500,000 signatures is to be sent to the committee in favor of the Government system. The signatures will come by command, originating in spite against one man with whom Powderly had quarreled. Not one in a hundred of the signers ever used the telegraph, yet they were asking to be taxed for the benefit of the rich brokers, bankers, merchants, commercial operators and speculators."

Gardner G. Hubbard addressed the committee in favor of the postal telegraph system proposed in the bill introduced by Senator Dawes. He gave it as his opinion that of \$86,000,000 capital stock of the Western Union Company, \$8,000,000 or \$10,000,000 had been paid in cash by the stockholders, and probably as much more by the stockholders of other telegraph companies, which had become bankrupt and been bought up by the Western Union, and that the rest of it had been taken from the public in the shape of telegraph tolls. It was true

the present value of the property was very large. He did not believe it possible to duplicate its 600,000 miles of wire for less than \$60,000,000. Over and above this property were other large values. He had always regarded the right of way over the railroads of the country as being nearly as valuable as the other franchises of the company. There was then this capital of \$86,000,000, nearly three-eighths of which was held by the directors of the company. They, therefore, had virtually a monopoly. There was practically no competition in the telegraph business, and there could be none, for it was a business which could be managed more easily and cheaply by one company than by a number; but the question arose whether the Government could not manage a system more cheaply than the Western Union, and whether the Western Union itself could not manage it more cheaply than it does. This question should be answered in the affirmative.

Mr. Hubbard then gave his well-known views on the subject of a postal telegraph system at great length. At the conclusion of his remarks, the committee adjourned indefinitely.

Merced Grange Festivities.

Some one who enjoyed the Harvest Feast at Merced, the 25th ultimo, wrote enthusiastically about it next day in the *S. J. V. Argus*. We quote most of the report:

A meeting of the Grangers took place yesterday in their hall at the Pythian Castle. The day was lovely and there was a full attendance. The meeting was called to order soon after ten. The interesting part was that Mr. Flint, the State Grange Lecturer, was present.

The morning session was somewhat lengthy, and when it was declared adjourned to meet at 2 o'clock, there was a grand rush for the banquet-hall, where was spread a feast composed of most delicious edibles. There was the usual turkey, chicken and ham, accompanied with such wonderful salads, sauces, pickles, jellies, and chow-chow, mince and other pies. We counted six varieties of cake and old-fashioned ginger-bread. The fresh ranch butter and excellent biscuit, and the delightful coffee, with pure cream, made one feel that life was worth living. After the feast ceremonies were over, the click of silver knives and forks commenced, and with the cheerful sound of voices and mirthful laughter the banquet-hall was filled with music which made the hearts glad and we felt like shouting:

Who would not be a Granger:
And with the Grangers stand
In our bright California;
This glorious sunny land,
The land of milk and honey
With its fruit and flowers fair,
And birds' song sweet and lively,
Mingling with the balmy air.

We believe that there is more harmony of action and true social enjoyment among the Grangers than any other organization in the country. Long may it gain and flourish.

Taxing Liquors and Tobacco.

At a meeting of Santa Rosa Grange, held Saturday, Jan. 28th, the following preamble and resolutions were adopted:

WHEREAS, Both of the great political parties during the last Presidential campaign pledged themselves to reduce the revenue of the Federal Government, which is so far in excess of its legitimate requirements; and

Whereas, The President, in his late annual message, reminded Congress of the constantly increasing surplus in the Treasury, and the pledges that had been made, and the great wrong of continuing to burden the people with needless taxation; and

Whereas, It has been suggested to make the proposed reduction by abolishing the internal tax on spirituous and malt liquors and tobacco; and

Whereas, We regard these as luxuries not at all necessary, and exceedingly pernicious in their effect, being productive of crime, ignorance, pauperism, insanity and filthiness, and greatly increasing taxation; therefore, be it

Resolved, That Santa Rosa Grange, No. 17, Patrons of Husbandry of California, hereby enters its solemn protest against any reduction of the internal tax on spirituous and malt liquors and tobacco, and articles manufactured from tobacco.

Resolved, That the Master and Secretary be, and they are hereby directed to forward to each of the Senators and Representatives in Congress from California, copies of these resolutions, over the official seal of the Grange.

POSTAL TELEGRAPHY.—Bro. Geo. Wilson of Enterprise Grange circulated petitions some time since in favor of postal telegraphy, and after obtaining signatures thereon, forwarded the same to Congressman J. McKenna, asking him, in the name of the petitioners, to use his influence in aid of the measure. Bro. Wilson has received the following answer to the petition:

Geo. Wilson, Esq.—DEAR SIR: Received yours and petitions. I presented the latter and they were referred to Committee on Postoffices and Post-Roads. The matter is of growing interest, and several bills have been introduced already. Yours truly, J. MCKENNA.

Washington, D. C., Jan. 16, 1888.

LEONARD STONE, a well-known and respected member of Eden Grange, died at San Lorenzo, Jan. 23d, aged nearly 63 years. Bro. Stone was a native of Gardner, Mass., but has resided in this State since 1851. He leaves a valuable farm property to his widow and six children.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

Much as it has been misrepresented and misunderstood, the Grange has never asked anything unfair in the way of legislation, but only "justly distributed burdens and equally distributed power." It is the unequal laws, the class legislation, the discriminations of these later years that, more than all else, have reduced the profits of the farm and taken from it its once boasted claim that it was the safest and surest business one could engage in. The vast increase in farm mortgages, the hindrances and uncertainties that now surround the occupation, can only be removed by a return to wise, equal laws, "a fair field and no favors" for all. The National Grange at its last session plainly said: "We demand that our National and State Governments should be economical, that the burdens of Government should be equal and just to all our people, and that taxation of all kinds of value and incomes should be rendered certain and conclusive, by the enactment and enforcement of suitable laws, thus offering the greatest relief from the oppression which hangs on the agricultural interest of the nation."

We are aware that the world moves, and that progress will rule the destiny of the great future, although it is sometimes slow in bringing out great results. Agriculture, as has been many times said, is the prime source of the nation's wealth, and is the basis of the prosperity of all other industrial pursuits. In a great measure it has had to fight its own battles for proper recognition and claim for public support. An intelligent agriculture has always in the history of the world been considered the chief promoter and the certain index of an advancing civilization, and therefore is entitled to the foremost place for public and private effort and protection. It should be placed first on the calendar of business in our legislative and congressional assemblies. The many important measures which affect its interests, as has been shown by the experiences of the past several years, have only been secured by persistent and continued effort.

THE GRANGE MOVEMENT in this State is remarkable for its suddenly developed energy and growth. Its value to the agricultural interest has been fully demonstrated, and the fostering of this interest is beneficial all around. Success to the Grange!—Woonsocket, R. I., Reporter.

DISTINCTIVE among the glorious achievements of the latter half of the nineteenth century stands the uplift it has given to woman. She has been crowned queen in a hundred realms, where she had only ventured as an alien. Puissant century of steam and electricity, thou hast wrought more grandly yet! Woman is disenthralled. One great factor in this noble work has been the Order of Patrons of Husbandry. It was first among the secret organizations to admit her on equality, and her presence has done more to preserve the high character and enlarge the usefulness of the Grange than any other fact. For this one reason then, if for no other, we pay tribute to the Patrons of Husbandry.—Penn. Farmer.

MEMBERS of dormant Granges, with but few exceptions, will say: "We used to have good times in our Grange; I wish we might now." The ready response is, What is to hinder? There are thousands of Granges that are in the full tide of prosperity and, with added experience, making their meetings of greater value to the members than was possible in the early days of the organization. What is possible for one Grange is, in a measure, possible for all. The steps for reorganization are so plain, and the benefits to be derived are so apparent, that dormant Granges everywhere should not fail to stir themselves to renewed life and activity.—A. Messer, W. M. Vermont S. G.

THE GRANGE is one of the few organizations which admits woman on equal terms with man, and on this account I expect great benefit will accrue to my brother Patron through the quicker perceptions of his better half. Unfortunately is the man who has not a good, true wife to stand shoulder to shoulder with him in the battle of life. He might as well throw up his hands and acknowledge himself beaten.—E. M. G., Connecticut.

It is encouraging to note that children's meetings are increasing in the plan of Grange work, that ladies' night is becoming more prominent, and woman's work in our organization shows greater development each year. Harvest festivals and Grange agricultural fairs are also increasing in number. Thus the more than 2000 meetings held each year by the Granges in Massachusetts are proving a most important factor in securing a proper recognition of the important position that agriculture holds among the various commercial and industrial interests of the Commonwealth.—James Draper, P. M., Mass. S. Gr.

PROGRESS.—A member of the Grange at Marquez, Texas, writes: "Our Grange is on a boom. Calls at the gate each meeting. Our number is steadily increasing, and its increase is of the best material of the country."... Merrimac Co., N. H., Pomona Grange had 65 applications for membership at its last meeting, and now has 375 members.... A. E. Page, Secretary of the Missouri State Grange, reports the organization of Salt River Grange in Ralls county, Marble Hill in Bollinger county, and Model in Bates county, "with good prospects for several more this winter."

HYDRAULICKER MULCTED FOR CONTEMPT.—On the 30th of January Owen Gowell, a hydraulic miner, one of the defendants in the debris case of Woodruff against the North Bloomfield Gold Mining Co., in which Judge Sawyer issued his famous restraining order January, 1884, was fined \$1500 and costs upon the master's report adjudging him guilty of contempt in violating the injunction against the deposit of slickens in the Sacramento river.

SACRAMENTO GRANGE had an interesting meeting Saturday, January 28th. Several of the officers-elect who were absent from the installation held the first meeting in January, were installed by Past Master Chas. A. Hall, assisted by Sister Alice Greenlaw.

DANVILLE'S INSTALLATION was impressively conducted by D. N. Sherburne, Hon. Chas. Wood assisting. The officers this year are mostly young members, with enough of the older ones to serve as balance-wheel.

In the Patron this week the Worthy State Lecturer fills one column with a very readable account of his recent visit to Merced Grange and the hospitable Atwaters.

State Agricultural Society.

The annual meeting of this body was held in Sacramento on January 28th, L. U. Shippee in the chair, and present, Directors Boggs, Chase, LaRue, Green, McM. Shafter, Hancock, Cox, Rose, Singletary and Shippee. Absent, Carr.

Dana Perkins, who was appointed to take the place of P. A. Finigan, presented his commission and oath of office, and was admitted to membership, though for a time Mr. Finigan contested his admission.

The annual report of the board to the Governor of the State was then read and adopted.

The Committee on Park reported that they had leased the same for one year from December 1st to Messrs. Gardner & Craig.

The next thing in order was the election of officers for the ensuing term. Director Green placed in nomination for president the present incumbent, L. U. Shippee of Stockton, and there being no opposition, Mr. Shippee was elected by acclamation.

H. M. LaRue was re-elected superintendent of the Pavilion, and G. W. Hancock re-elected superintendent of the Park.

It was decided by all votes save one that hereafter no pools be sold on wheat.

Mr. LaRue was elected judge of all the racing events, and was also recommended as a superior judge to the District Societies.

It was resolved that hereafter all judging of animals at the State Fair shall be by a schedule of points.

It was agreed that at the next fair \$2500 shall be distributed for county exhibits.

The following committee on speed program was appointed: Shippee, Rose, Chase, Green and Singletary. The date of closing the two, three and four-year-old trotting stakes was changed to March 15th.

The division of the stakes and added money in the great stallion stake is to be as follows: Stakes to be divided into three moneys—four-sevenths to first horse, two-sevenths to second, one-seventh to third; added money divided in four moneys—50 per cent to first, 25 per cent to second, 15 per cent to third, 10 per cent to fourth. If but two starters, stakes to be divided five-sevenths and two-sevenths. If a walk-over, no added money.

The secretary was instructed to prepare a circular letter to the various Boards of Supervisors, urging upon them the importance of having their counties make exhibits at the fair.

Arranging Dates.

At a meeting of district directors called to assemble in Sacramento on the same day, the dates for the fairs were finally fixed as follows:

Los Angeles—August 6th to 11th.
Santa Rosa—August 13th to 18th.
Petaluma—August 20th to 25th.
El Dorado—August 20th to 25th.
Chico—August 20th to 25th.
Oakland—August 27th to September 1st.
California State Fair, at Sacramento—September 3d to 15th.
Stockton—September 18th to 22d.
San Jose—September 24th to 29th.
District No. 14, Quincy—September 24th to 29th.
Salinas—October 1st to 6th.
Marysville—August 27th to September 1st.

The dates for Ione and Vallejo were not fixed, being left to the directors of those districts.

Messrs. LaRue, Shafter, Chase, Hancock, Green and Rose spoke very forcibly in favor of county exhibits, and urged the delegates present to make arrangements to have their counties represented at the coming State exhibition.

PERSONAL.—We had the pleasure of meeting at San Jose Mr. Nelson Bogue of the Batavia Nurseries, Batavia, N. Y. Mr. Bogue is a brother of J. T. Bogue, who came to California a few years ago and has become well known as an importer of grafting and budding stock and general nurseryman. The Bagues are evidently thorough horticulturists, and we hope Mr. Nelson Bogue will be able to extend his business connections in this State, even if he do not succeed in capturing him for a resident.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

ITEMS FROM MT. EDEN.—Haywards Journal, Jan. 28: Plowing is in full blast and seeding is also in progress. . . . Some of the early sowed grain is a foot above ground. . . . Mushrooms are plentiful around the hamlet. A number of the boys gathered basketsful this week. . . . The Hess Bros. continue to kill the bulk of the ducks shipped from this station. In one week they slaughtered just 500 ducks.

Butte.

EDITORS PRESS:—Our great blizzard has come and gone, and now we have had three or four days of delightful rain; everybody will rejoice. I said our "blizzard" for such it seemed to an old Californian. I live at an altitude of 1800 feet above the sea. I am trying to grow all kinds of deciduous fruits, and French walnuts, French chestnuts, and the American black walnut. I have a few orange trees, from one to four years old, and lo and behold the mercury got scared and ran down to 17°, 14°, 8° and 6°, but the Eastern visitor might laugh at us for calling that cold. My citrus trees look rather sorrowful, but I think that some of them are all right, or will come out all right in another season. It seems to me that the winter of 1861-2 was just as cold up here, though we had more snow then—16 or 18 inches—this time only six inches, but the heavy norther drifted it terribly. Well, I think the cold will be hard on the insect pests, though I have had nothing of the kind yet, as my trees are all young. Apples bore some last year. Although my neighbors have the codlin moth in their apples, I hope this cold snap will get away with them for awhile at least. I see by the Bulletin that the settlers in Lane county, Oregon, have too many Chinese pheasants. Now why cannot some of our sporting clubs get some of them down this way? I am sure they would do well here in the foothills and mountains, and they would not destroy the wheat either. Our Government ought to procure a stock of them and distribute them as they do the fish.—W. H. MULLEN, Big Bend, Butte Co., Jan. 23d.

Contra Costa.

COSTLY FIREWOOD.—Antioch Ledger, Jan. 28: N. W. Smith of Lone Tree valley planted the seed for his almond orchard nine years ago in the orchard rows, and budded them when they had made sufficient growth. Two years ago he top-grafted several acres of the almond trees to prune. This season those trees were heavily fruited with a delicious prune which returned a large profit. The almond orchard has now attained a growth which requires the removal of alternate trees to give sufficient space for the best results in fruitage. These handsome trees, 20 feet in height and two feet in circumference, Mr. Smith has recently been engaged in digging up and transferring to the woodpile. It seems almost an act of vandalism to make such a disposition of these fine, thrifty trees. About 12 acres of orchard has received this treatment.

Kern.

DISPOSING OF THE SURPLUS HARES.—A California Associated Press telegram says that at the rabbit-drive, which took place near Bakersfield, Jan. 29th, about 7000 of the pests were corralled and killed, but many thousands escaped because of the impossibility of maintaining the line of drivers unbroken where tracts of bushy ground were encountered. W. B. Carr treated the crowd to a grand barbecue after the drive was over. Thus far, at the different drives which have taken place, about 17,000 rabbits have been killed. The sport is liked very much, and one or more drives will be had every week.

Lake.

CAUGHT THE COUGARS.—Clear Lake Press, Jan. 28: D. Weiss of High valley, who lately, in company with N. E. Hanson, Chas. and Will Gillette, captured a panther, while two others escaped, has succeeded in taking the remaining two. He found where they had made a descent upon the sheep-fold and killed several, and, putting strychnine in the carcasses, he drove the sheep all off and left the poisoned bait. The cold weather and hunger drove the old mother and cub out of their den, and, being unable to find fresh meat, they ate of the poisoned sheep. Next morning Weiss found their bodies within a few yards of where they took their fatal dose.

Lassen.

WINTERING STOCK.—Susanville Mail, Jan. 25: From F. O. Alexander, who arrived from Secret Valley last Saturday, we learn that Jno. B. McKissick is feeding about 200 head of beeves on his place. H. McKissick drove 450 head of cattle to Brown's place, in Honey Lake valley, where they will be fed during the winter. Cattle are doing well, there being no sign of blackleg among them. The weather has been fearfully severe, but no loss of stock is reported.

Los Angeles.

RETURNS PER ACRE.—Westminster Cor. Times: Mr. S. Lyman had a crop of 20 tons of apples in his orchard of eight acres, most of which was sold before Christmas at \$1.50 per 100 pounds, shipped to San Bernardino and San Diego. This amounts to \$600, or \$75 per acre, and he valued his beets, grown between the rows of apple trees, at \$25 per acre. The fat pea lands grow steadily in estimation as they are cultivated. Much attention will be given to cabbages as a fall and winter crop,

with potatoes to follow in May. The cabbages are estimated to yield at the rate of 12 to 15 tons, worth \$15 for Eastern shipment, giving a net return of at least \$150 per acre for early shipment East, and the potato crop will average 125 sacks at \$1. This combination will fairly bring in \$250 to \$300 per acre. We are informed that over 200,000 cabbage plants have been set out under a contract to pay \$15 per ton, free on board cars at Santa Ana. A report of results will be in order in April.

LUCRATIVE LEMONS.—Anaheim Gazette, Jan. 26: R. H. Gilman, of the Semi-Tropic Fruit Co., received returns the other day from a large lot of lemons which he recently shipped to S. F. They were sold at \$6 per box—a rate which, if maintained, would make the owner of a ten-acre lemon grove vastly rich in a very few years. The lemons sent by Mr. Gilman were not better than the average grown on the company's place, but the average is unsurpassably good.

Mendocino.

FIGS FROM THE FOOTHILLS.—Dispatch & Democrat, Jan. 27: T. C. B. Finney has our thanks for a quantity of dried figs, which were grown on his mountain ranch between Ukiah and Boonville. They gave sufficient evidence that good figs can be raised in this county on land several hundred feet higher than the Ukiah valley.

Napa.

PRUNE TREES IN DEMAND.—Calistogian: Frank McDonald, the Knight's valley nurseryman, says the demand for some kinds of fruit trees is unprecedented the present year. Among these the French prune stands first. He says he might make a small fortune this winter if he had prune trees to meet the demands.

VINES GIVING PLACE TO TREES.—Register, Jan. 27: From a vineyardist who lives in the St. Helena district we learn that, with many other vine-growers in St. Helena and Calistoga districts, he is pulling up the poorer class of his vines and in their place is planting fruit and nut trees. Olives and prunes, walnuts and almonds, seem to be the favorites. The poorer class of grapes bring such low prices there is little profit in raising them.

Nevada.

GRAIN PROMISING.—Grass Valley Union, Jan. 25: The last few days of warm rain has shown the farmers that their grain-fields were not injured by the frosts, as the young grain has taken a remarkable start and gives a promise of making excellent crops.

Sacramento.

ORANGE-TREE PLANTING.—Record-Union, Jan. 28: W. R. Strong & Co. have just sold 20,000 budded orange trees, 6000 large sour Florida seedlings for avenue planting, and 10,000 sour seedlings for nursery purposes—all for the Palermo Colony tract, near Oroville. The cold weather does not seem to have discouraged citrus planting in this section. The above budded stock is intended to plant an orchard of 175 acres, which it is thought will be the largest orange orchard in the State.

San Bernardino.

HEAVY ORANGES.—Citrograph: A Navel orange grown at Dr. Stillman's place was weighed last week and pulled down a plump 25 ounces avoirdupois. A half-dozen gathered at the same place required six pounds and nine ounces to balance them. These may not be so large as somebody else has grown, but they are big enough for anybody to brag about.

San Joaquin.

MUSKMELONS IN JANUARY.—Lodi Sentinel, Jan. 28: Monday morning D. P. Burr placed upon our table half a muskmelon, which was grown in Woodbridge last season. Mr. Burr obtained the fruit from Samuel Woodruff, who stored a number in his cellar last fall. The rind of the melon is somewhat shriveled, but the meat is as solid and apparently as fresh as the day it was picked from the vine. Mr. Woodruff took no particular care in keeping the melons and thinks if he had packed them in sawdust they would have presented a fresh appearance on the exterior.

Shasta.

COLORADO IMMIGRANTS.—Record-Union, Jan. 30: Twenty-five colored people from the Southern States passed through Sacramento one day last week, en route to Anderson, in Shasta county, and they report that many more of their race will follow. These people are settling on Government lands. Many of them have found employment at preparing and planting lands in that vicinity for vines and trees, and they are supplanting Chinese where domestic help is required. One family of 12 are now located on the Sparks place, 2½ miles south of Anderson, the father of the flock having purchased the tract.

Santa Cruz.

CORRALITOS VALLEY.—Courier-Item: An important tributary of the Pajaro river is Corralitos creek, but the greater portion of the valley through which the creek meanders is known as the Pajaro valley. A strip of only four or five miles in length by about a mile in width, as it emerges from the canyons and foothills of the Santa Cruz range, is known as the valley of the Corralitos. While the celebrity of the Pajaro is world-wide for its fertile soil and never-failing harvests, the Little Corralitos is entitled to an equal fame for those desirable elements of prosperity. Recognizing these advantages at an early day in the settlement of our county, these lands were located upon, and to-day are fine properties and the well-improved homes of

a prosperous community. From its favorably sheltered inland location, together with its melon, warm soil, the valley of the Corralitos and the adjoining foothills have proved by actual trial to be favored spots for the successful cultivation of vines and fruit. Farmers here have embarked extensively in orchards, and the trees that have come into bearing reward the cultivator with abundant yields of Pomona's offerings. On summing up we have a total of 54,550 fruit trees in the district of which we have written, the greater portion of which are hardly beginning to bear. Looking for a market for the half-million boxes of fruit that in a few years will be the product of these trees, it is evident the cannery and fruit-drier will form an important factor in preparing the fruit for market. The field for these enterprises is a large one, and it is well for those interested in saving such valuable crops to commence even now to call attention to the feasibility of establishing a profitable industry in either, or both, of the towns of Santa Cruz and Watsonville.

Stanislaus.

IRRIGATION SCHEME.—Oakdale Cor. Modesto Herald, Jan. 26: Richard Threlfall, one of Stanislaus' oldest land-holders, is making preparations for irrigating on an extensive scale. He is going to put into the Stanislaus river a centrifugal pump with a capacity of 15,000,000 gallons per day. In this way he counts on irrigating 150 acres daily. He is also constructing two immense reservoirs that will contain an ample supply of water to irrigate 1000 acres each per annum. This supply of water is for production of diversified crops.

INCORPORATED.—Modesto News, Jan. 27: The San Joaquin Land and Water Co. Wednesday filed articles of incorporation with the county clerk of this county. The purposes for which the company is formed as set forth are for procuring water rights on one or more rivers or streams running through the counties of Calaveras, Tuolumne, Stanislaus and San Joaquin, to purchase, erect and construct dams, reservoirs, canals, aqueducts and waterways, in and by which the water so procured from said rivers or any of the same can be utilized for general purposes; to secure and impound springs, streams and other water of said counties, and lead the water so secured to any of such canals and waterways; to supply farmers, miners, cities, towns and villages with any of said waters, for mining, farming, drinking, irrigation and other purposes; to negotiate for, buy, sell, let, improve and cultivate lands and town lots in said State, lay out town lots and colony tracts. The principal place of business will be at Stockton. The term for which the corporation is to exist is 50 years, with a capital stock of \$1,000,000, divided into 10,000 shares, at a par value of \$100. The directors are: L. U. Shippee, George Gray, Lafayette Finck, N. S. Harold, J. D. McDougald, Louis Gerlach, Dr. A. Clark, Levi B. Holt and J. L. Beecher.

Sutter.

ENLARGING THE CANNERY.—Farmer, Jan. 27: At a recent meeting of the directors of the Sutter Canning and Packing Co., a Building Committee was appointed, consisting of J. C. Gray, R. C. Kells and B. F. Walton, whose duty it is to make all necessary arrangements to have the enlargement effected in season for the new crop. The cannery, it is understood, is to have thrice the present capacity, and will be in condition to handle all the fruit grown in this section. It is also contemplated to add a large drier to the establishment and in this way to meet all demands upon the institution by our fruit-growers. The company has purchased two more acres of ground adjoining their lot on the south, where comfortable quarters are to be erected for the operatives, where board and lodging can be secured at bare cost. This step has been rendered necessary in consequence of the lack of the local supply of help during the busy season, when it becomes necessary to bring help from a distance, which can thus be housed and fed on the grounds as economically as at home.

LADYBUG VERSUS SCALE.—Marysville Appeal, Jan. 27: A few days since we announced the appearance of the "red-spotted" or "twice-stabbed" ladybug in the old Tee-garden orchard near Yuba City, with the remark that its arrival was hailed with much satisfaction by the fruit-growers, as the bug is considered a formidable foe to scale insects, which inflict so much damage upon fruit trees. Yesterday P. L. Bunce, whose home is also near Yuba City, informed the Appeal that the ladybug mentioned has inhabited his orchard for six years past. It lived on his trees side by side with the San Jose scale, and subsisted on the latter, but did not exterminate the pest. In fact, the scale multiplied in spite of the attacks of the ladybug, and he was compelled to resort to spraying to keep down the scale. The spraying was also bad for the ladybugs, and their number has been kept reduced by the annual applications to the trees, but they are still to be found in the orchard. He is convinced that the San Jose scale cannot be exterminated in any orchard in which it has once established itself, and that it must be fought from year to year, but may be kept in subjection. He regards the ladybug as a useful friend to the fruit-grower, but says, as a result of his experience, that it would be very unwise to rely upon its labors to keep down the scale. He has found the scale on the trunks of his trees to a depth of six inches below the surface of the ground, and when he sprays again he means to draw away the earth from the

trees so as to expose the stem to that depth, and in this way hopes to make the application of the wash more destructive to the pests than it has proved hitherto.

Ventura.

EDITORS PRESS:—We had a regular "down-pour," followed by unusually cold weather for this section of the State. A gentleman living in an exposed part of the town told me that ice had formed at his place nearly half an inch in thickness. There has just been a warm, bountiful rain, and the grass and grain are growing responsive to the magic influence of the sun's rays.—O. F. S., San Buenaventura, Jan. 23d.

Yolo.

SHEEP DOING WELL.—Woodland Mail, Jan. 28: We are told by some of the sheep-raisers of Yolo county that the recent cold snap was not very damaging to their interests further than to retard the growth of grass. The sheep being in good order, stood the weather well, and there were very few losses. The continued spell of wet weather, they say, is more damaging to sheep than the cold weather was, but sheep that have plenty of feed are doing well.

AMBITIOUS VINES.—J. M. Garoutte called at the Mail office yesterday morning with a couple of "boom" grapevines grown here in Woodland. One of them measured 27½ feet and the other 24 feet in length, both being this year's growth.

Patent-Medicine Reading Notices.

We are glad that the Calistogian is waking up to the truth about patent medicines, and is getting around to our platform, and we trust there will be a good many others who will follow suit, if they stop to consider. The following appeared in its columns a week or two since:

Our patrons will see that the local page of the Calistogian is entirely free from the very numerous medical reading notices found in all, or nearly all, other country papers. We have refused to renew contracts for the continuance of such notices, because the publishing of them is a fraud on the readers, and because the foreign advertisers will pay comparatively little for the work. The local columns of nearly all country papers, while presenting a fair appearance, are to a great extent filled with merely patent-medicine notices, to the exclusion of local news. Patent-medicine men have learned that by sending a special agent through the country they can secure the insertion of such notices among the locals at a lower rate than is charged the local merchant for the same amount of space in the advertising columns.

Publishers have permitted this sort of work to go on till nearly all of the patent-medicine men advertising on the coast sneer at the idea of buying any space outside the local columns. Publishers will, in fact, give them space among locals cheaper than in the advertising columns. It is high time for a reform in this business. We cannot right the wrong outside the Calistogian office, but we can at least set the example. The agent of a patent-medicine firm was so indignant the other day because we would not contract to let him have space among locals at a much lower price than town patrons pay for space in the advertising columns that he threatened to send "a friend" here to publish an opposition paper. We merely told him that he should have mercy on his friend, but that if he had an enemy he wished to punish severely, to send him here by all means.

THE RURAL IN THE SOUTH SEAS.—The Rural has many subscribers in Australia, New Zealand and elsewhere in that quarter of the globe. Practical notes on California cultures are found of more value there than the contents of our contemporaries on the Atlantic Coast. One of our readers writes on this subject as follows: "I do not wish to say anything against the papers from your Eastern States, for we get a good deal of information from them, but we have not the wintering problem that so interests the farmers in cold climates, but I find the Rural Press just the paper I have been wanting." Some parts of the great island continent of the South are pursuing much the same line of products as California, and, therefore, our experience is of much value there. Perhaps some of our California readers can mention this fact of the Rural's value to friends they may have in that part of the world.

TARIFF ON GRAPE PRODUCTS.—Clarence J. Wetmore, secretary of the State Board of Viticultural Commissioners, is sending out blank forms for petitions to Congress against reduction of tariff on wines, brandies and raisins; also relating to bonding brandies and the passage of the Green Pure-Wine bill. It is the design to have these petitions signed and sent on to Congress. All of the measures prayed for in the petition have been already introduced in the present Congress, and it is thought that by keeping the matter alive in the minds of Congressmen, as may best be accomplished by this means, those interested will be able more speedily to obtain the relief asked for. Copies of the blank petitions may be obtained by addressing Mr. Wetmore at the office of the Commission, 204 Montgomery St., S. F.

CENTS, NOT DOLLARS.—On page 71 of last week's PRESS there was a table giving the average net receipts per pound for several varieties of fruits in Eastern markets. The proceeds should have been given as cents and decimal fractions of a cent, and not as dollars and cents.



A Country Parson.

A man of generous breadth and height,
Expert with plow or pen,
And skilled to curb a restive steed
Or sway the minds of men.

A face that's gentle with the grace
Of manhood strong and brave;
A voice that borrows melody
From deep-toned ocean wave.

And, though not over-quick to smile,
He frowns on naught save sin,
The while he stretches helping hand
The wanderer back to win.

Though taught in theologic lore,
He's not confined to books,
He reads the wondrous thoughts of God
In wildest woodland nooks.

For every bird or bush or brake
Adds treasure to his mind,
In lowliest lichen of the rocks,
He can a lesson find.

I ask not what his creed may be,
Enough for me to know
To serve his God and fellow-men
Is all he seeks below.

Memoirs of John C. Fremont.

[Written for the RURAL PRESS by JOAQUIN MILLER.]

I have just received a huge square book of nearly 700 pages, written by, and about, some people from South Carolina. And if this letter is a dull one, attribute it, I beg you, to fascination of this big book; for I have not been able to lay it down for hours and so have to write with weary eyes and my mind full of the plains, the mountains, in all sorts of wild and pleasant confusion.

This book is called the Memoirs of John C. Fremont, and it takes in the life of that earlier South Carolinian, Col. Thomas H. Benton, as well as that of his illustrious daughter Jessie.

We find Fremont at school in Charleston, a fine Greek and Latin scholar at 16. His first employment is on the deck of a ship coasting down the Caribbean sea in the interests of science. Then he is a surveyor, an Indian "Inspector," if I may use the term, and finally, and at a very early age, an explorer. And I think I read right easily, and between the lines—for he says nothing about it—why he, later on in life, did not entirely please the early settlers while holding the cheap and ungrateful position of Governor of Arizona; he was a humane man, a just and a kind man. You read this all through his big book. Without meaning to say it, you find it set down all through that John C. Fremont always was and always is a gentleman.

To go back to the days of his precocious manhood, we find him, after several expeditions to the West, the protégé of Senator Benton.

"This is the way to Constantinople." So reads an inscription which points down from out the snows of St. Petersburg. England set her face eastward a century ago, saying, "This is the way to India." But Thomas H. Benton on the Senate floor of the United States 50 years ago, pointing his prophetic finger to the West, cried, "There lies the road to India!"

And we, we all out here by the great sea, have got thus far on the road which he pointed out and which the author of this book first traveled and made possible.

The beauty of this book, by Fremont, the strength, the purity, the quiet humanity of this great book, to say nothing of the importance of it as history, has made me ashamed of myself. Here I have been reading one book of nonsense after another, by alleged American humorists, from which I have learned nothing, nothing but bad language and slang, while such colossal characters in our history as Jefferson, Benton and Fremont were slowly fading away in the distance. We need more books like this. We can spare the American humorist for a season. Let him go abroad, and never come back.

The stern and sober features of this history make a substantial background for this sweet episode in his early life at Washington where he first met his future wife, then at school there. He says:

"I went with the eldest of the sisters to a school concert at Georgetown, where I first saw her. She made the effect that a rose of rare color or a beautiful picture would have done. Months passed before, in the vacation time, I saw her again, at her father's house, which already I had come to frequent.

*** There are features which convey to us a soul so white that they impress with instant pleasure; and of this kind were hers."

This manly tenderness obtains all through the book. You miss the hardness and severity of the bloody duelist and fierce debater Thomas H. Benton entirely from these Memoirs as set down by Fremont. He is equally kind to the memory of his dead friends as to the wife of his bosom who has grown gray at his side. Here is the quiet, sweet way in which he takes us into his confidence in such matters:

"I find that in undertaking to write a life-history which shall truly give the complexion of the minds and events of which I know, I have set for myself a difficult task. To speak of friends who have been dear to me in the intimate relations of life; of events in which I had part, and of the persons concerned in them with me—and it is precisely of these that I have undertaken to write—is hedged with difficulties that oppose my pen at every line. And the occurrences in even a few lines through 50 years are long to give, though the very details, which for various reasons are forced from the page, are just what might prove interesting as making up our human life. Still, I console myself with thinking that this, perhaps, would be a life-picture that no living man might draw. And yet I thought to do it."

This tone of sweet simplicity, of dignified familiarity, of half-confidential talks outside of the great historical events, runs on through all his work. This old man of threescore and ten, once so nearly President of the United States, is a boy again in this book—a lover now and now a friend, but all the time a most courteous gentleman. And so I say the book is a good book and a great book, and few can afford to miss reading it.

No, Fremont did not send me his book. I scarcely know the man; never met him but once in my life, and never yet saw his wife. Nor did his publishers send me the book. It came to me through an artist friend, Truman Williams, who once illustrated something of mine, and who is now here in Oakland. It is not only due to myself to say this, but it is most especially due to General Fremont and his family, who are now in California.

And giving this civilian his military title, which he surely laid aside a quarter of a century since, brings me to speak of a very unpleasant feature which stares you in the face on the very first page. This gentle scholar, this traveler, has gone and put on shoulder-straps. Here he stands fronting his title-page in the uniform to which he has not the ghost of right now, and to which only a weak and overgrown schoolboy could cling. Well, it will serve to keep in mind that John C. Fremont is only very human, after all.

While writing the last paragraph, a friend, an old Californian, one of those good old pioneers who thinks he knows all about everybody, and of course knows really but little about anybody, came in and took up my book, and, without opening the lids of the book, opened his lips in a tremendous tirade of abuse, much of which I had read in the campaign papers here in California more than 30 years ago, when Fremont was running for President.

And now let me tell one or two facts. A man by the name of Wilcox, living on the Mariposa Grant, once told me that Fremont never paid his debts and that he could buy his notes for five cents on the dollar. I doubted this and told Wilcox I would give him one hundred cents on the dollar for the first note he could find with Fremont's name to it. He said he could send me enough to make a book, and would surely send me enough to convince any one that my hero was not an honest man. This was seventeen years ago. I now repeat the offer. Wilcox was a member of the Legislature at the time, and I think has since been in Congress. But whatever he was then or has been since, he was certainly a great liar; for I never got my promised autograph.

One thing more. It was but natural that the man who had made the first path across the plains, and had given the best years of his life to the widening out of the work, should seek to have some share in the building of the railroads over these grassy reaches of space. And so we find Fremont in Paris at the head of an enterprise as grand and worthy in conception as it proved disastrous.

I do not take the account of this dreadful piece of ill fortune from Fremont, for that portion of his life is as yet unpublished. I take it from a French capitalist who told me the story in Paris not long after the disaster. Briefly, Fremont had floated bonds in Paris on promises which had not been kept at Washington; the French flew into a panic and Fremont suddenly left Paris, covered with shame and disgrace. I believe that one member of his family, who was con-

cerned with him in the very laudable and entirely honest endeavor to build a Pacific railroad, was convicted and sent to the galleys. And yet the Government of France afterward set this aside and declared Fremont innocent of blame! The disaster, as I was informed, was due to a sudden panic induced by certain telegrams from America; which said telegrams were sent by the leaders and manipulators of rival enterprises. And that is all, and possibly more than all, there is of this matter as I had it from the lips of one of those who claims to have lost most heavily by an enterprise which has since made so many millions for others and opened up so many thousands of miles for settlement.

It would really seem that some men were born with a star, as Napoleon the Great believed, and that star not always a good one.

Take Fremont for example. He began to work early; and he has certainly worked late. And yet at no time has he ever had more than his daily bread; frequently not that. Look at his great railroad enterprise. It nearly cost him a life-sentence to the galleys of France. And yet the very next day, as it were, other men step in and are made millionaires by taking up the thread where it had snapped like the thread of fate in his hands!

And then when he sat in the Senate of the United States by the side of his illustrious father-in-law and friend, why did sinister destiny cut off the thread of his great employment and turn it over to ignorant and unknown men?

And then when stepping toward the highest place in the land, how curious that California, of all other States, could not lay her solid block of granite to help him onward as well as the great State of New York!

And yet all these things are merely detail now as we near the great "round-up." A few more terms in the Senate, a term or two of the Presidency—the Presidency of a Pacific railroad—any or even all of these things together could add nothing to the naive charm of those pages of travel in the untracked lands. They could add but little if anything to the dignity and that great respect which attaches, and must continually attach, to the name of John C. Fremont as the years sweep forward.

Let him go on and finish his book as he began, simple, earnest, sincere. Let him take the world into his confidence. This is a great, good world, full of heart, full of admiration for its heroes in the loftier ways of life. This man has a right to make a book. He has something to say. And well he knows how to say it. He has seen the world, seen it as not another man in all our fifty millions has seen it. He has suffered, suffered hunger on these Pacific shores of plenty. He has toiled, toiled hard and continually from boyhood up to within sight of his game. Let him rest with us; feast with us.

It has been the good fortune of but few men in history to be united, soul and body, with such a woman as Jessie Benton Fremont. Give this superb woman all the honor that is due her; but give her not entirely too much.

It has been the fashion, we all know, for nearly 40 years, to say that "Fremont owes everything to his wife; Mrs. Fremont is the man of the two." Let us see: is this true? No! So far from this being the cold, clear truth, the facts are, Fremont had done his most daring work before this woman came on the scene. His victories came to him before she came conspicuously to the front; his defeats came after she came.

And I say this not at all in disparagement of her; I say it not at all because she once turned aside to pour a whole bottle of wrath on my head for writing a poem called "Kit Carson's Ride"—a poem that at least secured some respect for his lonely grave, and revived the memory of a live, good man. I repeat, I have no other motive in the matter than a willingness to let the serene and lovable figure of John C. Fremont stand out alone, conspicuous and splendid, in the history and the fashioning of States.

JOAQUIN MILLER.

Oakland Heights, Oakland, Cal., Jan., '88.

"THE CIGARETTE MUST GO."—At a special meeting of the Santa Rosa City Council, held Jan. 13th, an ordinance was passed making it a criminal offense to sell cigarettes to boys under 16 years; also the smoking of cigarettes by boys under that age. The penalty is a fine of \$20 or imprisonment of 20 days, or both. It is the intention of the officers to strictly enforce the ordinance.

A NEW VARIETY.—SHE: Have you seen the chimpanzees up at the park?

HE: No. Are they in bloom now?

SHE: Are what in bloom?

HE: Why, the Jim pansies.—Life.

An Old Conclusion Newly Drawn.

[Written for the RURAL PRESS by MAID-OF-ALL-WORK.]

I do not know of any more satisfactory and comfortable occupation for women than house-keeping. It is not supposed that such an avocation is going to be vigorously denied or triumphantly disproved, but I know many persons and people who are wrestling with fate and themselves to find occupations for women exclusive of house-keeping. This is not to be a talk on the California help problem or on servants, and servant-making, but an attempt to look into an opening of thought on the independence of women as home-keepers and home-makers. There is so much said about women in all kinds of new and special places and positions as professionals and office-holders, and latterly about women as agriculturists, that one wearies of all these distinctions and differences, and wonders if it is really necessary to be any more or less of a woman to become a wage-earner.

I accept any occupation for an individual woman that she has the capacity to accomplish, just as we measure men by their special abilities, but the world refuses to consider a woman a success whose sole claim to distinction is that she manages to get along some way without living in a home as a housekeeper or homeward, just as men, whatever their special distinctions, are more perfect men as husbands (house-bands) or heads of household.

I enjoy talented women who have received the highest privileges of education, but their slightest approach in manners and conduct to an attitude of elevation above other women is an ugly blemish. And we measure men in the same way. All occupations are open to men, because they are no less men in responsibilities. If the world has placed a check upon women, it is because it could not afford to lose them as women. But my thought is, that woman is after all unwilling to surrender her position as home-maker and home-keeper, even after she has successfully proven her ability to successfully fill most all departments of mental and manual labor. Or, I feel that women enjoy most happy and perfect lives in positions inseparable from home lives, just as successful men are enlarged by happy domestic lives. Let there be Portias and Portias, if they turn their steps homeward with the evening sun.

The world will learn after awhile that the greatest independence in mind, spirit and occupation cannot change that spirit in woman which causes her to seek her happiest condition.

It seems to me that the majority of women, with their delicate, sensitive, shrinking spirits, should be made to feel as free and independent as possible, in order to stamp a natural courage and spirit upon future generations. Impose upon woman any misery you will, grant her any freedom you will, she will carry that slavery or that elevation of spirit directly to the altar of her own home, and from that home will emanate the effect upon her soul. As freer agents, as more acknowledged equals of men in powers and attainments, women would be grander home-keepers and more capable and respected mothers. From the standpoint of what she is, and wants to be, she should be judged. I think a close research would show that the upward movement of women has not been with a desire to separate themselves from their natural instincts, but to seek to strengthen and adorn that instinct with the achievements of a free spirit.

I cannot see any occupation for women (or men) that will preserve them in content and satisfaction unless it be one that does not interfere with a home-life. They will ultimately break from an isolated occupation calling for a single life and pass their declining years enshrined among kindred and friends.

I always liked Betsy Trotwood because she had a cottage of her own and lived in it. The grand things she did for Mr. Dick and David could not have been done in any other way. Betsy was a successful woman. She might have had a degree to her name and been a success in the same way and many others. But I love Betsy as she was.

One of our most notable examples of a toiling, aggressive public career, and a sweet and enviable private life, is Frances E. Willard, now of world-wide fame. She is constantly before the public in her unprecedented work as a reformer, and never yet has there fallen from her shoulders the sweet mantle of lovable womanhood that can best be worn by her who lives an unpolluted and sacred home-life. She is priestess of a home where altars are open to her most loved. This is what the world reveres in its honored ones—a reserved and sacred home-life, which is to its possessor a treasure-house of reserved riches. It is this that the world has feared to lose in womanhood. I would fear its loss as much in any one who goes out to domestic service as in one who sits in an office and searches law for anxious inquirers. One who contaminates life by constant exposure to what is rude and unsympathetic to it ultimately suffers loss. Sometimes, however, there is a great loss of delicacy and refinement in some woman who has been highly educated in a false spirit. She becomes strong-willed and overbearing, claiming that as the right of progressive woman. As if she would say, "I know that I know, because I have had superior advantages." Among people who are not her peers in such matters, she becomes offensive and loses a reverence that she ought to obtain. As a rule, the more a man really

knows, the more quiet and kind he is about asserting himself. Time and experience, of course, cause women to bear knowledge more gracefully, for the world calls daily for the grace and graces of womankind.

If Alice wishes to be a lawyer, let her be learned but gentle, keen but kind, slow to wrath, but sensitive, prompt and diligent in business, but capable of idling in the love joys of home. We must apply the same rule to her that we do to her brother. She must close the house door against the forms and worries of business, and preside at her hearth with all the warm and joyous attributes of her nature. This is not so easy to do, it is only the strong who can do this; and if the individual woman be strong, let her undertake what she wishes. This is my new conclusion that my sister may have a business or profession but she *must* have a home.

In considering the new subject of agriculture for women, it seems strange that this has not been made the central thought. The culture of land implies a home, and a home being assured, many of the ends of life would be enjoyed simultaneously with the production of an income. Few women can have positions as teachers, scribes or clerks, yet keep with them close at hand the infirm parents, invalid sisters, or young brothers they desire to support. But a successful small farm in easy distance of a good town solves the problem. She can keep with her those she loves and enjoy the refined protection of their presence.

The matter-of-fact widow with growing boys naturally seeks a farm, and why not the enterprising maiden lady? The cities always have plenty of homeless boys to spare, and many mothers in the country are only too glad to lend their daughters to educated women who will give them, in return for company and services, general culture and gentle training.

The question of company and help could be easier solved than the problem of learning how to manage land to a profit.

This is what every one who loves the country desires to learn, and one woman has as good a chance as any other man or woman. Success in agriculture presupposes a natural adaptability to such pursuits. One must love mother earth to receive her love in return. One must be willing to study her wants and labor for her seemingly sometimes without reward. In these days where small undeveloped tracts are within the reach of small capital, and it having been so well demonstrated that such tracts can be made profitable, it should be an opportunity whereby many women could begin the making of independent and retired homes.

In roaming about the great San Joaquin valley this summer, I met several single ladies who had acquired land from the Government by the homestead law, one of whom expected to found a home by bringing a mother and aunt from the "frozen East" (as they say in Southern California). In such ways as these independent womanhood is grand and consistent.

A young lady is a station-keeper and telegraph operator, in which there is nothing unwomanly provided she is qualified to do the work; but she wanders from station to station, boarding at all kinds of hotels, exposed to all kinds of associations, without the comforts, hopes and blessings of a home. Another lady who has a landoffice suffers none of these disadvantages, and another who practices medicine has a beautiful home and office combined. Not what a woman does in this new age, but how she *lives* is the safer standpoint. The girl who leaves the safety and pleasures of her father's farm for an uncertain shop-life in the city does a more questionable thing than she who could develop a raisin or flower or other industry on some neglected corner of her father's farm.

Why could not the mistress of a successful flower-garden enlarge into a successful mistress of a field? In this line the subject widens indefinitely. Herein is included toil, care, sacrifice, economy and a quick eye to detect the elements of success in others. Women will learn that true independence consists not so much in having opinions as in knowing how to catch and assimilate the best opinions of others.

Let woman's ambition wander where it will, it will return to the hearthstone with its laurels and its offerings; and it seems best that it should not go into ways where the heart will harden to modesty, piety, charity, and the humble homely graces of home.

GIRLS' PLEDGE OF ABSTINENCE.—An exchange publishing the "ironclad" pledge which has been signed by many young ladies at White Cloud, Kansas, remarks: One cannot help admiring the courage of the girls who are willing to bind themselves to strict rules of living, and dare demand the same standard of morality in their gentleman friends that the latter demand of them. When there ceases to be a double standard of morality, and men and women are judged alike for the same crimes against society, then that body will have fewer stories of broken hearts and blasted lives to whisper about from one member to another. We honor the girls of White Cloud and the young Irish-Americans, farther east, who have the courage of their convictions and dare stand firmly by what they believe to be right. Here is the card: "I, the undersigned, do solemnly promise, God helping me, to abstain from the use of chewing-gum and slang; and also abstain from, and use my influence against, the use of tobacco and intoxicating liquors. I further promise that I will not keep regular company with any one whom I know uses tobacco, strong drink or profane language."

YOUNG FOLKS' COLUMN.

Hannah Ann's Beads.

[Written for the RURAL PRESS by MARGARET DAVIS BURTON.]

Away down where the wild raspberries grew thick around the pond the children were busy. Two little white sunbonnets and a straw hat appearing here and there among the leafy brambles showed where they were, and their busy hands with pink-stained fingers culled the glowing berries in playful rivalry. The bright tin basin was nearly full, so many times had the three tiny baskets contributed their loads, when a thunder-cloud began to unroll its somber folds and frighten the wild birds to silence.

"Come, we must hurry home," called Maggie, the eldest of the three, lifting up the big basin, which made a load for her, since she was but a slip of a girl, rounded and slender as the stalk of a lily, with a fair, flower-like face looking out from the little frilled sunbonnet. Will and May tripped over the deep grasses in her train, and they all hurried toward the rail fence that divided the pasture-land from the road. Along the smooth carriage-drive they could hasten and easily reach home before the storm should begin. Maggie was cautiously handing the basin over the topmost rail to Will, who had already climbed the fence, and May was perched unsteadily upon a corner, when they were all startled by a scream. Looking down the slope, they saw not far away the Perkins children, who had been berrying, too. Now they were climbing the fence and Hannah Ann was crying.

"I know Mar will whip me, boo-hoo! boo-hoo!" she was whimpering as she bent down, searching for something that the long grass concealed.

"Say, Maggie Bell," called Charlie Perkins, "come over here and help us. Hannah Ann has broke her beads."

A thrill of feminine sympathy went to Maggie's little heart as she clutched her own precious necklace of sparkling crystals, strung on pink twine that shone so prettily through the clear glass. She led the way to where her playmates were in distress, and after due explanations, helped to gather up the scattered beads. Each little warm palm held close some of the lost treasures, but as they were bright-blue and smooth as pearls, it was difficult to see them in the shadowy grass. Still they looked eagerly until a few mutterings of thunder and splashes of rain gave warning that the storm was upon them.

"We will all go in to Mr. Wescott's," said Maggie. That was the nearest house, and they ran over a hill and rapped loudly with the brass knocker upon the heavy nail-studded door which was opened to them with a welcome.

During the thunder-storm that was soon raging without, Hannah Ann and Maggie sat near the window trying to thread the beads again upon the broken string which had been tied with a knot. Maggie held one end of the stout wool thread and Hannah Ann the other, but it was so limp that they could scarcely string a bead. Julia Wescott offered them her needlebook, but every needle was either too large for the beads or too small for their thread, and so they sat at their vain endeavor until the afternoon sun gleamed clear and bright over the fresh woodlands.

Maggie, Willie and May hurried home with their berries and ate some of them with sweetened cream for dessert at dinner-time, while Hannah Ann's broken necklace was forgotten.

The string of beads had been scattered by pure accident in Hannah Ann's hurry to get to some shelter before the thunder-storm should burst; and yet she dared not tell her mother this, because she knew from bitter experience that a severe punishment would be her reward. When she could not get the beads restrung, and thus escape questioning altogether, she consulted with her little brother as to what she had better do.

"Tell her Wescott's dog jumped up and broke 'em," suggested Charlie.

"She'd whip just the same, you know; she'd say I was careless. Oh, dear, oh, dear, what shall I do!"

"Indeed, that child has a shock of hair," remarked Mrs. Perkins, as she sat rocking comfortably in Mrs. Bell's morning-room. Maggie was sitting upon a low stool by her mother's knee, while her mother was combing and arranging her heavy brown tresses that Maggie felt were such a trial.

"Hannah Ann's hair is no care at all. You ought to trim hers out in the back, and then you would not have any trouble either."

Mrs. Perkins was tall and dark and thin, and spoke with a high, grieving voice that was especially exasperating to Maggie when she offered such advice. Mrs. Perkins' own hair was dull and straight and long in harmony with her other features, and Hannah Ann's locks would have been like her mother's if they had not been cut off square across the back of her neck.

"Mrs. Bell, I have something to tell you about your little girl," Mrs. Perkins began again, formally, as if she had quite forgotten all about the subject. "My Hannah Ann came home the other day in great distress. She said Maggie Bell had broken her beads, and six of them were lost. Of course it would not

matter if those very beads had not belonged to Hannah Ann's dead aunt, and besides, they were imported from London. I thought you ought to know, and that most likely your little girl would not say anything to you about it," she concluded, looking at the supposed culprit with an expression that was meant to show a sort of lofty pity.

Maggie glanced with surprise at Hannah Ann. There she sat by the window, her head bent, and her thin, dark features glowing until even her eyes seemed full of the warm color, while her hands were clasped nervously in her lap.

"She looks just as mean as I should feel if I had told such a story as that," thought Maggie, and she looked up at her mother. In that kind face was an expression of pain and surprise that grieved her and took away all feelings of scorn.

"I did not break Hannah Ann's beads," she protested earnestly, but Mrs. Perkins interrupted. "There is no doubt about it. If my Hannah Ann's word is not sufficient, you can take Mrs. Wescott's, for the children were there, and she will confirm what my Hannah Ann has said."

"Well, the least Maggie can do is to beg your pardon. So, my dear, ask Mrs. Perkins' pardon in the best manner you can."

Burning with a sense of injustice, this the child refused to do. "I did not break the string of the beads, or do anything but try to help her save them, and —"

"That is enough, Maggie; do as I tell you."

"Hannah Ann, did I break your string of beads?" she said, turning fiercely to her playmate. Hannah Ann felt all her courage flee, and putting her hands to her eyes began to cry. This aggravated Mrs. Perkins' grievances, and Maggie, getting a stern glance from her mother, kneeled and begged Mrs. Perkins' forgiveness for meddling with Hannah Ann's beads.

Soon after Mrs. Perkins took her leave, feeling quite pacified. "Well, well!" she observed to Hannah Ann, "what a little spitfire that Maggie Bell is. I am glad you are so different in disposition."

Hannah Ann heaved a great sigh of relief, and at the same time inwardly shrank from the whipping she had so narrowly escaped. "Anyhow, I got off this time," was her self-congratulation, and she resolved to "get off" in the same way the next time her skin should be in danger, if she could.

Mrs. Bell, who had striven by all means of kindness and gentle sympathy to win the entire confidence of her children, was more grieved at the implied want of faith on the part of her daughter than by any other feature of the unpleasantness. She questioned Maggie closely, but could obtain only protestations of innocence.

"Well, my dear child," she concluded tenderly, "I am very sorry about the whole affair, still you did right to ask Mrs. Perkins' pardon, for you owe obedience to me."

"And I do always try to mind you, mamma," added the girl, giving her mother a hearty kiss, and bounding merrily out into the sunshine, which made her luxuriant curls look like gold.

The next time Mrs. Bell called on Mrs. Wescott she took pains to inquire all about the beads, but as she could find nothing that confirmed Hannah Ann's story, she dismissed the matter entirely from her mind.

Yet Maggie never forgot it, and although she forgave Hannah Ann's unkindness, she would never again associate with her. Long years have flown since those childhood days, and poor Mrs. Perkins' hair has been made gray and "brought down in sorrow to the grave" through the deceit and willfulness of her children, while Maggie Bell, acting in perfect contrast to Hannah Ann, has passed through all the vicissitudes of life with honor and success.

In telling the quaint little story, she says: "When tempted by the glitter and allurements of false friends, or undesirable company, I have always thought of Hannah Ann's beads, and the memory of the little blue baubles has ever proved a charm."

Temperance in the Schools.

EDITORS PRESS:—I am extremely glad to see that the people are beginning to realize the necessity of educating the rising generation as to the evil effects of alcoholic stimulants as a beverage, and also the evil effects of tobacco. I think it is one of the greatest subjects that has ever been introduced into our public schools. If the boys would only think that these habits are the most filthy and disgusting that ever a boy or young man contracted. Take warning, you will never amount to anything, you cannot get employment in any good place nor go into good company if you get into such evil habits.

Big Bend, Cal.

WM. H. MULLEN.

THE FOUR ELEMENTS.—The evolution of chaos into earth, air, fire and water can be represented in the following manner: In a narrow vial or glass tube, pour mercury to the height of one-fourth of its capacity; for the next fourth, add a saturated solution of subcarbonate of potash; next fourth, methylated or pure spirits of wine, tinted blue; and lastly, turpentine, tinted red. On shaking this mixture together, you will have a representation of chaos; but soon, on resting, the elements will separate themselves, and the mercury will represent earth, the blue spirit air, the red turpentine fire, and the colorless potash solution water.

DOMESTIC ECONOMY.

Washing Glassware.

After gathering all the glassware together, empty all the glasses, and if any have had milk in them, rinse well in cold water before washing. If glasses that have had milk in them are washed in hot water, without being rinsed first in cold, they will surely be cloudy, no matter how well they are washed, and they will also spoil the water for the rest of the glasses. Have ready a pan of hot water, into which put a few drops of ammonia. The addition of ammonia to water, besides softening it, will give the glass a nice polish. Use a soft wash-cloth, and for this purpose there is nothing better than an old napkin. Wash each glass separately, and put aside to drain. Never, if it can be avoided, wash anything besides glassware in the same pan at the one time. When all are washed, begin at the first one drained to dry. Use the checkered towels that are purposely for this kind of work. Usually the glasses drain so dry that the towel is only used for polishing, and takes the place of the chamois skin generally used for this purpose. Newspapers will be found excellent, if used, with which to give a nice polish to glassware. If soap is used in the wash-water, the glass should be wiped immediately out of the suds, or rinsed in clear hot water if left to drain; for if not rinsed, but put to drain from the suds, it is sure to be streaky, and will require a great deal of labor to make it at all presentable.

An old toothbrush, kept for the purpose, will aid greatly in cleaning cut or pressed glassware. To clean glass bottles, fill with ammonia water, put in some small shot, about a teaspoonful to a medium-sized bottle, and shake rapidly until the bottle is clean. Where the shot is not convenient, small pebbles or cinders will answer the same purpose, although they are not as clean to use as the shot. To be sure, where a fine glass bottle is to be cleaned, none of these things should be used, as they are sure to scratch and deface the glass. Fill the bottle two-thirds full of ammonia water, put a soft swab on the point of a fine bent wire and clean the bottle with the swab. If the whole cannot be cleaned in this way, after cleaning as much as possible remove the wire, put in the bottle an egg-shell broken fine, and shake well. This will clean the bottle and will not deface the glass. When putting ice in fragile glasses be very careful that you do not drop it in, which is the usual custom, or you will be wondering why the bottoms of the glasses fall out so easily.—*American Cultivator.*

MOCK LEMON PIE.—One-half cup of sugar, yolks of two eggs, one-half cup of sweet milk and one-half cup water; beat the eggs, add the rest, beat all together, and place in a crust the same as for a custard pie. When done, beat the whites of the eggs to a stiff froth, add a tablespoonful of sugar and one teaspoonful of extract of lemon, spread over the pie, return to the oven and brown. This makes a small pie.

CHICKEN FRITTERS.—Cold chicken, salt and pepper, lemon juice, batter. Cut the cold chicken in small pieces, put in a dish, season with salt, pepper and juice of a lemon. Let this stand one hour. Then make a batter of two eggs to a pint of milk, a little salt, and flour enough to make a batter not too stiff. Stir the chicken in this, and drop it by spoonfuls in boiling fat. Fry brown, drain and serve.

APPLE CAKE.—Take light bread dough and shorten it, or make a crust just as you would for soda biscuits, and roll out about one half inch thick, then cut good sour apples into quarters and again into eighths, and place in rows on the crust, sprinkle with sugar and spice to the taste, and bake, or you need not season but just a very little, and make a sauce of butter, sugar and water and pour over it.

PARKER HOUSE ROLLS.—One cup each of warm new milk and yeast, two tablespoonfuls each of sugar and melted lard, one quart of flour, or enough to mold firm; let it rise till light, then mold, roll out about one-half inch thick, cut with biscuit cutter, butter the tops, fold up, let it rise until light, and bake in a quick oven.

SAGO PUDDING.—Boil three tablespoonfuls of sago in a quart of milk, add a pinch of salt. When cooked, set it to cool, stirring it occasionally. Beat four eggs very light with three tablespoonfuls of sugar, and stir it into the sago and milk; add a small piece of butter and flavor with nutmeg. Bake 40 minutes.

OYSTER PIE.—Grease a deep tin plate and cover the bottom with puff d paste; lay on it a dozen good-sized oysters; season with butter, pepper and salt; spread over this an egg batter and cover with a crust of the paste, making small openings in it with a fork; bake about 25 minutes.

SODA BISCUIT.—One quart of sifted flour, one teaspoonful of soda, two teaspoonfuls of cream tartar, one teaspoonful of salt; mix thoroughly and rub in two tablespoonfuls of butter and wet with one pint of sweet milk; bake in a quick oven.

POTATO CAKES.—Two pounds of mashed potatoes, four ounces of butter and a little salt, two pounds of flour, and milk enough to make a batter, one-half cup of yeast; set to rise, and when light bake in cakes the size of muffins.



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The Week.

Since our last the weather has been in a decided melting mood, and the downpour has been most generous, even to the measure of four inches in 24 hours at one point in the upper end of the Sacramento valley. The temperature has been for the most part delightfully mild, and plants are responding with alacrity to the gentle beckoning of the moist warm air. Grain and forage plants are coming forward splendidly and the characteristic beauties of the California winter, the vernal green in unbroken outline and soon to be starred with winter bloom, are a most grateful change from the unusual frost reign of last month. The rainfall, with the latest additions, amounts on the average to about twice the fall to this date last year, and all the present indications are for a year of exceptional growth and bearing of plant and vine and tree.

It would please many just now to have a few days of sunshine for the later plowing and sowing, and to push orchard work before the buds break forth anew.

Orchard planting this year amounts almost to a furor. Long ago the nurseries completely surrendered on the most popular varieties, and again we find nursery stock arriving from the East by carloads. Other lines of development are correspondingly active. We old Californians must rub our eyes well to keep pace with the constant changes in the landscape.

Experiment Stations Provided For.

Telegrams from Washington announce that the faithful agricultural investigators of the United States and the great body of enterprising and progressive farmers who approve their work, have secured a signal favor from the National Legislature, for a bill has passed both houses of Congress and is now in the hands of the President, which will render immediately available the funds for carrying on the experiment station work, which was ordered but not provided for by the last Congress.

The regular reader of the RURAL is already well informed on the subject and will understand just what this announcement signifies, but still, as the matter now comes up for definite action, it will be well to recapitulate briefly. In effect Congress has agreed to pay \$15,000 annually for agricultural experiment stations in all States which are prepared to maintain them, and, if we are correctly informed, all the States, and one at least of the Territories, have qualified themselves to discharge this work. The law which was passed March 21, 1887, prescribes as follows:

1. That agricultural experiment stations shall be established and maintained under direction of the college or colleges established in accordance with the law of July 2, 1862, known as the Morrill law, granting public land for founding colleges of agriculture and mechanic arts.

2. That such stations shall conduct original researches, or verify experiments upon all subjects bearing directly upon the agricultural industry of the United States, having due regard to varying conditions and needs of the respective States or Territories.

3. That these stations shall report to the U. S. Commissioner of Agriculture as well as to the Governors of the several States.

4. That out of the money (\$15,000 per year) there shall be the first year but one-third spent upon buildings or repairs and after that but five per cent for such uses.

The other provisions of the law relate to matters of detail or to meet conditions which do not exist in this State.

By this law this Government money will be devoted to carrying on and extending the work of the College of Agriculture of the University of California, and the central or home station will be on the University grounds at Berkeley. Prof. Hilgard, who is at the head of this college, and becomes by virtue of his position and merit director of the experiment station work in California, has already on several occasions declared that it will be his policy to localize the experimental work as far as possible in different regions of the State, because there are so many different conditions of soil, climate, etc., that satisfactory results cannot be gained by experiments at any single point. Prof. Hilgard has virtually decided upon the establishment of a branch station south of the Sierra Madre mountains, another which shall properly represent a vast area in the San Joaquin valley, and a number of other points have been under consideration either for general agricultural stations or for special stations devoted to viticulture. As a matter of fact, there are three of the latter already in operation: one at Cupertino, Santa Clara county, one at Mission San Jose, in Alameda county, and another in the great Fresno grape region. As we have said, Prof. Hilgard believes in establishing and maintaining as many outlying stations as possible, provided they are so located that their results may be considered as representative for a considerable area of the State. In this work, however, he will be obliged to proceed with care, because of the amount of appropriation and the conditions governing its expenditure. We are aware that some regions are preparing to meet these difficulties by deeding suitable land in trust to

the Regents of the University for experimental work, and by raising sums of money for the erection of suitable buildings thereon. It goes without the saying that as the desire is to extend this work as far as possible, because of the need of local work in this State, those sections will secure stations which provide lands and funds for their establishment, provided of course that the sections are representative and the lands suitable. No such declaration has been officially made, but such it would seem would naturally be the case where it is obviously desirable to have so many outlying stations as in California. We have heard that one section at least has declared that it will offer to the Board of Regents the land and money enough to erect suitable buildings. These buildings are to be of moderate cost, probably a house for the local foreman or superintendent, a barn for the horses, wagons and tools, and perhaps a small glass house for propagation. Under the law which declares that only \$3000 can be spent for building, it will of course be impossible to fit out many stations in this way unless the people in sections desiring stations co-operate with the University authorities in providing the place and accommodations for the carrying on of the work. We give this unofficial announcement in order that our friends in different parts of the State who may contemplate moving in this direction may place themselves in communication with Prof. Hilgard. The Regents of the University will no doubt be largely influenced by his recommendation in the premises.

In the RURAL of last week we gave a statement by Prof. Hilgard concerning the lines of work which it is contemplated to pursue in this State, but, of course, changes will be made therein as conditions demand. The work will consist largely in extending the investigations and researches which were begun by Prof. Hilgard when he came to California 13 years ago. This work has already commended itself to Californians, and has won wide recognition at the East and abroad for our experiment station as a leading institution of this kind. So far as has been possible the work has been localized by interesting volunteer experimenters in all parts of the State. Last year there were upward of 600 parties furnished with plants and seeds for trial, and Prof. Hilgard's report for 1887, issued last summer, gives full evidence of the valuable information reported by such volunteer experimenters. With outlying stations there will also be a great extension of this volunteer work, as each station will serve as a center of distribution of growths found specially suitable for the region in which the station is located.

It certainly looks as though we were now on the eve of realizing great benefits from systematic research and experimentation in all parts of the State. To do this, however, to the extent of the possibilities, it will be necessary for the fullest co-operation of enterprising land-owners and residents in all parts of the State, and to such we commend the subject for consideration and action.

The Tariff Issue.

The contention over the maintenance of existing import duties on agricultural products continues to rage at Washington and in the parts of the country where local products are assailed. The woolmen are making a valiant fight and have some of their strongest men at Washington doing their best to stem the tide of free trade and political influence which is running to sustain the President in his views and policies, as announced in his message. It does not yet appear what the issue will be, but it behooves all to exert whatever influence they may possess to sustain the hands of those in Congress who are struggling for the maintenance of this important industry. A word or a letter or a resolution may turn the tide of some member's thought, and it should not be withheld.

Our great fruit industries must still be considered in danger, though their position has been notably strengthened during the last few weeks. To offset the action of the importers at the Atlantic seaboard cities, who, of course, cry for free import of all foreign fruit and fruit products, there are coming forward day by day most emphatic declarations by growers and manufacturers of fruit products, which open the eyes of Congressmen to the facts, and cause

them to hesitate before sacrificing the interest of thousands of American producers to the profit of foreign growers and a small coterie of importers, who will quickly transfer to their own pockets the duty which now goes to the Government, and wholly forget the consumer of whose interests the free-trade advocates profess to be so tender. The action at San Jose by a large gathering of fruitmen from all parts of the country must carry great weight in Washington. Comments upon these resolutions and the resolutions themselves are given on another page of this issue.

State Board of Forestry.

The California State Board of Forestry met January 23d in its new quarters in the Flood building, at Market and Fourth streets. There were present Chairman Kinney, Sec'y Forman, and James Bettner and John D. Spreckels, the newly appointed commissioners, as well as H. S. Davidson, the engineer who is making up the forest map of the State, E. L. Collins, the evidence expert, R. H. Lee, the forester in charge of the stations at Santa Monica and Pasadena, and W. G. Klee, Inspector of Fruit Pests.

Inspector Klee addressed the board in reference to preventing the introduction of the cottony cushion scale, and was promised assistance in the matter.

R. H. Lee reported that the experimental forest station at Santa Monica, established in December, consists of a tract of six acres, well watered and adapted as to soil and climate for the purpose in view. Gophers and squirrels abound, and are at present a great nuisance, but it is hoped they will finally be exterminated. Great encouragement has been given him by influential people in the vicinity of the station, and great success may be anticipated. The expenses of the plantation for the first month were rather large but would be reduced hereafter. The outlay for wages and seeds for December was \$391.25. He estimated that the monthly expenses of the experimental station would reach \$400.

Mr. Lee concluded by recommending for cultivation certain varieties of eucalyptus and acacia, the wood of the former being equal in texture to the best bird's-eye maple.

A communication was read from the commissioner's agent in Trinity county, calling attention to the wholesale stealing of Government timber in that county by dealers in firewood. This matter was referred to E. L. Collins, the Government officer whose duty it is to look after and prevent such trespassing. Mr. Collins reported on the destruction and appropriation of State forests throughout California, and said that in two cases where he had tried to obtain convictions, the laws had been framed in such a manner that the offender easily evaded justice. He mentioned that some 100,000 feet of timber had been cut in Mariposa county, and that he had obtained an admission of the fact from Mr. Snyder, a sawmiller who had cut half that amount.

H. S. Davidson, the engineer who is engaged in making up the forest map of the State, stated that since August 8th he had gone through six of the northern counties and had found among the people much interest in the work of the board, and all were anxious that it should increase its usefulness. He had posted hundreds of notices against fire. The great difficulty in getting evidence was that people were afraid to report. As to depredations, he found that it was generally held that Government timber land was the property of the first man to discover it. The shake-makers did nearly as much damage as the great fires. They were criminally wasteful and should be looked after. He referred to the wholesale entries of timber-land, and said that in a few years there would be no public timber-land left. He thought the board should take some means to make the timber in the vicinity of Mount Shasta a national park, or to secure Federal legislation looking to that end.

In reference to the protection of forests, Secretary Forman said that Senator Stanford, in reply to a telegram, had stated that he was introducing a bill similar to that proposed by the board, only differing in detail.

On the 30th the board held another meeting to urge our Congressmen to endeavor to secure the passage of a bill for the withdrawal of all Government timber-land in the State from sale and placing it under control of the Board. The Secretary was instructed to write to the California delegation, showing how Senator Stanford's bill can be amended with advantage.

Mr. Collins was directed to proceed at once to gather information as to the extent of the redwood reserve in San Mateo county, and the probable cost of purchasing it for a State or National park.

Mr. Kinney, who with Claus Spreckels and John D. Spreckels went to Chico to inspect the tract offered for an experimental tree-planting station, reported that the land was especially adapted for the purpose, and recommended that it be accepted.

Two Giant Trees in Portugal.

As we are growing both cork oaks and Spanish chestnuts in this State, it may be interesting to look forward and see what coming centuries may behold in California. The engravings on this page and the following description by M. Charles Joly of two giant trees in Portugal, will give suggestions for such a forecast. M. Joly kindly sends us a little pamphlet containing an extract from the *Journal de la Société Nationale d'Horticulture* of France. A translation for the *RURAL* is prepared by our obliging polyglot M. N. M.

Among the curiosities deserving the attention of the botanists and travelers are the colossal trees found in certain regions where people have respected the work of nature. Of these giants I will mention a cork oak (Fig. 1) and a chestnut (Fig. 2), the photographs of which were sent to me by my friend M. Duarte de Oliveira of Oporto.

It is a well-known fact that the coast of the Mediterranean is specially favorable to the growth of the cork oak (*Quercus Suber* L.). It requires a climate, which, if not hot, must be, at least, but little exposed to sudden changes of temperature and to rigorous cold.

When the tree is virginal, that is to say, has not yet been stripped of its bark, it can easily resist the inclement seasons; but when it has been denuded, the cold air and the excessive heat are equally prejudicial. In former times cork was used only for stoppers, but now it is used by builders, hatters and for machinery. From it are made cartes de visite, and of etiquette, carpets, life-preservers, buoys, etc., and the residue is ground by machinery for packing purposes. Algeria, like Tunis and Morocco, possesses wonderful forests of cork-oaks. They are likewise found in Catalonia and Andalusia.

France has forests of them in Provence, Gascony, the Landes and in Corsica. In Portugal there are very extensive forests in the provinces of Estremadura, Alemtejo and Algarva. The latter country exports to England a considerable quantity of cork, which is returned to Portugal in the form of stoppers for the famous wine of Oporto so esteemed by our neighbors. Cork is to-day a very important object of commerce in Portugal, and day by day its value increases. In 1867 it was 0.15 fr. the kilogr.; now it is 0.25 fr. In the provinces of Alemtejo and Algarva the acorns are gathered to be fed to the hogs, the superiority of which animal is attributed to this alimentation.

It is in Portugal that the colossal oak, the subject of this notice, is seen. It is on the property of M. le Vicomte de Roboredo, and is called in that country Herdade de Torre. It is 500 meters north of the chapel of St. Goncalo, upon the Palmella road, and 15 kilometers south of Lisbon. It measures nine meters (nearly 30 feet) in circumference at one meter from the ground; is 18 meters (nearly 60 feet) high, and its diameter at the top is 20 meters (about 66 feet).

The tree is regarded by the people of the vicinity with a kind of veneration, and they respect it as the Druids did their forests. It has still a great part of its first bark, which, at certain points, exceeds 20 centimeters (about seven inches) in thickness. The exterior of the trunk does not present any cavity. Sometimes the yearly yield is abundant and a product of 800 liters (about 22 bushels) of acorns is not unusual. M. Carlos Pimental, a learned Portuguese sylviculturist, thinks that this oak is the dean of the forest, and that it must be at least 400 years old. There are in the vicinity other oaks of from four to six meters in circumference.

The second colossal tree (Fig. 2) is the chestnut of Alcongoeta, which is upon the northern declivity of the Gardunha mountain, near Fundao, at an altitude of 800 meters (about 3600 feet). At that place are found trunks of con-

siderable diameter. Unfortunately, however, their branches have been cut off for use in building. The most colossal tree among them is on the road from Fundao to Alcongoeta. Since it was lopped about 20 enormous branches have grown out. The trunk is six meters (about 20 feet) in height and 14 meters (about 46 feet) in circumference at one meter from the ground. An opening on the north side, three meters in width, gives access to the interior of the trunk. When it had all its branches its diameter was 20 meters, and its shade covered a

The Citrus Fair at San Jose.

It was a happy arrangement to have the Central California Citrus Fair at San Jose open as it did on Tuesday evening of last week, with the hospitable welcome to the members of the American Horticultural Society briefly described in the *PRESS* for Jan. 28th.

We visited Horticultural hall on Thursday evening, after the fair was fully under way, and spent two or three pleasant but all too scanty hours in noting the varied and elegant

the valley advertised in charming fashion Hansen, Plath & Co.'s nursery at Ocean View.

Beyond, in the center of the hall, the gilded booth of the "Golden West." On a base of ivy-bedight rocks, two or three feet high, was a raised platform, about 20 feet square, inclosed with a light railing, supported on slender uprights from whose tops festoons of pepper-foliage were strung to a higher central pole. Railing and uprights were covered with magnolia leaves, fruit, ears of corn, pine cones, etc., all which—festoons included—were

brightly gilded, making a most beautiful reception bower for the visitors who were requested to register their names within and were presented with souvenirs in the shape of olive cuttings. A stuffed bear-cub stood on the apex of the structure, over the sign "Golden West." This pretty retreat was designed, as we understood, by Mrs. E. O. Smith, and constructed by Mrs. Georgiana West of Santa Cruz, Mrs. Smith, Mrs. Inscoe and other ladies of San Jose.

Over the stage at the further end of the hall was the legend, "Northern and Central California Winter Products," in letters fancifully formed of apples.

On the left of the central aisle near the door was the Oroville table, where handsome oranges and lemons were neatly displayed, the oranges predominating.

Then came the "Sacramento County Exhibit," comprising pyramids of oranges, some

Navels among them, plates of lemons and several varieties of apples, bundles of licorice root from I. Lea's Florin ranch, big ears of yellow corn "raised on the Cosumnes river, 20 miles southeast of Sacramento; planted in May; never had rain nor irrigation; would go about 75 bushels to the acre, there being about 150 acres"—so said Wm. H. Dixon. Here were English and black walnuts, chestnuts, ripe olives, raisins and prunes, giant squash and other vegetables.

On the same table, beyond the Sacramento exhibit, Geo. F. Hooper of Sonoma showed pickled olives and olive oil, a few oranges and lemons, and samples of pecans, black and English walnuts, Italian chestnuts and French prunes from his Sobre Vista ranch.

Juan Gallego, Mission San Jose, had a small collection of oranges, lemons, walnuts and almonds, Japanese persimmons and very fine-looking olive oil.

Jas. Shinn of Niles contributed a box of large Navel oranges, twigs of almonds and loquats in bloom, Persian walnuts, carob sprays and pods.

To the right of the entrance was a handsome stack of goods in glass and tin, put up by the San Jose Packing Co. Next a large table of oranges, contributed by I. Cunningham of Saratoga, J. W. Fuller and other growers. They were abundant in quantity, but evidently affected by recent frosts. Here, too, were lemons from Milpitas, walnuts from Evergreen, elegant prunes from Wm. Warren's evaporator, and fresh grapes, both white and purple, from H. C. Morrell's place in the Santa Cruz mountains.

Beyond shone Stanislaus' lavish output of golden fruit, mostly from the orchard of K. Vogt at Knight's Ferry, although Geo. A. Goodell of the same place had quite a number. In the middle of the table was a pyramid of oranges 16 shelves in height, capped with the contents of a small wire basket. This display from Vogt's orchard, embracing Navels, Malta Bloods, Mediterranean Sweets, and other oranges, clean, bright-hued and heavy with juice, was by far the finest citrus feature of the Fair—no other exhibit approached it.

Around the sides of the pavilion, beginning to the left of the entrance, came first the Angora Robe and Glove Company's showy and pleasing display. Then there were cocoons raised by Leon Straus and by Mrs. E. Glover of San Jose—the former arranged on strings and the latter as they were spun on twigs—with reeled silk from the State Board's filature, and specimens of



Fig. 1.—VIEW OF AN ANCIENT CORK-OAK IN PORTUGAL.



Fig. 2.—VIEW OF A GIANT CHESTNUT IN PORTUGAL.

surface of 150 square meters, or about 1600 square feet of area.

A SAN JOSE correspondent writes us Jan. 27th: "Please send me the seeds due me according to the following numbers," etc., but omits to sign his letter. As we have several subscribers at San Jose to whom seeds are due, we are obliged to wait until our unknown friend writes again and gives his name.

A DAYTON (NEV.) farmer shipped two car-loads of potatoes to Los Angeles last week.

exhibits. The interior of the pavilion was tastefully festooned with greenery, and the walls were liberally adorned with ivy. Directly in front of the entering visitor, and almost the first thing to catch his eye, stood a great crimson arch, framed in closely-set oranges, with the greeting "Welcome Horticulturists" in letters wrought of leaves and berries. Around stood olive trees in bearing, the finest being from the "Quito Olive Farm," with orange, loquat, magnolia and native forest-trees in boxes of earth. A dozen little pots of lovely fragrant lilies of

manufactured silk from the establishment of H. X. Van de Castele.

A. R. Woodhams and other Santa Clara growers united in making a display of grains, both in sheaf and thrashed, and in long array beneath the gallery stood the potables of the Paul O. Burns Wine Company.

Under the placard "From Oregon" lay a lot of superb apples, some of which at least came from Dr. Plummer's orchard at Portland, with evaporated prunes in cubical canisters, put up by Mark Levy of Portland, mountain honey from D. Kauffman, Needy, and in boxes attractively packed by Chauncey Ball, Mt. Tabor, noble specimens of evaporated Bradshaw plums, Coe's Golden Drop, Italian prunes, Lawton blackberries, and Lewelling and Royal Ann cherries.

The Santa Clara table bore heaps and plates of Easter Beurre, Winter Nelis, Doyenne d'Alencon and Lawrence pears, all from David Parker, San Jose; other big pears, unticketed; singularly fine Newtown pippins, by L. D. Woodruff, Willows district, and W. Oliver, who had besides ruddy Spitzenbergs and Nickajacks. Fine White Winter Pearmain, Nickajacks and Newtown pippins were also shown by O. J. Albee of Lawrence Station. Easter Beurre pears and several varieties of apples were exhibited by E. M. Hines; fine Japanese persimmons by I. Cunningham of Saratoga. Mrs. J. M. Britton, beside big winter pears, showed a bunch of last year's quinces, which were deliciously fragrant. Passing a double-faced sign which stood like a long tent across this table, we came upon a charming surprise—a most elegant display of apples, mainly Newtown pippins, pears, Winter Nelis and other varieties, Japanese persimmons and grapes, contributed by D. C. Feely, C. T. Settle, J. A. Gist, E. M. Thomas and others, which were not only fine in themselves, but also admirably disposed. This end of the Santa Clara table was one of the choicest spots in the pavilion, and deserves more notice than we are now able to give to it.

On the opposite side of the hall, beneath the gallery, were choice dried fruits in variety, and jellies in glass attractively set on a little winding stairway by Mrs. N. A. Sanders. Then came a collection of products of Gilroy and vicinity, "as packed for shipment and not for display," among which the ordinary boxes of extraordinary dried apricots, prunes and plums in great variety, Bartlett pears and peaches, by P. H. Cordes, were particularly noteworthy; also green apples and grapes, as well as evaporated fruits, by several other parties.

One of the most artistic and brilliant single exhibits in the hall was that of the dried and evaporated fruit, in show cases and glass jars, surmounted by a row of variously tinted jellies, made by Geo. A. Fleming & Co. Alongside of these were arranged numerous small boxes of dried and jars of canned fruit by Mrs. S. T. Ingalls of Willow Glen, F. A. Werts of San Jose, O. J. Albee of Lawrence Station and many others.

The Japanese Tree Importing Co. had a considerable exhibition of citrus stock, including dwarf orange trees hung with fruit.

In an out-of-the-way corner, easily overlooked, were 18 boxes of fresh Late Red Sweet St. Martin prunes, picked about Christmas, from the Deer Ridge Farm of our friend S. H. Herring, near the summit of the Santa Cruz mountains, accompanied by Bell Flower, Newtown pippins and White Winter Pearmain apples, tinged with the morning blush of the hilltops.

Lastly, close by the door, to the right of the entrance, was a stupendous pile of squashes (160 to 170 lbs. apiece) and huge beets, chinked with "spuds," carrots, and other vegetables to the height of a dozen feet. This was a dazer to the sight-seers from beyond the Rockies.

The briefness of our visit to the pavilion forbade our going into details of exhibits and exhibitors as largely as we felt inclined. We would have liked more than a few passing glances at the cabinet of shells, native woods and minerals, loaned by the Normal School and private individuals; and the table of curios, Fiji weapons, etc., looked very interesting, if one had time to scrutinize.

The courteous reception given us by Pres. Jones, Sec'y Dunn and ladies of the committee, and the friendly attentions of D. C. Feely, enhanced the pleasure with which we hurriedly viewed this splendid demonstration of what be grown in Central California.

The American Horticulturists.

Annual Address by President Earle.

Our correspondence last week brought the meeting of the American Horticultural Society at San Jose to the close of the first day's session. Though we intend to refer more at length in the future to some of the events of the first, we proceed now with the first event on the morning of the second day, and this was the annual address by President Parker Earle of Cobden, Illinois. It is one of the most notable papers ever presented at a horticultural gathering, whether it be judged by its breadth of thought or style of expression, or by its wealth of practical suggestions for the growth of the horticultural interests of the country. For this reason we desire to place it upon record in our columns in full, and would advise its preservation for future reference:

President Earle's Address.

It was nearly 50 years ago that I had my first dream of a horticultural paradise as I read, in the good old Bible story, the report of that exploring committee which Moses sent out to search the land of Canaan, and spy out its resources and "to bring back the fruit of the land." Now, Moses being the wisest of his race, and the greatest leader of men, did not ask his committee to bring back samples of the grain, the merino wool, the short staple cotton, or the best breeds of live-stock, Shorthorns or Jerseys, but simply to bring back the fruit of the land. For Moses seemed to know that the country which could grow the best fruits was the very best country for the chosen people of the Lord to emigrate to. And when this first horticultural deputation returned laden with the figs, the pomegranates, and the great cluster of grapes from the banks of the brook of Eschol, that the two men bore on a staff between them—and I know that that cluster of grapes reached from the staff on the men's shoulders nearly to the ground, for my mother's great Bible pictured it that way—then Moses and Aaron and Caleb and the few wise men of Israel wanted to go up and possess the land notwithstanding the sons of Anak dwelt there and the other tribes of the great stature. But the mass of the people of Israel were ignorant and did not appreciate this horticultural exhibition and the promise of the better life that was possible in a fruit-growing country, but they grumbled and rebelled, and they all suffered the righteous penalty for their neglect of such a noble opportunity. But I well remember the longing with which I considered that enormous bunch of grapes and the impulse I had to go and find a country where they grow grapes in big clusters. Now I think that there are many thousands of men and women who were little boys and girls a little while back like myself—only a half-century or so—who have been carrying visions of the great grapes of Eschol in their brains ever since those early Bible readings. And we have all been wanting to come to the land of Canaan—ever since we found out where it was—that we might see its fabulous fruits hanging in the golden sunshine and taste the perfumed air of its happy valleys while we strolled along the banks of the wonderful brook of Eschol, and, perchance, find opportunity to lift some of those big grape clusters that are not wholly of the imagination.

The Earthly Paradise.

And so a few of us horticultural dreamers have come over the great fertile plains and across the thirty deserts and have climbed the gigantic walls which fortify you against invasion, to test for ourselves the climate and the fruits of this earthly paradise. We think we like the land and the fruits thereof and shall make a good report of them to all the chosen people of Israel.

My friends of the land of Canaan, we are glad that we came. We are glad to be with you and to see the welcome which shines in all your faces. We come as fruit-growers, and gardeners, and forest planters, and builders of homes, to greet our brethren in a land whose conditions of culture we have long envied. We have come to study these new conditions for ourselves; to gain new ideas which we may apply where our surroundings are less favorable; to compare views as to many questions regarding which we have a common interest; and to drink with you at the fountains of enthusiasm which have inspired you to so many brilliant enterprises all along this golden coast.

Horticulture.

Horticulture is a broad term. It covers almost everything that makes our country beautiful and sweet to live in. It embraces the operations of the fruit-grower, the skillful manipulator of the garden, the arts of the landscape builder, and all that relates to the planting of forests in a land that perishes without them. Every horticulturist should be a missionary. He should be an educator of the public taste as regards trees and flowers and lawn plantings and fruit gardens. He should be an enthusiast for the beauty of his town. He should stimulate the making of parks; the adorning of cemeteries and schoolhouse yards; the planting of groups of roadside trees. The true horticulturist will make his mark in the community in which he lives. I think that one of the great needs of the time is a generous enthusiasm for horticultural improvement.

We want tree-planting associations in every town in the land. Every man should not only make his own home beautiful, but should find some stimulus for his neighbor whose grounds are lean and bare.

The work that has been done by horticultural agencies in redeeming this great country, its towns and its farms, from the nakedness of forty years ago is something to rejoice in. The land is blossoming with beauty in thousands of parks and lawns and cottage door-yards; but many leagues of barrenness still stretch along almost all of our railways and highways—a vast field for the preacher of this new gospel of beauty and home comfort; and until every farmhouse and cottage in all the length and breadth of this magnificent country shall be blessed by sheltering trees and blooming bed or climbing vine, or some sweet spot of green turf which shows the outbursting longing of the immortal spirit for beauty; until every American farm shall have its garden for vegetables and fruits, and every village lot its fruit-bearing tree or vine, will the duty of the horticulturist as a teacher and a missionary be partly undone.

Narrow Discussions.

I think it has often been a fault of our horticultural societies that their range of discussion has been too narrow. They have been given too much to the special interests which affected the business of the majority of members and too little to those relating to the public welfare. In fact we are often simply pomological societies or nurserymen's clubs. We come together with our great problems of culture, of insect management, of the cures for mildews and blights, and our whole business success is often involved in finding answers to these vexing questions, and we are prone to neglect the sweet influences which make for beauty alone, and the refinement of the home.

I hope for an extension of all horticultural influences, for more societies, for more horticultural columns in the press, for social rural clubs and tree-planting associations, because I believe that the great horticultural movement of this age is doing far more for the higher civilization than all the factories and forges and trade guilds in the land. Let us labor generously toward that millennial day when every cottage shall shine with some of the beauty and every laborer's table carry some of the fruits of our art.

Fruit-Growing.

But while I would exhort everybody to grow trees and vines and plants for beauty and fruits for home supply, I do not by any means seek to influence any large increase of fruit-growing for commercial purposes, for I believe that fruit-growing as a business is increasing quite as fast as our facilities for distribution, and rather more rapidly than profitable to the growers. It appears to me that there is no subject of more immediate practicable interest to the commercial fruit-grower than this one of the means for a wide distribution. You are all well aware that our most important and stable fruits often sell at ruinous prices in our leading markets not only on particular days, but for long periods. The shippers of pears from California, of peaches from Delaware, of apples from Michigan, of strawberries from Illinois, and of oranges from Florida, can all testify to this. Yet I do not think too many of either of these fruits of good quality have ever been grown in any of these States, nor enough for the markets that were within practical reach of them, or the mouths that were hungry for them. The fault is with our transportation and our lack of means for reaching an elaborate system of distribution. I think I have known good oranges to sell at not much over one cent apiece at wholesale in Chicago, the market being overloaded, when there were a thousand towns within a day's ride of that city in which you could not buy an orange for less than five cents, and not many at that, and millions of mouths within the same radius which did not taste an orange in the whole winter. Yet the fruit distribution from Chicago is more closely worked than from any other American city.

Distant Markets.

There have been many winters in which the price of winter apples has paid the producer very lean profits, and paid the larger dealers more losses than gains, while at that same time an apple was a rarity, if not an absolute stranger, in half the farmers' homes and laborers' cottages in America. The delicious apricots of your Pacific Coast are often left to decay in the luxuriant orchards that bear them for want of a market, while not one-tenth of the people of the United States ever tasted an apricot in their lives. Yet, by using the best modern means of transportation, your most delicate varieties, picked ripe from the trees and full of excellence—and not as they are now, mostly for long shipment, too green to be of high quality—can be laid down in all of our great Eastern markets in very perfect condition.

The same difficulty exists with most of our fruits. So many of our available markets are not reached, and the fruit-grower suffers from an apparent over-production, when half the people go hungry for fruits which they need and cannot obtain. This condition of trade is not found in the case of staple goods of other kinds and manufactured articles. For all these goods are handled according to a more thorough business system. The more perishable nature of our fruits must of necessity modify and limit the same system of thorough commercial canvassing by which more durable products are placed constantly in every town and hamlet in

the country; but I feel sure that regular fruit markets can be built up in thousands of towns that now get no supplies except in the most irregular way, by an energetic system of canvassing. This subject demands serious attention of our growers and dealers.

Tricks of Trade.

This leads me to notice one grave reason why the building up of a regular fruit trade is more difficult than it should be. This reason is the irregular quality and serious imperfections of a majority of the fruits sent to market. Both the dealers and consumers soon get disgusted when they find half the peaches in a basket, or half the apples in a barrel, wormy; and in the case of the peaches, find all of them green, hard and unedible below the top layer; and even the top course seeming ripe and well-colored only when seen through the delusive taretan which is bound tight over them. A basket of green peaches with a goodly supply of wormy, and with sizable specimens placed on top and then all covered tightly and beyond examination by a colored netting, which makes them all appear blushing with ripeness, is a cheat and a fraud so contemptible and disgusting that it should consign the perpetrator of such a swindle to the tender couch of the county jail. It is only equaled by a barrel of apples that is faced up handsomely at both ends and is filled with scabby and wormy scrubs through the middle.

I regret to say that such baskets of peaches and such barrels of apples are forced off upon an innocent buying public by hundreds of thousands every year. I think and hope that the most abused fruit market in the world in this respect is that best of all fruit markets of the world, the city of Chicago. I will venture the guess here of all the millions of people that have this year bought peaches coming through the Chicago market, not one in four has had occasion to bless the grower of the fruit, and in most cases has been obfuscated if not cured. I dwell particularly upon this kind of fruit and this kind of package because it is the most notable kind of example of a widespread attempt to deceive the buyer to be found in all our fruit-marketing history. It will not be a good excuse to say that red taretan is necessary to hold the fruit in place in the baskets because white netting with a very open mesh will serve that purpose equally well and will not obscure the real color. And no well-colored peach can be made more beautiful by any kind of covering. Is it any wonder that respectable grocers dislike to trade in our fresh fruits, and that the people get sick and weary of buying them, when the opening of every new package is the unveiling of a new deception?

An Earnest Protest.

I am a fruit-grower, a fruit-packer and a fruit-buyer, and I stand here in all three capacities to protest in all the earnestness of my soul against all kinds of deception in fruit-packing. It is impolitic in the highest degree and it is unworthy of all decent men. A large dealer not long since said to me that the whole business of fruit-packing, East and West, North and South, with now and then an exception, is worm-eaten and rotten with dishonesty. My friends, I hope his denunciation was unjust, and I believe it is far too sweeping, but severe criticism is called for.

Let us away with all stuffings and facings, with all deceptive coverings, with all under-size packages, with the packing of all green, half-grown, gnarly and worm-eaten fruit in any kind of packages. If we must pack it, put it on top where it will tell its own story. Let us do this, and we shall find it will pay in money, pay in the plaudits we shall win from all men and in our own self-respect and integrity of soul. I should say here, and I cheerfully do say, that I believe that the Californian fruit-packers are generally far less open to criticism in this matter of straight packing than are the majority of Eastern growers. You cannot afford to pay freight on trash 2000 or 3000 miles. Yet there is some room for improvement in the selection and grading of fruits from this pre-eminent horticultural State. It cannot be too often or too earnestly impressed upon fruitmen everywhere that to secure the best results the most scrupulous pains must be taken not only in growing fruit properly, but in careful handling, thorough grading and unflinching honesty in packing. The man with a high standard, well worked up to, is the man who will come out best in the race.

Fruit Production.

The business of fruit production is growing to be so vast a one in many sections of this country that the time has fully come for giving it more thorough organization than it has had before. There are many considerable sections of the country where it is already the overshadowing industrial interest, and it seems to me probable that in your great and glorious State of California it will soon overtop every other producing interest. For you, as for Florida and Delaware and large sections of New York, Michigan, Illinois, Missouri, Georgia, Arkansas and other States, these questions of transportation, distribution, a high standard of packing, and a high standard of quality of fruits, are subjects of overwhelming business importance. The United States is the great fruit country of the world. There is no limit to the possibility of our fruit production, when insect and fungoid troubles are handled by energy guided by science. There will be no limit to it, except that of pecuniary profit. We can furnish the nations of the Old World

with fruit, as we do with bread and meat and cotton. There is no reason why the peaches of California and Mississippi and Michigan and Georgia should not be laid down in the European markets. I speak temperately, and my conclusions are based upon my own experience as a shipper of fruit. The facilities for producing this do not at present exist, but they are known and within the reach of a properly organized effort. Hence I see a future for the horticultural interest of this country that is glorious and vast as the blue canopy of a summer sky. To reach any grand and rewarding results every step must be taken with care and thoroughness.

Microscopic Fungi.

Among the many obstacles to success in fruit-growing, the most destructive and most difficult to overcome are the myriad tribes of microscopic fungi which assail plant and tree and vine and fruit. There is no branch of our business which does not suffer serious annual losses from these obscure enemies, and no climate or section so fortunate as to long escape their attacks. The discouraged fruit-grower who has lost his pear trees by the omnipresent blight; his peach trees by the insidious yellows; his grapevines by the mildew, whose white shroud extinguishes all hope for fruit; his apple crop having become scabby and his strawberry plants have burned by the rust as by a consuming fire, turns his face away from the old homestead upon which all these horticultural curses have fallen, and travels to some new fair land, where smiling skies and sweet winds promise him immunity from all these evils. For a few years these promises are kept and his virgin crops are fair as the golden apples of Hesperides. But his obscure enemies follow him with the certainty of an avenging fate, and they will follow him the wide world over, even within the gates of Eden itself, if he does not wage an exterminating warfare upon them.

You cannot probably name a fruit that we grow which is not preyed upon by four or five or more of the lilliputian foes. The number that affect the interests of horticulture cannot be stated, but it is certainly counted by hundreds, a single one of which, like the scab on pears and apples, costs the American fruit-growers millions of dollars annually. I think it safe to say that the quantity of fruits entirely destroyed or so seriously defaced as to lose their market value in this country by these low forms of vegetable life is far greater than all that escapes their attack. This difficulty grows greater year by year, in all fruit-growing neighborhoods. That this is a situation which demands the serious attention of all horticultural people, I need not suggest.

Lack of Knowledge.

Our definite scientific knowledge of the nature this vast underworld of microscopic life which pervades and attacks and overwhelms all the higher and nobler forms of vegetable organism, is as yet very incomplete and is all very modern. It is the most obscure domain of physical research. The botanists who have thoroughly studied the fungology in this country and done something to master its elusive problems, can be almost numbered on the fingers of the two hands. We have thousands of scientific men and hundreds of specialists who are making plain paths through the intricacies of scientific obscurity, but this great and universal realm of the infinite little things which attack all superior creations and assail the integrity of every structure which enters into our civilization has received little investigation.

What we need is more workers in this field. We must have more knowledge, and that we may have investigation, we must provide in some definite way for the support of it. Is there any more important kind of work for our Agricultural College and for our State experimental stations? I urge this matter upon your thoughtful consideration.

A Noble Occupation.

The business of fruit-growing is one of the noblest occupations of the world, if carried on with a faithful spirit. The results of our work contribute directly and powerfully to the betterment of mankind. We minister to the health and position and moral stature of the community. I would have every horticulturist regard his vocation with a becoming pride. We work with the great force of nature. We form alliances with the sunshine and the rain, and the secret affinities of the soil. We manipulate the occult energies of chemistry. We join hands with Providence to produce our harvests. The American fruit-grower, like the American farmer, should hold his head proudly but reverently as the best man of the world. As I look at it there is no man on earth that outranks the well-equipped and competent American farmer and American fruit-farmer. But equipment of knowledge and intellectual competency mean a great deal.

Technical Training.

The successful and ideal farmer must be a man of culture and of science, must have a wide knowledge of the world, its great industries, its history, its commercial needs. He must be a power in the community and in the State. Are we taking the necessary educational steps to produce such farmers? There is no question which a convention of horticulturists representing every section of our country can more appropriately consider than that of the facilities we are providing for the education of the American farmer as he should be. We have the foundation for the best educational system

of any nation in the world, and we have a more earnest general desire to find the best kind of education. Our farmers and our agricultural writers are more widely imbued with this desire than this same class in any other country.

Yet I fear that the present tendency is to place our standard too low. I am greatly in sympathy with our agricultural colleges and with the industrial departments of our universities, but I cannot join in the general criticism of those institutions which attempt to give a generous literary culture as well as a good technical training. In fact, I feel like protesting earnestly against the general trend of the discussion in the agricultural press toward a purely technical, manual, industrial education.

The American farmer should be the most liberally educated and broadly cultured man in the American state. The farmers, as a class, far outnumber the class of manufacturers, or of merchants, or of professional men, or of all these classes together, and yet they have less influence in molding the industrial and political policies that govern us than either one of these other classes. Why is this except that the farmer has learned how to plow, and to mow, and dig ditches better than he has learned how to think? His education has been so generally confined to those rudiments necessary to give him practical success as a farmer in a narrow sphere. And here come the doctrinaires of the new industrial education and propose the same policy for our agricultural colleges only in a larger degree.

This widespread sentiment is, it seems to me, one of the saddest mistakes of the age. It proposes an education as deficient in general mental culture as the old classical schools are in scientific and technical training. The true education that will make broad-minded, forceful men of our bright boys—must embrace all that is best and all that is possible of both the old and the new systems. Let us, by all means, shed all the light of science on the difficult problem of agriculture—let us teach engineering and drainage, and stock management and veterinary practice; but let us not try to eliminate the Latin from the nomenclature of science, or go into editorial spasms at the sight of a pile of Greek roots.

Credo.

I believe that the farmer will never take his proper place as a director in great affairs of economy and statesmanship until he is educated as the lawyer and minister, the physician, manufacturer, merchant and statesman are educated; until he becomes a student, if not a master, in all lines of classical, literary, esthetic and scientific culture, as have the controlling men who gauge our politics and direct our affairs. The plea so earnestly and frequently made against classical and literary teaching in our agricultural colleges is a plea for mental narrowness and intellectual incapacity. The technically educated farmer may guide the plow to turn the truest furrow, but he may not be able to do much good in holding the helm of State—facility in forging plowshares, in turning the parts of an engine, in grafting and training fruit trees, in the economical care of stock and the treatment of sick animals—all these accomplishments so essential to the artisan and the farmers as such—nevertheless fail to qualify him for the higher social duties and the solemn responsibility of the citizen who should be foremost of men in controlling the great policies of the commonwealth. In fact, a well-trained faculty for tile drainage is not a liberal education. Cincinnatus was called from the plow to the chieftaincy of a people, not because his hand could hold the plow well, but because his educated brain could master the great problems of the State. The men who have made farming and horticulture a noble occupation, who have given dignity to labor and who have voiced the needs of agriculture and the longings of industry, are not the men who have had simply a dextrous manual skill, but they are men whose minds have had that training and culture in all the learning of the ages, as well as the science of the day, which have given them a masterful position among the best men of the time.

Forestry.

I should be recreant to the duty of this hour if I did not call your attention once more, as I have often done before, to the commanding question of forestry. To one who has watched the deforesting work of one generation of men in all the woodland portions of this country and noted the gradual change of climate from one of mild conditions to one of extremes as the great conserve forests have disappeared, it would seem that no appeal should be necessary to arouse every class of thinking men to take some immediate action to arrest this threatening waste and to rebuild these faithful guardians of climate and soil. There is nothing better established in physical science than that a good proportion of forest is necessary to maintain equability of climate. It is conceded by scientific men and sustained by practical experience in many countries that as much as one-fifth or one-fourth of the land should be in forests to secure the greatest aggregate of agricultural crops. I cannot stop to discuss the philosophy of this statement, but the fact will scarcely be questioned. There are several of our States that have passed the limit of safety in timber waste. But the work of woodland destruction goes on with remorseless energy. I can name you States where nearly or quite one-half of the total area of land has been laid bare of forest growth in about a quarter of a century. Some of them have not five per cent of their valuable timber left. And

so far neither the nation nor any State has made any serious attempt to stop the waste or to promote forest culture. The Governments of other countries show much more wisdom than we. The European Governments live in the immediate presence of the ruin and national decay that has come to once fertile and populous lands. The institutions of civilization have never declined in a country that has maintained its forests—I think I can safely say that it has never been maintained in any country that has wasted its woodland heritage without repair. Hence these enlightened Governments have been long taking the most vigorous measures to conserve and to restore the great protective agency of the green and glorious woods.

It is the clear duty of our General Government to absolutely prohibit the further slaughter of the timber on its domain and to withdraw all forest lands from sale except to meet the pressing needs of settlers. And why should not this Government take similar measures to those taken in the Old World to establish forests on treeless public lands—and cannot State Governments encourage timber planting by a judicious system of bounties and arrest its waste by a very heavy tax on timber cutting? By some such plan or by some plan the States should take prompt action for the building of forestry, and no graver responsibility rests upon our Legislature than this.

Those Gone Before.

There is one sad duty remaining to me on this occasion—to announce the names of two friends who have passed onward beyond the reach of mortal vision. This society had no more zealous member, and horticulture no warmer friend, than O. C. Kendall of Cleveland, Ohio, who died during the last autumn. Many of our members mourn his loss as that of a brother. Mr. Kendall was one of our largest and most useful fruit merchants and was one of the class whose faithfulness and integrity all men praised. He was the affectionate head of a devoted family; he was active in every good work for helping his fellow men; he was in all places a gentleman, and in all the relations of life the soul of honor. In the death of such men in the maturity of their powers society suffers a great loss. We who knew him well will never know a better man. The death of Col. Marshall P. Wilder, the venerable president of the American Pomological Society, although not unexpected—for he was 88 years old—cast a certain sorrow over the entire horticultural world. For half a century he had been at the head of American pomology. His fame was world-wide. Boston has been the home of many great men, but she had few citizens of such stately presence as our noble friend. President Wilder had a kingly aspect and bearing, but he had a queenly heart—as gentle and true as your own mother's. None knew him but to admire him and to love him. He lived out a great and well-rounded life here, and he has gone forward to those happy uplands where frosts neither rot nor blights destroy the immortal fruitage on the heavenly hills.

"A FRIEND OF MINE."

The Law Which Encircles the Entire Globe.

Travelers who have gone "far countries for to see" say that they find human nature pretty much the same all the world over.

They find wide variance in color of skin, in physical contour, in mental characteristics, but in the essential elements that control social conduct, the human family is a brotherhood.

The law, unwritten, found in no statute-book, enforced by no court decrees, but having an influence circumscribed only by the limits of earthly space, is the law of kindness.

Among peoples where cruelty to human kind is almost a fixed habit, who are relentless foes, and as friends scarcely less to be dreaded, whose savage natures revel in fiendish atrocities, there yet lingers the spark of divinity which lifts man above the beasts.

Sorrow melts the human heart wherever found, and sympathy mingles its tears with grief all the world over. Where pity does not dwell, there lives no thing of human kind. It is "the touch of nature that makes the whole world kin."

What a terrible world this would be to live in were it not for the sympathy and loving kindness shown us when sorrow comes, for it is decreed that in all lives "some days must be dark and dreary."

The 10,000 and more voluntary testimonials the proprietors of Warner's safe cure have received in regard to the efficacy of that remedy, reveal "this touch of nature" in a peculiar manner. The great majority of them acknowledge that it was through some kind friend who, in pity for their suffering, had made known to them the wonderful merits of this great remedy.

The testimonial of Capt. G. B. Wiltbank of Philadelphia is a fair sample. He was put ashore from his ship to die of a fever resulting from kidney and liver trouble, and as physicians could not help him there seemed no hope for him. But he says: "A friend of mine, who happened into port, came to see me and urged me to begin the use of Warner's safe cure." He began to use it as his friend advised and was cured in a very short time.

How many men there are to-day in the world, rounding out lives of usefulness, making the world happier and better, who would have long since passed to the other shore had it not been for the loving kindness of friends, shown in this practical way, as these testimonials from all quarters of the globe afford ample evidence.

AGRICULTURAL DIRECTORS.—The Governor has appointed Agricultural Directors as follows: J. W. Wilson of Sacramento, and Charles F. Reed of Yolo, District 13; James B. Iverson and Jesse D. Carr, District 7.

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FRUIT SHIPPING.

Annual Meeting of California Fruit Union.

[Official report prepared for the PACIFIC RURAL PRESS.]

The Third Annual Meeting of the California Fruit Union assembled at 1 P. M., Jan. 18, 1888, in Irving hall, Post street, S. F.

Pres. Hatch called the meeting to order and appointed B. C. Brown of Glenwood, assistant secretary.

The minutes of the last annual meeting were read and approved, whereupon the secretary read the annual report of the past year. [This report was printed in last week's RURAL PRESS.]

It was also stated by the secretary during the reading, that at a session of the Board of Trustees the previous day, a dividend of six per cent had been declared on all paid-up stock, a reserve fund of 2 per cent on the net profits had been set aside, and a division of about \$4500 had been ordered to be made to the actual shippers through the Union on a basis of six-tenths of one per cent on the gross sales. Both of the above disbursements to be payable at the office of the Union, 507 Montgomery street, after Feb. 1, 1888.

On motion of A. Block of Santa Clara county, the report was received and ordered placed on file.

R. J. Trumbull of San Francisco moved that the report be referred to a special committee of three to be appointed by the chair, with instructions to report tomorrow on the several suggestions and recommendations embodied in said report. Motion being seconded, was put and carried, and the president appointed as such committee: Eugene Gregory of Sacramento, A. P. Hall of Peorin, and G. M. Gray of Chico.

B. C. Brown of Santa Cruz county moved the appointment of a committee of three on order of business, with instructions to report forthwith. The motion having prevailed, the Chair appointed B. C. Brown of Santa Cruz, P. E. Platt of Sacramento, and R. B. Blowers of Yolo county.

W. C. Blackwood of Alameda county moved that a committee of three be appointed by the Chair to meet the committee appointed at the Santa Rosa convention and unite with a like committee from the State Board of Trade who shall confer with the railroad authorities with regard to the freight rates which shall be made this year, and after such meeting report the result to Board of Trustees of the California Fruit Union.

The motion was seconded by J. W. Cassidy of Sonoma county, and on being put by the Chair was carried unanimously.

B. C. Brown, chairman, reported for the committee on Order of Business that they would suggest the following program:

1st. Reports of committees.

2d. Election of officers.

3d. General discussion of packing for shipment, shipping facilities and any other matters pertaining to the general good of the Union.

The president announced the appointment of the following gentlemen to form the committee to meet and act with the other two committees as before stated: R. B. Blowers of Woodland, J. Z. Anderson of San Jose, P. E. Platt of Sacramento.

As the hall was very cold, on motion the meeting adjourned to meet to-morrow at 10 A. M., at the State Board of Horticulture rooms, 220 Sutter street, the use of the same having been kindly offered the Union.

Second Day.

The stockholders met pursuant to adjournment, President Hatch in the chair. The minutes of the preceding day were read and approved.

A. P. Hall, chairman of the special committee to whom was referred the annual report of the secretary, made a verbal report of progress. He stated that inasmuch as the majority of the recommendations in the report were with regard to freight matters and that a special committee had been appointed on this very point, they found little if anything to recommend. The report was, on motion, received and the committee discharged.

Election of officers being in order, R. B. Blowers of Yolo county moved the appointment by the chair of a committee of five to make nominations for the Board of Trustees for the ensuing year. Carried.

The president appointed as such committee

R. B. Blowers, Woodland, G. M. Gray, Chico, P. H. Buck, Vacaville, J. C. Boggs, Newcastle, H. C. Morrell, Wrights.

The committee retired and in the interim Mr. Frank L. Ripley of the firm of Blake & Ripley of Boston, who had acted as agents of the Union in that city the past season, addressed the meeting on the Eastern market outlook and the result of the efforts of last season. Mr. Ripley answered clearly and concisely all questions put to him and showed his thorough knowledge of the needs and possibilities of the Boston market at least. He said that up to the 15th of August they could handle five cars per day of our fruits with profit to the producer. That after that date the shipments should be largely cut off, and by no means to send after that our pears, but that their market would take our fine, large plums at any time at fancy figures, and that limited quantities of our best peaches could continue to be sent them. That Tokay grapes in carload lots would sell well at any time, provided, of course, that they were in good condition on arrival. But that Muscats were a failure and that he would not advise putting more than 50 crates in a carload. Answering the question as to whether black grapes would do well, he replied that as they had never had but few, and they were long scraggly bunches with a great many berries off, he could not say positively, but his opinion was that they could safely be put in about the same proportion as Muscats, and if they were large and firm he did not doubt they would sell well, his main point being at all times to send nothing but our finest fruit and to take unusual pains in the packing.

Mr. Markley of Sonoma county moved the adoption of the following:

Resolved, That the Board of Trustees be requested to make arrangements with their Eastern agents to handle dried fruits and nuts.

Mr. Hibberd moved an amendment to include all fruit products.

Mr. Markley accepted the amendment and the motion was carried unanimously.

W. C. Blackwood of Alameda county moved the adoption of the following:

Resolved, That it is the sense of this meeting that the Board of Trustees should adopt the auction plan of disposing of our fruits in Chicago.

Carried unanimously.

John Markley of Sonoma county moved the adoption of the following:

Resolved, That it is the sense of the meeting that the Board of Trustees employ a general agent in the East to look after the general interests of the Union.

The motion received a second and was carried.

L. W. Buck of Solano county moved a vote of thanks be tendered the State Board of Horticulture for so kindly allowing the Union the use of their rooms. Carried unanimously.

John Markley moved a vote of thanks be tendered Mr. Ripley for protracting his stay here and giving us the great amount of valuable information.

The motion having received seconds from all sides was unanimously carried.

No further business appearing, the meeting adjourned sine die.

H. A. FAIRBANK,
Secretary.

KILLING BEEVES WITHOUT CRUELTY.—The U.

Humboldt County Lumber.

Humboldt, the most northerly, save Del Norte, of California's coast counties, contains nearly 3600 square miles, or about 2,300,000 acres. This area includes somewhat over 920,000 acres of timber land, which come under the head of redwood, pine, fir, spruce and cedar. Of this, about one-half is redwood land proper, the rest divided between the last varieties named, but chiefly pine and spruce. Two hundred thousand acres are of madrone, black oak, white oak, live oak and laurel, the madrone and black oak predominating.

The timber runs through the county from north to south in an irregular belt, 10 to 15 miles in width, leaving an open margin along the coast of from two to ten miles, though at some points it reaches quite down to the ocean, while to the eastward lies what is known as the Bald Hill country—an open, mountainous region, well adapted for stock-raising. In the *Eureka Mail*, a few months since, John W. Cooper says:

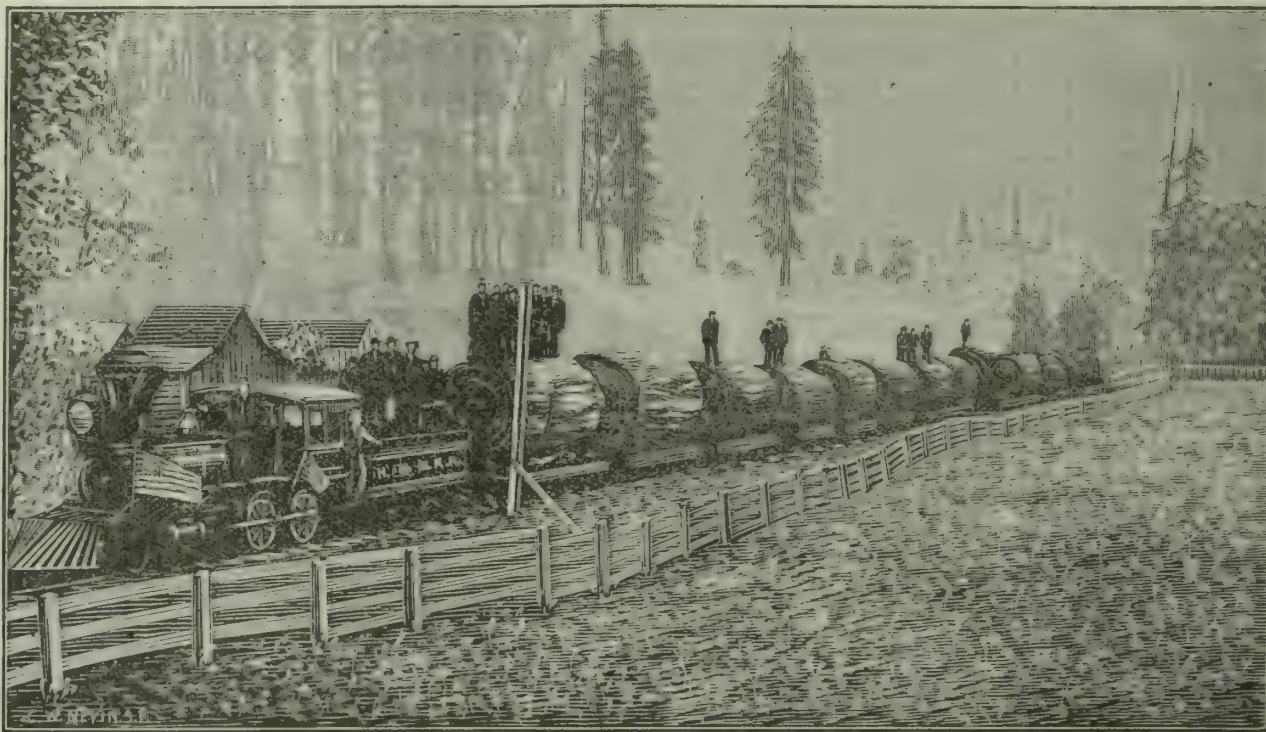
"The forest of the middle division of the county is chiefly composed of the redwood, a timber becoming widely known for the enormous size of the trees, and the excellent quality of its wood for house-building, fences, railroad ties, shingles, doors, windows and furniture. The manufacture of this timber ready for its various uses and its shipment to market is the chief and ruling industry of the county—over 100,000,000 feet of lumber being now shipped from it in a single season. Thousands of men are employed in its various processes, and millions of capital are invested in timber lands, mills, railroads and vessels, in connection with this business. The skill and intelligence required in felling this timber—often on rough, broken, and steep places—so as to break it as little as possible, in getting the logs out of such rough places, and cutting them up to the best advantage in the mills, together with the great danger to life attending the handling of such timber (often used up to 10 and 12 feet in diameter) through these processes, commands the highest wages paid for labor in any portion of the United States.

"There are also large quantities of timber in this forest belt, called Oregon pine. It resembles the Virginia pine, and is most valuable for frames and floors of buildings, bridges, ship-building, and masts, being very tough, strong, and durable. It frequently grows to 8 and 10 feet in diameter, and nearly 300 feet high, and the finest vessels in our lumber-carrying trade are built of this timber on Humboldt bay, near the city of Eureka, the capital and chief seaport town of the county. Fine spruce and white fir, excellent for coopering and other purposes, are also found in great abundance in this belt, and also several kinds of valuable hard woods, particularly laurel or pepperwood, which makes a most beautiful light-colored furniture. In the eastern and highest portion of this timber belt are large quantities of tanbark oak, and quite a business is growing up in preparing and shipping it to market."

In the pamphlet carefully prepared last summer under joint direction of the County Commissioners to the State and Mechanics' Fairs, and of the Eureka Chamber of Commerce, it is stated that the redwood will cut on an average 100,000 feet to the acre. The pine and spruce will average from 50,000 to 60,000 feet to the acre. This shows the county's reserve of building timber to aggregate 73,296,000,000—greater than the whole timber reserve of Michigan, Minnesota and Wisconsin put together. Besides which, the 200,000 acres of madrone, oak and laurel afford an almost exhaustless supply of wood unexcelled for furniture and woodenware manufacture.

The total output of lumber products from 21 out of 24 mills in the county for the year ending July 31, 1887, according to figures furnished the Board of Commissioners above-mentioned, embraced 104,519,726 feet of lumber, 203,700,985 M. shingles, 17,240,523 M. shakes, 82,153 M. posts, 234,726 M. pickets, besides 927 cords of stove bolts, 39,550 hoop-poles, 35,520 ties, and 8000 fruit-boxes.

Our illustration (for the use of which we are indebted to the courtesy of Mr. Fred W. Bell, Secretary of the Commission) represents a trainload of 16 logs floating 88,568 feet, from the woods of John Vance on Mad river—a stream of over 100 miles in length, which crosses the county in a northwesterly course and empties into the Pacific ocean just north of Humboldt bay. The group of persons standing on the nearest section gives the eye an easy standard by which to measure the fallen timber.



TRAIN-LOAD OF REDWOOD LOGS, FROM HUMBOLDT COUNTY WOODS.

He said: "Boston will pay more than any other city in the Union for fancy fruit, but is one of the poorest markets for second or third grade fruit."

His words made a strong impression on the assembly and caused many to decide to experiment with the Boston market another season.

R. B. Blowers, chairman of the Committee on Nomination of Board of Trustees, reported, recommending the following named gentlemen for the position: A. T. Hatch of Suisun, Solano Co.; L. W. Buck of Vacaville, Solano Co.; J. Z. Anderson of San Jose, Santa Clara Co.; H. W. Meek of San Lorenzo, Alameda Co.; Webster Treat of Davisville, Yolo Co.; A. Moger of Newcastle, Placer Co.; E. Gregory, H. Weinstock and P. E. Platt, all of Sacramento.

H. C. Morrell of Santa Clara Co. moved that the secretary cast the ballot for the stockholders. The motion, being seconded and put to vote, was lost, as two dissenting votes were cast. On motion, the meeting adjourned to 1:30 P. M.

Reassembled at 1:30 P. M.

Mr. Blowers, chairman of the Nominating Committee, stated that at the request of Mr. Meek they would substitute the name of John Markley of Sonoma county in place of Mr. Meek.

On motion of A. P. Hall, who had cast a dissenting vote, seconded by Wm. Barter, who had also voted in the negative, a reconsideration of the vote authorizing the secretary to cast ballot was had, which resulted in the motion being carried instructing the secretary to so cast a ballot. The ballot having been cast, the president announced the election of the following named gentlemen as the Board of Trustees for the following year: A. T. Hatch, L. W. Buck, John Markley, Webster Treat, P. E. Platt, H. Weinstock, J. Z. Anderson, E. Gregory, and A. Moger.

Mr. Parsons of Flushing, N. Y., was called on and addressed the meeting on the Eastern market. A general discussion on the same subject followed.

S. Consular report on cattle and dairy farming tells how cattle are slaughtered at Basle, Switzerland. A large abattoir has been built by the Government on the bank of the Rhine, just below the city, and put under the control of an accomplished veterinary surgeon, who controls all the operations of killing the animals and preparing the meat. This man has invented an instrument for killing the animals. It consists of a mask or plate, which has a short steel gun fastened to it. This is fastened to the horns by straps, and the cartridge in the end is fired by tapping the iron pin in the end of the gun and driving it against the cartridge. The bullet pierces the center of the brain and is buried in the spinal marrow, causing instantaneous and painless death. The ox walks without fear to the shambles, a touch is given to the fatal needle, and the huge creature drops utterly dead and incapable of suffering. The bleeding is perfect.

LOUR FOR ASIA.—On the night of Jan. 28th the steamer Premier took from Tacoma for Vancouver 14,400 sacks, or 375 tons of flour, the largest cargo she has carried since she has been on the route. This flour is for shipment to China and Japan by Canadian Pacific steamers.

ELSINORE COAL.—The coal famine in many Southern Californian towns, says the *Riverside Press*, makes Elsinoreans thoroughly appreciate their location. While coal is selling at other points at from \$20 to \$30 per ton, it is selling there at \$5 per ton, and there is no discount on the quality.

"TRUST" CONSPIRACIES.—A bill was introduced in the N. Y. Legislature on the 30th ult., making it a felony to form trusts or combinations to control or withhold from the people or to raise the prices of any article of food, coal or necessary of life.

THERE is some talk in Dixon of organizing a joint stock company to manufacture combined barvesters.



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ELASTIC TRUSS
has a Pad different from all
others, is cup shape, with Self-
adjusting Ball in center, adapts
itself to all positions of the body, while
the ball in the cup presses back
the intestines just as a per-
son does with the finger. With light pressure
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a time and then have them return again. I mean a rad-
ical cure. I have made the disease of FITS, EPILEPSY
or FALLING SICKNESS a life-long study. I warrant
my remedy to cure the worst cases. Because others have
failed is no reason for not now receiving a cure. Send
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and treatment; 50 cuts; 25c. This office.

THE WOODBURY TREE CLEANSER

FOR WINTER AND SPRING.

After two years' experience, I have to announce that there has
not a single case come to my knowledge where the Woodbury Tree
Cleanser has not fully and satisfactorily accomplished everything
that has been promised.

By reference to a late report from Prof. Klee, I observe he
states that he has found very good results from it in almost every
case, and that he has encountered no occurrence of any injury from its
use. I am informed that it has his recommendation as a thorough-
going, successful and cheap Winter Wash; and it is certainly in-
dorsed by the leading orchardists in the State. [Please send for
their published letters.]

It has had an unexampled success in exterminating Scale on
all kinds of Fruit Trees. It is sent all ready for use, and instruc-
tions which are very simple, are furnished with every package.

Price $3\frac{1}{2}$ cents per pound in cases, 80 pounds in a case; in
8-pound cans, same price, 15 cents extra for can; $3\frac{1}{2}$ cents per
pound (10 per cent off) in barrels; about 400 pounds in a barrel.

I also make a fine

ROSIN WASH,

Containing no Kerosene, perfectly harmless and thoroughly suc-
cessful. This is the valuable remedy strongly recommended by
Prof. Klee for the Cottony Cushion Scale or "Icerya." Price $\frac{1}{2}$
cent per pound higher than the Woodbury Tree Cleanser. I also
manufacture the fine Anti-gumming Farm Machine Oils and gen-
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READ WHAT YOUR NEIGHBOR SAYS ABOUT IT.

It is thorough in its work and is not dangerous to any-
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will do all you claim for it as a rodent poison.

L. L. ROBINSON,
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Your Carbon Bisulphide has been a perfect success,
and it is the only poison I have ever used that was

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I have used it with unfailing success, the holes doc-
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It is a dead sure thing, and any one who will give it a
trial, will never again fool away his time with common
preparations of strychnine, phosphorus, etc.

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It is the most economical and efficient agent yet
offered to the public.

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I used it and not a squirrel escaped.
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As a means of killing squirrels, gophers, etc., it is un-
questionably the best now in use, and I believe will be
universally adopted.

J. De BARTH SHORB,
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I find it certain death and never had occasion to apply
it a second time.

JAMES K. VERNON,
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It is the cheapest and most effective agent that I have
ever used in the destruction of squirrels and gophers.

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I know of nothing equal to it.

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Not one hole has been reopened, and I feel disposed to
bless Prof. Hilgard and Mr. Wheeler.

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Also Trees and Cuttings of the true White Adriatic Fig.

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Roses for \$1.00. 15 choice
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Seeds, Etc., Continued on Page 106.



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made into a perfect seed bed; has a seedling attach-
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PUBLIC AFFAIRS.

Tariff Resolutions.

EDITORS PRESS:—The resolution of the American Horticultural Society against the reduction of the tariff on fruits is gratifying to California fruit-growers, and will aid in securing the continuance of the present tariff. The voice and sentiment of our people in conventions assembled has ever been for protection. No industrial convention in California has adopted a free-trade resolution. No political party in the State has ever dared go before the people with a solid free-trade plank in its platform, so free trade has not been a political question and will not become one unless some future convention make the issue squarely against American industries. If belief in free-trade doctrines is prevalent, why have not free-traders spoken out in meeting and adopted resolutions? Is it because they have not the courage of their convictions, or because they have not honor in their own country?

Society needs protection against so-called free-traders who tramp about the country and congregate in cities, living in ignorance and in defiance of law and good government and crying out against "the tax which with relentless grasp is fastened upon their clothing," of which the average of these wears scarce enough to wad a shotgun. The want of suitable clothing cannot be charged to the tariff, as domestic cloths are cheaper than foreign, and imported cloths, sufficient for a year's wear, would be increased in cost by the tariff but 70 cents.

There are men of personal wealth and good standing who advocate free trade. One of them stated before the American Horticultural Society that, as a fruit-grower, he did not want protection; if he could not compete without it he would not compete at all. A man of his ability and wealth could grow fruit at a loss or abandon the business without serious consequences to himself, while the average fruit-grower must continue to compete for his living.

The question is, can he compete with free trade fruits at present cost, paying one dollar per day more for labor than is paid for the same labor in Europe, and freight increased in the same proportion?

The present tariff makes it possible for him to continue and prosper in an enterprise of great importance to the State and country.

The increase in price of fruits, owing to the tariff, is small and is not seriously felt by Eastern consumers, who are themselves directly protected in their own industries, or indirectly in good home markets for their products.

Our countrymen, as a class, are not so selfish and short-sighted as to prize pennies saved in the purchase of foreign products, leaving their neighbors without work or bread and their own people without an honest independence through steady and sure employment.

The United States is great and rich to-day because it has cared for the welfare of its citizens more than for dollars, and dollars have not been gained by its people at the sacrifice of manhood. These are the glorious results of a wise, sagacious and unselfish protective policy inaugurated by the first Congress of the United States and continued until the present time.

As a coincidence, the first Territorial Government of California, established by Commodore Stockton at Los Angeles on the 15th of September, 1846, prescribed duties on imports.

The sooner we learn the better for us, that patient toil and sacrifice in establishing and developing our varied industries is the only way to obtain cheap goods, make a home market for our products and become a prosperous and independent people.

W. H. AIKEN.
Wrights, Santa Clara Co., Cal.

The Resolutions.

The resolutions which were adopted at San Jose, to which our correspondent refers, and which were adopted almost without a dissenting vote, are as follows:

Resolved, By the American Horticultural Society assembled at San Jose, Cal., that any reduction by Congress of the existing tariff on green and dried fruits, oranges, nuts, raisins, prunes, wines and other horticultural and agricultural products would injure all and destroy many of these industries.

Resolved, That a copy of this resolution be forwarded to each Senator and member of Congress, and that a printed copy be sent to each member of Congress, with the request that the subject of the above resolution be urged upon the attention of the Senators and members from each of their respective States.

Gabilan Rancho,

Containing 7665 acres, situated near Salinas City, Monterey County, is offered for sale. For particulars address J. C. BOAG, 312 Van Ness avenue, San Francisco, or TYLER BEACH, San Jose, Cal.

100,000 Fruit Trees for Sale

At reduced prices, consisting of Apple, Pear, Peach, Apricot, French Prune, Walnut and other trees. Palms, Grevillas, Monterey Cypress, etc. Trees are guaranteed to be absolutely free from scale or other insects. MILLER THOMAS, P. O. Box 304, Los Angeles, Cal.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., room 3.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING JANUARY 17, 1888.

- 376,497.—PAWL AND RATCHET MECHANISM—R. J. Ballew, Magalia, Cal.
376,425.—SPRING VEHICLE—A. Bink, Stockton, Cal.
376,429.—INKING ATTACHMENT FOR PRINTING PRESSES—J. R. Brodie, S. F.
376,468.—FENCE-POST TIGHTENER—Levi Brooks, Black Diamond, W. T.
376,577.—CAN-OPENER—H. Bruckerman, Table Rock, Cal.
376,510.—PACKING CASE—Jos. Davy, Oakland, Cal.
376,437.—RUBBER DAM CLAMP—J. H. Hatch, S. F.
376,651.—CHIMNEY—B. F. Hentzell, S. F.
376,558.—METHOD OF FITTING GARMENTS—E. Stahl, Prescott, A. I.
376,565.—TAMPING TOOL—Waldron & Boller, Folsom, Cal.
376,569.—TELEGRAPHIC APPARATUS—S. B. Whitehead, S. F.

FOR WEEK ENDING JANUARY 24, 1888.

- 376,735.—WEED-CUTTER—Denehy & Childs, Acampo, Cal.
376,739.—SAMPLE TRAY—D. Goldstein, S. F.
376,804.—CAN-CRIMPER AND CAPPER—M. Jensen, Astoria, Ogn.
376,756.—RAILWAY CROSSING—W. H. & R. T. Shannon, Stockton, Cal.
376,787.—FRICTION FIRE-ESCAPE—Smith & Olds, Helix, Ogn.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

WAGON-SPRING BRACE.—Frank H. Mason, Saucelito, assignor of one-half to Geo. V. Kennedy. No. 375,826. Dated Jan. 3, 1888. This is an improvement in the braces of wagons by which the springs are kept in position. The spring brace is connected by a lever operated by the bed, so the brace is kept tight at all times. In the construction patented the brace is kept tight under all circumstances and will not rattle.

SIDE HILL PLOW AND ROAD-GRADER.—Elisha Clark, Felton, Santa Cruz Co. No. 375,802. Dated Jan. 3, 1888. This reversible plow may be also used as a road-grader. It consists of a plow-beam united to a land-side or shoe at the bottom by means of a vertical post or posts, and having the mold-board and plow-share supported in front of the post by a vertical shaft or spindle, about which it may turn to stand upon either side of the plow-beam, and with either point toward the front to correspond with the plow point, the latter being formed upon the stationary shoe.

ANIMAL TRAP.—Bertie P. Jolly, Soledad, Monterey Co. No. 375,822. Dated Jan. 3, 1888. The trap is specially designed for gophers and other burrowing animals. It is one of those made of spring wire arms held in position by a trigger, which is operated automatically by the throwing of the earth against it. The invention consists in a single piece of spring wire, having its ends bent at an angle and curved in opposite directions through approximately 180 degrees, said ends crossing or interlocking, and in a trigger formed by a single piece of wire, the ends of which are bent at right angles, one end being provided with a notch for engaging one side of the main spring wire, and the other being broadened or flattened out to receive the impact of the earth. This trap is of very cheap and simple form.

GRAIN SEPARATOR.—John Grider, Stockton, assignor of one-half to Geo. Chestnutwood and Thos. N. Moore. No. 375,486. Dated Dec. 27, 1887. This is a new and useful improvement in grain separators, the object of which is to prevent the riddle or shoe from becoming clogged with the weeds and short straws discharged upon it by the grain belt, and at the same time to more effectually clean the grain, so that but a small proportion is returned to the cylinder, whereby the elevator and conveyor are never choked. The racks not only have a forward and backward movement, but a lifting movement as well, which tosses up the material and thus gives the fan-blast such power and direction that the separator is more complete and most of the grain is saved at the forward end.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Rural Seed Offering—1888.

Great Inducements for New Subscriptions

To encourage gardening and further extend the circulation of the PACIFIC RURAL PRESS, we will offer, while this notice remains in our columns, to furnish to all old or new subscribers the following seeds on the favorable terms named below:

VEGETABLE SEEDS.		33 Antirrhinum Majus, fine mixed.		5
In Papers, postpaid.		34 Cactalia coccinea (Tas- set flower).		5
1 Early Blood Turnip.	10	35 Ca. pumila Speculum, (Veget. Liking Glass).	5	5
2 Early Extra Bassano.	10	36 Candytuft, white fragrant Centaurea Cyanus (Bach- man's Button).	5	5
3 White Sugar.	10	37 Mangold, 4th French.	5	5
4 Yellow Sugar.	10	38 Clarkia, fine mixed.	5	5
5 Early Long Dark Blood CABBAGE.	10	39 Convolvulus (Morning Glory) mixed.	5	5
6 Early York.	10	40 Foxglove, mixed.	5	5
7 Early Dutch.	10	41 Foxglove, mixed.	5	5
8 Early Wakeful.	10	42 Foxglove, mixed.	5	5
9 Early French Oxheart.	10	43 Foxglove, mixed.	5	5
10 Large Late Drumhead.	10	44 Foxglove, mixed.	5	5
11 Large Late Drumhead.	10	45 Foxglove, mixed.	5	5
12 Red Dutch (pickling).	10	46 Foxglove, mixed.	5	5
13 White Dutch (pickling).	10	47 Foxglove, mixed.	5	5
14 White Dutch (pickling).	10	48 Foxglove, mixed.	5	5
15 Extra Early Forcing.	10	49 Foxglove, mixed.	5	5
16 Long Orange.	10	50 Foxglove, mixed.	5	5
17 Early Horn.	10	51 Foxglove, mixed.	5	5
18 White Belg.	10	52 Foxglove, mixed.	5	5
19 Early Long Daughters.	10	53 Foxglove, mixed.	5	5
20 White Spine.	10	54 Foxglove, mixed.	5	5
21 Early Cluster.	10	55 Foxglove, mixed.	5	5
22 Early Frame.	10	56 Foxglove, mixed.	5	5
23 Long Green.	10	57 Foxglove, mixed.	5	5
24 King of the Hill, Pickles.	10	58 Foxglove, mixed.	5	5
25 Early Curled Silene.	10	59 Foxglove, mixed.	5	5
26 Ice Drumhead.	10	60 Foxglove, mixed.	5	5
27 Simpson's Early Curd.	10	61 Foxglove, mixed.	5	5
28 Prize Head.	10	62 Foxglove, mixed.	5	5
29 White Paris Cabbage.	10	63 Foxglove, mixed.	5	5
30 Hanson.	10	64 Foxglove, mixed.	5	5
31 Boston Mainstem.	10	65 Foxglove, mixed.	5	5
32 Large Yel. Canteloupe.	10	66 Foxglove, mixed.	5	5
33 Extra Fine Nutmeg.	10	67 Foxglove, mixed.	5	5
34 Casaba (new).	10	68 Foxglove, mixed.	5	5
35 Montreal Nutmeg.	10	69 Foxglove, mixed.	5	5
36 Queen of Wines.	10	70 Foxglove, mixed.	5	5
37 Sweet Watermelon.	10	71 Foxglove, mixed.	5	5
38 Iron Clad Watermelon.	10	72 Foxglove, mixed.	5	5
39 Early Bask.	10	73 Foxglove, mixed.	5	5
40 Black Spanish do.	10	74 Foxglove, mixed.	5	5
41 White Imp.	10	75 Foxglove, mixed.	5	5
42 Georgia Kattlehead do.	10	76 Foxglove, mixed.	5	5
43 Early Red.	10	77 Foxglove, mixed.	5	5
44 Red Water field.	10	78 Foxglove, mixed.	5	5
45 Yellow Danvers.	10	79 Foxglove, mixed.	5	5
46 W. Portugal or Sil. Skin PARSNIP.	10	80 Foxglove, mixed.	5	5
47 White Dutch.	10	81 Foxglove, mixed.	5	5
48 Mammoth California.	10	82 Foxglove, mixed.	5	5
49 Olive Shaped Radish.	10	83 Foxglove, mixed.	5	5
50 Early Scarlet Turnip.	10	84 Foxglove, mixed.	5	5
51 Black S. and W. Turnip.	10	85 Foxglove, mixed.	5	5
52 Long Scarlet.	10	86 Foxglove, mixed.	5	5
53 Early Seedling Bush.	10	87 Foxglove, mixed.	5	5
54 Early Seedling Bush.	10	88 Foxglove, mixed.	5	5
55 California Ficus.	10	89 Foxglove, mixed.	5	5
56 Ma. blanch.	10	90 Foxglove, mixed.	5	5
57 Boston Marrow Winter.	10	91 Foxglove, mixed.	5	5
58 New Hubbard Winter.	10	92 Foxglove, mixed.	5	5
59 Tomato.	10	93 Foxglove, mixed.	5	5
60 The Conqueror.	10	94 Foxglove, mixed.	5	5
61 Early Red Smooth.	10	95 Foxglove, mixed.	5	5
62 Troy.	10	96 Foxglove, mixed.	5	5
63 Canada Victor (earliest).	10	97 Foxglove, mixed.	5	5
64 Acme.	10	98 Foxglove, mixed.	5	5
65 Favor.	10	99 Foxglove, mixed.	5	5
66 Cow Horn.	10	100 Foxglove, mixed.	5	5
67 Yel. B. table or B. w. d. h.	10	101 Foxglove, mixed.	5	5
68 Early White Flat Dutch.	10	102 Foxglove, mixed.	5	5
69 Long White French.	10	103 Foxglove, mixed.	5	5
70 Imp. Lat. Rutabaga.	10	104 Foxglove, mixed.	5	5
71 Red Top Strap Leaf.	10	105 Foxglove, mixed.	5	5
72 Round Lo. f.	10	106 Foxglove, mixed.	5	5
73 Large Flat do.	10	107 Foxglove, mixed.	5	5
74 Extra Early.	10	108 Foxglove, mixed.	5	5
75 Champion of England.	10	109 Foxglove, mixed.	5	5
76 York-hire Hero.	10	110 Foxglove, mixed.	5	5
77 Rural New Yorker.	10	111 Foxglove, mixed.	5	5
78 Black Ge. man Wax.	10	112 Foxglove, mixed.	5	5
79 Redger.	10	113 Foxglove, mixed.	5	5
80 Red Valentine.	10	114 Foxglove, mixed.	5	5
81 China Red Eye.	10	115 Foxglove, mixed.	5	5
82 MISCELLANEOUS.	10	116 Foxglove, mixed.	5	5
83 Kohlrabi.	10	117 Foxglove, mixed.	5	5
84 Scotch Kale.	10	118 Foxglove, mixed.	5	5
85 On. Red Parsley.	10	119 Foxglove, mixed.	5	5
86 Sage.	10	120 Foxglove, mixed.	5	5
87 Toym.	10	121 Foxglove, mixed.	5	5
88 Tobacco.	10	122 Foxglove, mixed.	5	5
89 Blue Gum.	10	123 Foxglove, mixed.	5	5
90 Mont. Cyp.	10	124 Foxglove, mixed.	5	5
91 FLOWER SEEDS.	10	125 Foxglove, mixed.	5	5
92 Acroclitum.	10	126 Foxglove, mixed.	5	5
93 Alonsoa, Grandiflora.	10	127 Foxglove, mixed.	5	5
94 Abyssin. Sweet.	10	128 Foxglove, mixed.	5	5
95 Ananthurus Abyssin.	10	129 Foxglove, mixed.	5	5
96 Agrostis Las. caulis.	10	130 Foxglove, mixed.	5	5
97 Adonia C. rubra.	10	131 Foxglove, mixed.	5	5
98 Anemone Umbellata.	10	132 Foxglove, mixed.	5	5
99 Ananthurus C. rubra.	10	133 Foxglove, mixed.	5	5
100 Ananthurus C. rubra.	10	134 Foxglove, mixed.	5	5

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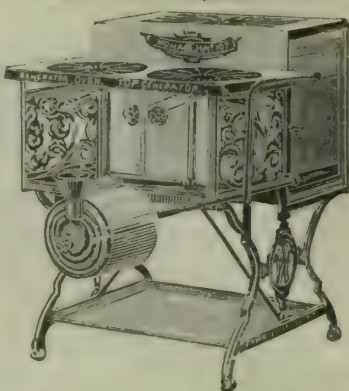
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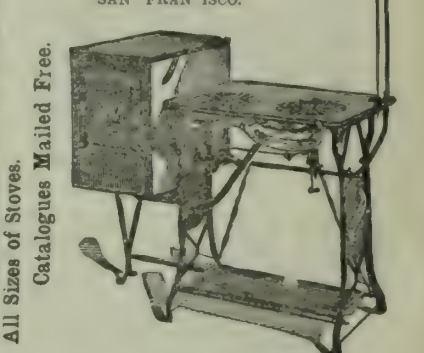
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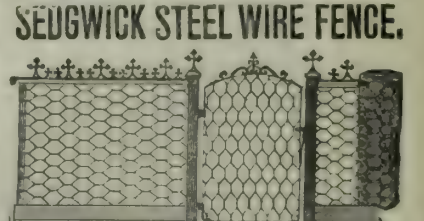
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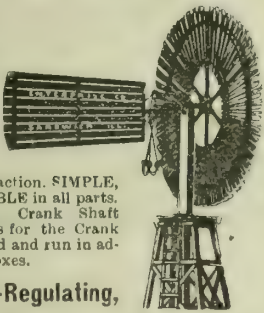
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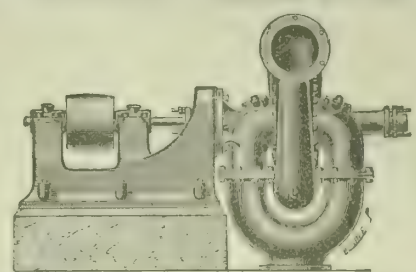
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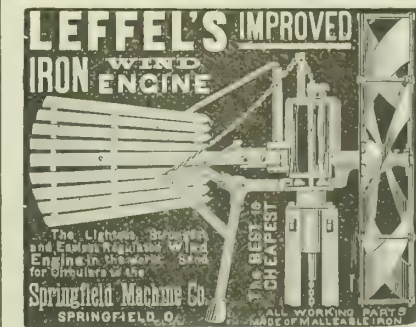
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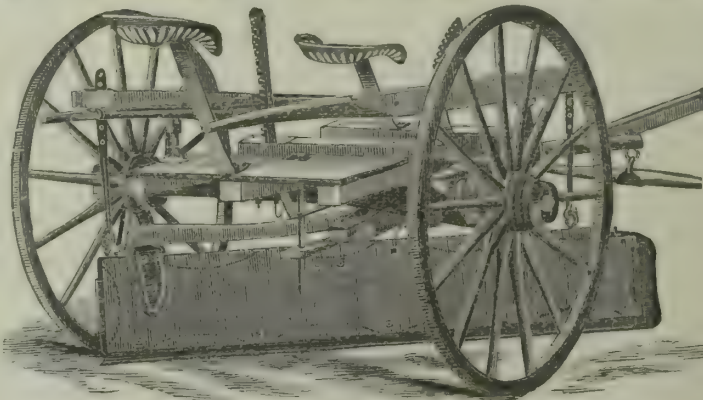
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Santa Barbara County Notes.

EDITORS PRESS:—The recent exceedingly cold weather (for California) is still exciting comment. The cold did not injure anything here except bananas, early potatoes and some varieties of flowers. Roses are blooming as usual in the open air, and strawberries are ripening with no signs of Jack Frost on their features. The grasses have been retarded, but are now growing finely and pastures will soon be good. From present appearances grazing will be much better than in average seasons. The orange crop is large, and on account of the cold weather the fruit is not sweet as usual at this season, but with some warm weather now the fruit is rapidly sweetening up. No orange trees were injured in the least by the cold snap. Early potatoes that were cut down are now up again, looking not much the worse for their tussle with the frost.

Many walnut trees are being set out. The business received an unusual impetus by the extraordinary large crop and good prices of last season.

Olives are being set out in great numbers in the Santa Ynez valley. All reports from there as to the olive business are of the most satisfying character. Orchards of deciduous fruits are being planted to a considerable extent in the western end of the county. Not many orchards are being set in the vicinity of Santa Barbara, as the market has been very limited because there was no cannery or drier, and shipping facilities have been very uncertain until the completion of the railroad. This being a new mode of transportation, and being put through to Santa Barbara at a rather late date for fruit, the people have not taken the advantage of the convenience as they will hereafter. As it was, however, several thousand boxes of apples have been sent out and the attention of buyers brought to the fact that much fine fruit is grown here. So many apples were shipped out that the local market is nearly bare of choice fruit.

Lima beans, walnuts, fruit and flax will continue to be the articles of export from Santa Barbara and vicinity, and wheat, barley, beans, flax, mustard and dairy products from the west end of the county for the present year. Asphaltum, too, is an important article of export from Carpinteria. A large force of men are now engaged in mining for this material a short distance from the railroad depot. A spur has been laid from the main track of the railroad for the convenient loading of cars; much of this asphaltum is being used in Los Angeles.

Although there is no boom in Santa Barbara real estate, the city and county are both gaining in solid prosperity. The pavement which is being put down on State street at cost of \$160,000 is going to make a fine thoroughfare of that street, and will be a better advertisement for the town than all the "booms" that could be gotten up. Another improvement now being prosecuted is the numbering of the houses. A number of schemes for the purpose of securing an abundant supply of water for the city are being investigated and some works are being built.

The S. B. Lumber Co. have built an extensive addition to Stearns' wharf at an expense of \$100,000, with railroad connections, on which they are storing lumber for wholesale distribution throughout this section. They have, in fact, already secured quite an extensive trade in that line. The harbor at Santa Barbara is so commodious and free from storms that vessels can unload at all seasons and almost every day in the year. It is no unusual sight to see three large lumber schooners unloading at one time.

Lompoc wants to be incorporated. She is quite an important town in the midst of a fine farming country, and is growing some excellent fruit in addition to immense crops of grain, beans, flax, mustard and other crops.

L. B. CADWELL.

"Pomona's Retreat," Carpinteria.

POLLED ANGUS.—It will interest our stockmen to know of the arrival in this city of A. B. Matthews, the well-known importer and breeder of Angus cattle, whose headquarters are in Kansas City, Mo. Mr. Matthews brings with him a fine band of these animals, which can now be seen at the Telegraph stables on New Montgomery St., near the Palace hotel, S. F. We make at this time this brief announcement to call attention to the cattle that stockmen may examine them. We intend to make fuller reference to them hereafter.

HOARBOUND HONEY A DECADE OLD.—In 1878 10 barrels of honey were shipped from Ventura to London. It proved unsalable, as the bees had fed upon some bitter substance, which also darkened the honey. The barrels were put in warehouse and remained till a few months ago, when a scientific man found the product was pure hoarbound honey.

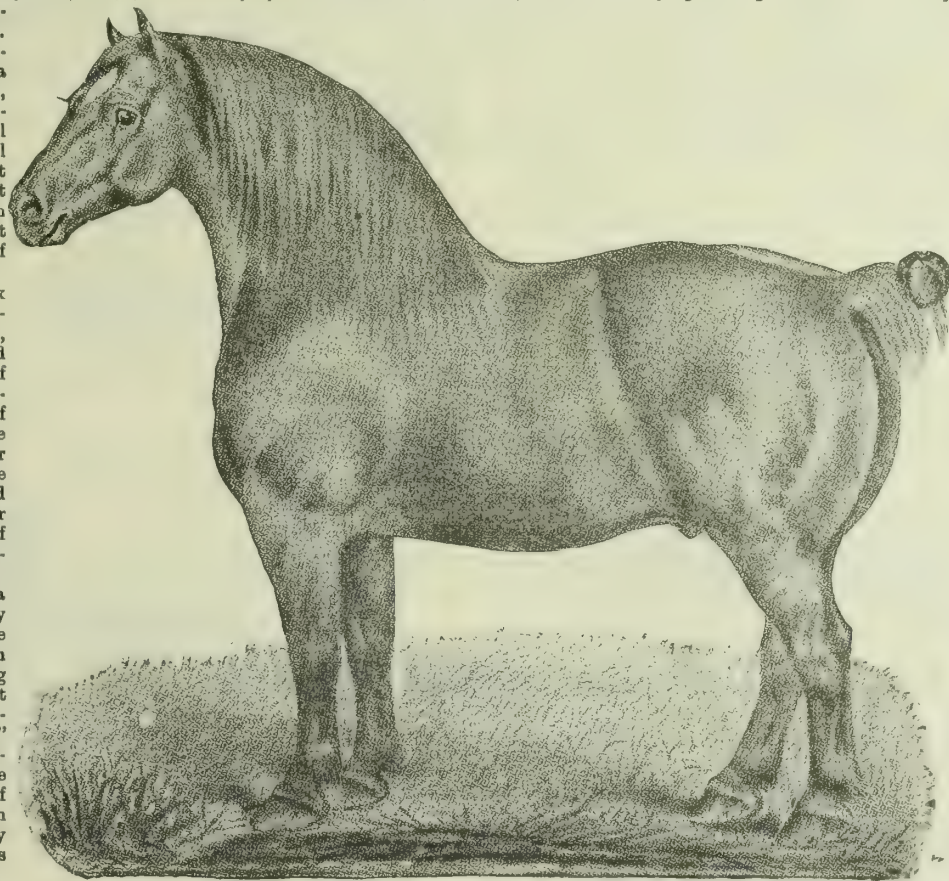
DAIRY CATTLE must be cheap in Yolo county. The Democrat advertises: "A milch cow for sale. See 50-cent column."

Cook Stock Farm.

The Stallion Steinway.

During the winter of 1879, Mr. Daniel Cook, the late proprietor of what is already quite well known as the Cook Stock Farm, Danville, Contra Costa county, Cal., one of the most beautifully located and conveniently and superbly equipped stock farms in the United States, conceived the idea of founding a breeding farm. When Mr. Daniel Cook first ventured into the business of raising trotters and gentlemen's fine horses, he was taught, and believed it wise, to place at the head of the stud a son or grandson of the old hero of Chester Rysdyk's Hambletonian, 10, whose dam was by a thoroughbred, who could trot, and a producer of uniform speed, and therefore purchased Steinway, with a three-year-old record (fourth heat) of 2:25½. His record of 2:25½ was made under what must be considered not the very best circumstances. He was speedy, and in his trials proved that he was capable of putting to his credit a mile of 2:15, having been driven a half-mile in 1:07½, and a quarter in 32 seconds to wagon. He sired at least nine animals that will make themselves famous names. He has given ample evidence of his superiority as a sire, and all who have purchased his colts are better pleased than on the day they were bought. The following is his pedigree:

Steinway, by Strathmore, sire of Santa Claus, 2:17½; Tucker, 2:19; Skylight Pilot, 2:19; Secret, 2:20¼; a son of Rysdyk's Hambletonian, first dam



IMPORTED FRENCH DRAFT STALLION, SIR BENJAMIN.

Abbess, dam of Solo, 2:28½, and Soprano, three-year-old record of 2:33, dam of C. F. Clay, five-year-old record, 2:18, and Eminence, three-year-old record, 2:27. Solo and Soprano are full sisters to Steinway; Abbess, also, the dam of Jersey Lily, which trotted a quarter in 34, and showed ability to beat 2:30 at a two-year-old, sold for \$7500 (afterward burned at W. H. Wilson's Cynthia Ky., fire), by Albion, sire of Vanity Fair, 2:24, and of the dam of Favorite, 2:25; 2d dam by Marshal Ney, thoroughbred; 3d dam by Bertrand, son of Sir Archy, a thoroughbred. Abbess sold with a filly by her side, full sister to Jersey Lily, for \$4500; for a brood mare to Elizar Smith, Esq., owner of Alcantara, Lee, Mass.

In addition to his individual merits, his blood lines are such as to make him worthy of the position of honor in any breeding establishment in the whole country. His sire Strathmore, certainly one of the greatest sons of Rysdyk's Hambletonian, having placed to his credit with limited opportunities, 23 2:30 horses, including Santa Claus 2:17½, Tucker 2:19, Skylight Pilot 2:19, Secret 2:20½, and of the dams of two 2:30 horses, including C. F. Clay's four-year-old record 2:23, five-year-old 2:18, and certainly his grandsons are showing great merit as sires. Sydney, pacing record 2:28, is certainly a phenomenal sire of early speed.

Steinway is considered by all leading breeders as one of Strathmore's best sons, and his full sister Soprano, dam of C. F. Clay, five-year-old stallion, record 2:18, and Eminence three-year-old, record third heat 2:27, is most noted daughter of Strathmore, and Steinway daughters are proving that they are phenomenal as brood mares. He is now coming to the right age to produce speed, and he has convinced his owners and friends that he will produce speed both ways.

Steinway's first public performance was at Lexington, Ky., in the fall 1878, at a two years' race with Memento and others, which three heats were trotted 2:38, 2:32½, 2:31½, Memento

winning the first heat, Steinway the last two. His next race was July, 1879, at Sharpsburg, Ky., when he beat a field of colts in slow time, 2:41, 2:39, 2:34. His next race was at the same place, July, 1879, in the free-for-all with aged horses. Bushwhacker's record is 2:27. Blackwood Jr.'s record is 2:22½. Steinway in five heats, 2:37, 2:34, 2:38, 2:34, 2:35, Steinway winning second, fourth and fifth heats. This was over a miserable half-mile track. His next was at Lexington, August 15, 1879. He beat a field of three-year-olds, such as Jewett, Catchfly and others in six heats, 2:38, 2:34, 2:30, 2:25½, 2:30½, 2:30½, Steinway second in first, second and third heats and winning fourth, fifth and sixth heats, showing his ability of trotting in 2:20.

His next race was at Lexington, Oct. 15, 1879, he was beaten in three heats by Jewett; time, 2:26½, 2:23½, 2:26½. Steinway was lame in this race and really was not fit to trot, and he was timed 2:27, 2:22½, 2:27. This was his last race at a three-year-old. At a four-year-old he showed a mile in 2:51, last half, in 1:08. After this, owing to the injury he received while serving a mare, he was not trained until 1885. He was driven a half mile in 1:07½, and a quarter in 32, and owing to the old injury it was impossible to prepare him for a race. His owner would not allow him to go alone on mud-hill plan for a whip for a fast record. If his owner would believe in this go alone record plan, he could have placed four of his get inside the 2:30 list, from a two-year-old to a four-year-old. The merit of the trotter can only be determined by public performance. Many

horses can show a mile privately in 2:30, and could not win a heat with other horses in 2:40.

Steinway is a long-bodied, rather plain, bright bay, two white heels, 15½ hands high, weight 1200 pounds. His disposition and that of his colts is kind, and he imparts to his get beauty and style. Like many other royally bred stallions, he has had his powers overshadowed by cold-blooded mares; the few high ones that he has mated have demonstrated by their offspring his ability to transmit great speed, size and endurance.

Ongerth's Tree Protector.

WOODIN & LITTLE, Agents, 509 and 511 Market St., San Francisco, Cal.—GENTLEMEN: In reply to yours of the 29th ult., as to effects of your Liquid Tree Protector on the tree you treated for me last April, I would say that where the wash was applied the insects of all sorts are certainly killed. The wash is still on the tree, and the bark under it shows a healthy and lively appearance. I was afraid for awhile that owing to its gummy feeling and appearance the pores of the bark might be closed to the great detriment of the tree, but so far I am glad to say there have been no indications of any ground for my fears. I am so well satisfied of this that I shall entirely paint the trunks and larger branches of all my trees with your preparation this winter.

I would add that your Grafting Compound is the best preparation I ever saw for covering wounds on trees, and it is apparently not affected by any sort of weather. Yours very truly, R. D. FOX, Proprietor Santa Clara Valley Nurseries, San Jose, Dec. 5, 1887.

WINTER NELIS PEARS, picked from the tree four months ago, and since then kept in storage under the Allegratti system, are to be seen at 409 Montgomery street. There are boxes and boxes of them, and, judging by the one we ate, they are as good as if gathered but last week.

A Famous French Draft Horse.

We give herewith a portrait of Sir Benjamin 2995, a famous French draft stallion, owned by James A. Perry of the Riverside Stock Farm, Wilmington, Ill. The portrait faithfully presents the outline of the animal, and will commend itself to lovers of this sort of horse-flesh.

Mr. James A. Perry was among the first importers of French horses to the Pacific Coast, as he brought as early as 1876 such famous stallions as the Duke de Chartres, Old Rollin and many others. Mr. Perry claims that he has brought to this coast the very best French draft stallions that ever landed in the State of California. He has now on hand for sale at the Petaluma stables in Petaluma, a very fine collection of French draft stallions.

Mr. Perry has been importing French horses for the last 18 years, using his best endeavors to procure the best specimens of the draft horse that could be obtained in Europe. He spent a long time in England and on the continent examining the different brands of horses, with a view to their adaptability to the wants of the people of the United States. He became satisfied that the French draft horse is the best suited to the wants of a large class of our people. He believes he has accumulated a stud worthy the attention of the most critical horseman, more for quality than for its numbers. Catalogues will be sent on application. Parties should, however, see Mr. Perry's horses for themselves and thus judge of their value.

Inducements to Subscribers.

To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, IF REQUESTED the following articles (while this notice continues), at the very greatly reduced figures named at the right:

- 1.—The Agricultural Features of California, by Prof. Hilgard, 138 large pages, illustrated, cloth, with colored maps (full price \$1). \$0.25
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The Woolly Aphis.

WALNUT GROVE, CAL., Jan. 6, 1888.

Mr. Charles J. Woodbury, 123 California St., S. F., Cal.—DEAR SIR: Yours of the 3d inst. to hand last evening. In regard to the Woolly Aphis, I can only give you my experience. When I came here, my apple trees were badly infested with Aphis, so I washed them thoroughly to exterminate and have not seen any signs of the Aphis since, which has been over two years. Yours respectfully,

L. D. GREENE.

I will remark that I have known of no case where my tree-cleaner has not been perfectly successful as an antidote for the Woolly Aphis.

Full directions accompany its use. Price, 3½ cents per pound in cases, 80 pounds in a case; in 8 pound cans same price, 15 cents extra for can. In barrels, 3½ cents per pound, 10 per cent off, 400 pounds in a barrel. I also manufacture the fine Anti-Gumming Farm Machine Oils and General Lubricating Oils.

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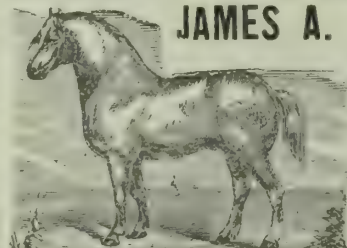
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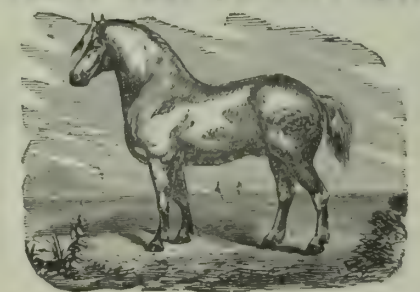
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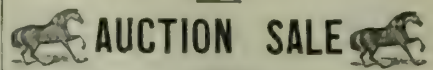
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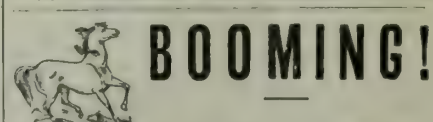


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Langshans, Plymouth Rocks,
Brown and White Leghorns,
Pekin Bantams, Light Brahmas, Partridge Cochins, Buff Cochins, Black Minorcas. Registered Berkshire Pigs. Also one pen of Langshans direct from China.

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AGRICULTURAL WORKS,
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Stationary Engines and Boilers.
Portable Straw-Burning Boilers & Engines.

IRON AND BRASS CASTINGS.
Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,
Including Grape Crushers and Stemmers, Elevators, Wine Presses and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.

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One door from Bank of California.

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Free Coach to and from the Hotel.

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GRAIN WAREHOUSE,
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THE GIANT POWDER COMPANY.
PATENT OWNERS OF
NOBEL'S DYNAMITE,
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Best and Strongest Explosives in the World.
As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

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JUDSON POWDER,
The Only Reliable and Efficient Powder
For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

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To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

FERTILIZE! FERTILIZE!
NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. KOBES—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Pota-h.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
BERKELEY, Nov. 20, 1886.

Dr. J. KOBES, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,
E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1/2 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

FOR SALE IN LOTS TO SUIT,
On board cars at Sbranto, Station of the C. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the MEXICAN PHOSPHATE & SULPHUR CO. H. DUTARD, President, room 7, Safe Deposit Building, or
H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

Booth's Sure Death Squirrel Poison
For Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and Farmers wherever used.

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Put up in 1-pound, 5-pound, and 5-gallon Tins.
Every Can Warranted.

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BOOTH & LATIMER, San Luis Obispo, Cal.
Special Terms on Quantities in Bulk.

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Free Coach to and from the House.
J. W. BROKER, Proprietor.

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CODLIN MOTH WASH,
WHALE-OIL SOAP, Etc.

By the use of these Washes all insect life reached will be destroyed, and all trees washed will show a marked improvement in growth and general appearance. For sale by
ALLYNE & WHITE, 112 & 114 Front St., San Francisco.
SEND FOR CIRCULAR.

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"Greenbank" 93 degrees **POWDERED CAUSTIC SODA** (tests 99.3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by
T. W. JACKSON & CO.,
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SPRAY PUMPS.
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[Established 1854.]
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Rheumatism, Neuralgia, Pneumonia, Paralysis, Asthma, Sciatica, Gout, Lumbago and Deafness.
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DR. CHAS. ROWELL.
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UNFERMENTED WINE.
Made from Zinfandel grapes. Put up in quart and pint bottles. Price, 50¢ per dozen quart bottles; \$4 per dozen pint bottles. Orders can be filled through this office or by H. MILLS & SON, Lakeville, Cal.

AGENTS LOOK HERE
and farmers with no experience make \$2.50 an hour during spare time. J. V. Canyon, Glens Falls, N. Y., made \$18 on day, \$76.50 one week. So can you. Proofs and catalogue free.
J. E. SHEPARD & Co., Cincinnati, O.

S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 1, 1888.

General rains up to to-day have given the agricultural districts all the moisture required for two or three weeks to come, and with clear weather in the interior plowing and other outdoor work will be pushed forward. In farm products trading the past week was light, owing to rains, but with more settled weather more business is looked for. European and Eastern wheat markets have fluctuated slightly, closing generally firm. The following are to-day's quotations:

LIVERPOOL, Feb. 1.—Wheat—Holders offer freely; new No. 2 winter, 6s 8½d, and steady; do, spring, 6s 8d, and steady. Flour—Holders offer freely at 9s 2d, and steady. Corn—Holders offer freely, spot, 4s 11d, and dull; February, March and April, 4s 10½d, and dull.

Eastern Wool Markets.

NEW YORK, Jan. 30.—The stocks of domestic wool are not oppressive, and though trade is yet comparatively quiet the present sales have cleared out many parcels that have been presented. The bulk of holders of prime lots express more confidence, and are aided therein by the attention of good buyers, and prices for desirable grades, if not buoyant, are fairly steady. The sales include 10,000 lbs of California's prime at 13@18c; 28,000 do scoured, 37@45c; 20,000 Oregon, 18@22c; 50,000 Territory, 20@22c; 10,000 spring Texas, 19@21c; 12,000 fall do, 13@15c; 38,000 do, 14½@16c; 40,000 No. 1½ blood, 37c; 10,000 ¼ blood, 36½@37c; 12,000 fine ½ blood, 35½c; 10,000 fine delaine, 34c; 10,000 XXX and above, 34c; 20,000 X and XX, 31@32½c; 20,000 one-half unwashed, 26c; 18,000 common unwashed, 23c; 10,000 super pulled, 36c; 400 scoured, 48@50c, and 257,000, 30,000 nols, 180 bales foreign, 325,000 Mediterranean Carpet were sold at private terms; also June sales of Donskoi.

Philadelphia reports a quiet trade, with a tendency among manufacturers to cheapen stock with common foreign.

Boston mentions an active trade, including 235,000 of California fall at 12@14c.

Foreign Review.

LONDON, Jan. 30.—The *Mark Lane Express* says there is no demand for native wheats, and it is impossible to sell except at a decline. Foreign wheat values are only nominal. Flour is greatly depressed. Foreign has declined sixpence per sack.

California Products in Chicago.

CHICAGO, Jan. 28.—So far as values are concerned, the dried fruit market remains about steady, but the demand is not resuming any to speak of, and the market is for this reason still ruling very quiet. Peaches, sun-dried, in sacks, ½ lb, 11½@12½c; peaches, evaporated, unpeeled, in sacks, ½ lb, 14½@16c; do, boxes, ½ lb, 15@17c; do, peeled, in sacks, ½ lb, 22½c; do, in boxes, ½ lb, 25@28c; apricots, sun-dried, in sacks, ½ lb, 12½@13c; do, evaporated, in sacks, ½ lb, 14½@16c; plums, pitted, in sacks, ½ lb, 12½@13c; prunes, small, ½ lb, 8@11c; do, fancy large, ½ lb, 14@14½c; nectarines, according to quality, in sacks, ½ lb, 16@18c; raisins, loose Muscatels, ½ box, \$1.60@1.90; raisins, London layers, ½ box, \$2@2.40.

Beans—There are a good many beans selling every day. The sales are usually from second hands, and for this reason do not appear on the market. A firm feeling prevails and very few consignments are received. Prices range as follows: California, according to quality, \$2.40@2.50.

Hops—A fair demand exists for choice grades. These are steady and in fair demand. Off grades ruled dull and slow, and of these there are fair stocks. Choice Pacifics, 12@14c; common to prime, 8@12c.

California strained honey, 7@8c.

An Advance in Olive Oil.

NEW YORK, Jan. 28.—It is reported that the foreign supply of olive oil will be smaller than usual. There has already been an advance in this market in price on standard brands.

Eastern Wheat Markets.

NEW YORK, Jan. 29.—The movement of wheat has been light at the interior, amounting to only about 800,000 bushels. On the small movement a decrease of 500,000 bushels is estimated in the visible supply.

Exports of flour are also decreasing somewhat. Exports for the week ended Thursday, from both coasts have been about 1,640,080 bushels, and from Jan. 1st to date, about 81,766,000 bushels. The exports of corn were about 480,000 bushels, and from Jan. 1st about 12,908,000 bushels.

Eastern Grain Markets.

CHICAGO, Feb. 1.—P. M.—Wheat, steady; cash, 76½c; March, 81 11-16c; May, 82½c. Corn, firm; cash, 47 7-8c; March, 48½c; May, 52 7-8c. Oats, steady; May, 33c. Barley, nothing doing.

Miscellaneous.

NEW YORK, Jan. 30.—Raisins are quiet, but exceptionally strong at last rates.

Hops have crumbled some, the best rate being 12@14c; others, 5@12c; Pacific Coast, 8@12c for new and 6@8c for old.

More movement in the latter is reported from England, the receipts for the season being 63,400 lbs; imports, 25,250.

Local Markets.

BAGS—The pool is reported to be asking 7½c for June-July delivery. The market is being talked and written up. June-July delivery is quoted at 7½@7¾c, although it is claimed by some that a shading on the lower quotations can be obtained.

BARLEY—The market has held strong throughout the week for all kinds of bright choice grades, with free sales of brewing and chevalier for shipping. On call the bears have been hammering away at futures, with but little success. At to-day's call the sales reported are as follows:

Morning Session: Buyer season—500 tons, 85½c; 400, 85½c; 800, 85½c. Buyer 1888—300 tons, 91½c; 400, 91½c. Buyer season—400 tons, 85½c; 200, 85½c. Seller season—100 tons, 79½c @ ctl.

BUTTER—Warmer weather, heavy rains and improving pasture created an easier tone, and with

freer receipts prices are lower and weak at the decline. Some Utah and Eastern are near at hand.

CHEESE—The market has an easier tone but is not quoted lower.

EGGS—The market is higher, due to bad weather preventing receipts. With more settled weather, receipts are expected to increase and the market ease off. Considerable of the Eastern received came in frozen.

FLOUR—The market is steady, with a good demand ruling.

WHEAT—The market for sample parcels has been quiet but strong, with holders not offering. The stock shows a continued decrease. The tonnage loading will take in about 75,000 tons. On call the bears did not send futures as low as they expected, although buyer season did touch \$1.40, but in the next call sold at \$1.41. At to-day's call the sales reported are as follows:

Morning Session: Buyer season—100 tons, \$1.41; 300, \$1.41½ @ ctl. Afternoon Session: Buyer season—100 tons, \$1.42; 1100, \$1.42½ @ ctl.

(COMMUNICATED.)

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to Jan. 29, '87.	July 1, '87 to Jan. 28, '88.
Flour, qr. sks.	2,865,878	2,158,448
Wheat, ctls.	9,828,878	5,519,149
Barley, ctls.	1,843,267	1,072,325
Oats, ctls.	109,388	134,788
Potatoes, sks.	617,918	753,919
Corn, sks.	61,281	141,693
Rye, sks.	16,164	15,031
Buckwheat, sks.	4,707	2,172
Beans, sks.	375,112	341,385
Bran, sks.	301,564	302,685
Hay, tons.	65,570	75,837
Salt, tons.	14,843	10,440
Wool, bls.	45,100	39,107
Hides, No.	67,343	61,121
Raisins, 20-lb boxes.	130,747	99,574
Quicksilver, flasks.	10,007	18,649
Hops, bls.	12,470	14,517

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to Jan. 29, '87.	July 1, '87 to Jan. 28, '88.
Flour, sks.	66,379	148,346
Wheat, ctls.	340,537	604,702
Barley, ctls.	1,775	75
Oats, ctls.	236,825	146,490
Corn, cts.	60,997	12,590
Wool, bales.	9,660	7,254
Bran, sks.	27,918	41,548
Hops, bales.	753	321
Hides, No.	27,194	20,556
Potatoes, sks.	54,185	7,063

Cereals.

The London *Farmer's and Chamber of Agriculture Journal* says: The wheat price of the bygone year has only once, and that was in 1886, been outstripped in badness. Nowhere in the records of 100 years can any such spectacle be met with as the mean of three successive years yielding as do 1885-6-7, an average wheat value of no more than 32s 1d. Nor are the low prices of the past and immediately preceding years the result of extreme or violent fluctuations. In the 12 months just ended, wheat did, indeed, touch 36s 4d on the one side and 28s 5d on the other. The margin is thus nearly double what it was in 1886, when there was but 4s 2d between the highest and the lowest values. The fact is noteworthy, however, and not without its lesson when we recognize the modern tendency to an equalization of price, due, of course, to the continuous and uninterrupted flow of supplies from one part of the globe or another to meet the wants of our dense population. This is but a development of those transport facilities which have wrought such striking changes in the values of our corn. The year 1877 was the last which saw any violent fluctuations and big margin. They were 22s 7d that season between the 68s 9d once received, and the 46s 2d which was the minimum record. Between 1853 and 1861 the margin of fluctuation was never under 11s, and, in the days of Crimean memories, 1854 had quotations of wheat varying from 83s 3d to 52s 2d, or a margin of no less than 31s 1d.

Mail advices from Europe are of an interesting character. Crop weather in England and also on the Continent was favorable. The stocks of wheat held by the leading consumption countries were very materially reduced the first two weeks in January.

The French wheat crop last year is officially given at 295,039,475 bu.

Eastern advices report light export shipments of both wheat and flour. They are also confirmatory of a continued heavy consumption with a rapid depletion in stocks. It is very generally conceded that there will be a much lighter carryover in July next than last year in that month. Taking the prices of futures in Chicago and New York as a basis, the conviction is forced on all that operators in those markets believe in higher prices later on, owing to the wide difference between cash wheat and May wheat.

Oregon advices report more activity in wheat, due to the raising of the ice blockade and 12 vessels on the berth loading at Portland and two at Tacoma on Puget Sound. Holders of the better grades of wheat express confidence in the future. In this State wheat-holders are offering more sparingly, due to lessened available supplies and a stronger market abroad and low charters. The rate ruling for charters continues to recede owing to the heavy tonnage here to arrive, and a better freight market reported abroad. Choice grades of wheat are held very strongly. Some exporters pay an advance so as to bring their shipments up to our average. Exporters are taking advantage of the rainy weather, and are in the market only for odd parcels obtainable under quotations.

The Eastern market for bright, plump brewing barley is in light supply, and a much higher range of value is looked for. In anticipation of better prices free purchases have been made here for shipment to

the East. Free purchases have also been made of Chevalier for Australia. Some very choice is said to have been placed at \$1.37½. Feed barley, if bright and of good quality, finds ready buyers, at quotations, but poor is hard to sell. The market is overstocked with the latter. Advances from the interior report more outdoor work, and a consequent larger consumption of barley. Up to three years ago it was estimated that six sacks of barley were consumed in the interior to one in this city, but now the best informed place the consumption larger. Railroad building is taking larger quantities than in any former season. Although the stock in the State was large on Jan. 1, yet by July it will be greatly reduced, owing to the heavy consumption. The acreage that has been so far seeded to barley is less than last year to like time.

Corn is stronger, with the more choice grades fetching a slight advance. Eastern advices continue to note a strong market for the better grades.

Oats have ruled steady the past week, with a firm tone, due to lessened receipts. Choice grades are in light supply. The demand for all kinds is only fair.

Rye is firmer, under light offerings. The market is of such a character that free offerings send prices down, and free-buying orders send prices up.

Buckwheat is firm, under light offerings.

Feedstuff.

Hay continues to hold to strong prices, notwithstanding the rains and improving pasture. The consumption is reported to still be large, with a light supply to draw from. About all being received is coarse and otherwise poor. Extra choice, if obtainable, can be placed at \$20.

Bran and middlings, under lessened receipts and a fair demand, rule steady. Ground barley is steady; the consumption demand is said to show signs of falling off. Oilcake meal is without change.

Fruits.

Apples are in good supply. The loss during the cold snap was very heavy. Receipts from Oregon are light, as they are from the East. Choice apples fetch good prices.

Oranges make a better showing, and as the quality is good and weather warmer, the demand is tree, but prices are no better.

Limes and lemons are in good supply, with a good demand at quotations.

In dried fruits more inquiry from the East is noted. The call is for all kinds but bright color, dark being discriminated against. Although the market is shaded on November quotations, still large dealers think a higher range will rule later on. The stock at the East is light, and demand improving.

In raisins there is nothing absolutely new to report. The market is very strong, owing to light stocks both here and at the East. It is generally claimed that the stock will barely meet the trade call up to September next.

Live-Stock.

Choice bullocks are scarce and fetch an advance. Medium-sized sell better than the large, owing to less wastage; in some instances they are placed as much as one-half cent higher than those that cut up badly. The supply of poor to fair cattle is quite free, necessitating concessions. Mutton sheep are higher, with a strong market at the close for choice, owing to light offerings. Milch cows are being inquired for, but no price is named, still for good milkers good prices are obtainable. Hogs continue scarce. On Friday last the price was marked up one-fourth cent, and to-day a further advance is obtainable. In horses, there is nothing new to report, the rainy weather having interfered with trading. Leading horse-brokers report a good inquiry for carriage, general utility and driving animals.

The following are the wholesale rates of slaughterers to butchers:

BEEF—Extra, 9@9½c; first grade, grass fed, 8@8½c; ½ lb.; second grade, 7@7½c; third grade, 6@6½c.

MUTTON—Ewes, 9c; wethers, 8½c.

LAMB—Spring, 15c @ 1½ lb.

VEAL—Large, 7@9c; small, 8@10c.

PORK—Live hogs, 6½@6¾c for heavy and medium; hard dressed, 9@10c per lb; acorn fed, 5½@6c; dressed, 7½@8c; soft hogs, live, 4@5c. On foot, one-third less for grain or stall fed, and one-half less for stock running out.

Vegetables.

Cabbages are in good demand for more distant orders, but only choice, hard heads fetch outside quotations. Cauliflower comes in sparingly, and show more or less the severity of the past cold snap. Mushrooms are in good supply.

Outdoor gardening is being vigorously pushed forward. With clear skies and warmer weather, quite a start will be made by plants.

The market is about cleaned up of feed potatoes. The loss by the cold was much larger than first estimated. Choice, good-conditioned potatoes find ready buyers. Considerable quantities have been taken for seed.

Onions show more strength, as the warmer weather allows more shipping on distant and near-by orders.

Miscellaneous.

Hog products are higher; particularly salt pork. Grass seeds have met with a better inquiry at unchanged quotations.

In poultry the week held steady, the demand and supply being about equal.

Wild ducks and geese have ruled low under liberal supplies.

Beans are very strong in sympathy with another advance at the East and light supplies on this coast. Seven thousand sacks of Lima were taken on Eastern account at \$2.65@2.75.

Hops are quiet but firm for choice, which are in light stock. Brewers are not well stocked, but are quietly picking up all odd lots of the better grades. In wools there is nothing new to report. The finer grades will be in good demand at relatively higher prices than either coarse or medium.

The tonnage movement compares with last year at this date as follows:

	1887.	1888.
On the way.....	286,395	211,377
In port, disengaged.....	93,983	87,273
In port, engaged.....	41,306	25,572

Totals..... 420,684 324,222

To obtain the carrying capacity, add 60 per cent to the tonnage.

San Francisco, Feb. 1, 1888.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS		WEDNESDAY, Feb. 1, 1888.	
Bayo, cts.	2 10 @ 2 00	Brazil, shell.	15 @ 12
Butter,	@	Pecans,	1 1 @ 16
Peas,	3 30 @ 3 75	Peanuts,	4 @ 6
Red,	2 25 @ 2 55	Pilberts,	10 @ 12
Pink,	2 25 @ 2 55	Hickory,	5 @ 6
Large White,	2 25 @ 2 55	POTATOES	
Small White,	3 40 @ 3 75	Burbank,	1 10 @ 1 35
Lima,	2 45 @ 2 75	Early Rose,	90 @ 1 00
Old Peas, hly eye	2 00 @ 2 10	Caffey Cove,	80 @ 1 15
do green,	1 50 @ 1 75	Petaluma,	90 @ 1 10
do Niles,	1 30 @ 2 00	Tomatoes,	1 10 @ 1 15
BROWN CORN		River,	7 00 @ 10 50
Southampton, 50	0 @ 75 00	Jessy Blues,	1 10 @ 1 15
Northampton, 50	0 @ 75 00	Humboldt,	@
CHICKEN		do Kidney,	@
California,	6 @ 7	do Peachblows,	80 @ 1 20
German,	7 @ 8	do Onion,	@

DAIRY PRODUCE, ETC.		BUTTER	
Cal. fresh roll, B.	42 1/2 @ 45	Salt Lake,	1 00 @ 1 25
do Fancy brands	45 @ 47 1/2	Sweet,	2 10 @ 2 50
Pickle roll,	@	POLTRY AND GAME	
Pork, new,	@	Hens,	5 50 @ 7 50
Eastern,	22 1/2 @ 35	Roosters,	7 00 @ 8 50

CHEESE		EGGS	
Cheese, Cal., B.	15 @ 16	Cal. ranch, doz.	3 1/2 @ 3
do,	14 @ 16	do store,	35 @ 40
do,	@	Ducks,	@
do,	@	Oregon,	@
do,	@	Eastern,	20 @ 30

FEED		TURKEY FEATHERS	
Ran, ton,	16 50 @ 17 00	tail and wing,	@
Feed meal,	26 00 @ 27 00	Stulpe, Eng. doz	@
Grd. barley ton, 16	51 @ 14 50	do Common	@
Hay,	11 00 @ 12 00	Doves,	1 25 @ 1 50
Middlings,	19 00 @ 20 00	habbits,	1 00 @ 1 25
On Cak. Meal, 32	50 @	Hare,	75 @ 1 25
do new process, 50	@	Venison,	@
Straw, bale,	40 @ 60		

Ducks.....	— @ —	Wild, do.....	1 50 @ 4 60
Oregon.....	— @ —	Turkeys, B.....	15 @ 17
Eastern.....	20 @ 30	do Dressed.....	17 @ 19
FEED		Turkey Feathers	
Barley, top.....	15 50 @ 17 00	do.....	

Practical Teaching.

A very sensible course with regard to manual training is to be put in practice at once in several N. Y. grammar schools. In one school a room is being fitted up for a cooking department for girls, another will be fitted up as a workshop for boys, and it is expected that both rooms and equipments will be ready for use the coming week.

The changes involved in this new departure, late dispatches state, affect every grade, from the lowest in the primary to the highest in the grammar schools. The new manual training is not an annex or special study. It respects the present studies and involves a modification of methods throughout. Children are to make maps in geography and build dirt mountains and make rivers between them of real water. They are to have weights and measures in their arithmetic and actual blocks of wood to prove their geometrical theorems. It is not intended to qualify the boys for carpenters or iron-workers or plumbers, but to train their eyes and hands to exactness and judgment, to the practical affairs of every-day life by use of tools.

NEWCASTLE FRUIT DISTRICT.—We have received a copy of a very interesting compilation by J. F. Madden, entitled "The Newcastle Fruit District." It gives a great deal of information about this famous region, and can be had by addressing J. F. Madden, Newcastle, Cal. Mr. Madden has done good service during recent years in connection with displays of Placer county products, and is well informed on the resources of the region.

THE "RURAL" READ IN ILLINOIS.—A subscriber in Chicago, inclosing \$3, adds: "Your paper comes to me regularly, and being interested in a ranch at San Miguel and another in the Santa Clara valley, I read it with much interest and derive a great deal of benefit from the perusal."

THE death of Asa Gray, the famous botanist, is announced by telegraph. We hope at an early day to allude to his life and distinguished services.

THE land in Monterey county, advertised for lease in this issue, at a rental exceptionally low, offers an opportunity to those who wish to engage in stock-raising, as feed promises to be excellent the coming season. Mr. Atherton, 331 Montgomery street, is the agent.

Black Scale.

December 29, 1887.

Messrs. Woodin & Little, 509 and 511 Market St., S. F., Cal.—GENTLEMEN: Referring to Prof. Ongerth's Liquid Tree Protector, I desire to say that about two months ago I found quite a percentage of my olive trees infested with the black scale. In some instances the tree was entirely enveloped by a black smut, while the branches, to the very extreme tips of the tender shoots, were covered with the young scale. I sprayed my trees once only with the Tree Protector. The effect was wonderful. It not only completely and entirely destroyed the scale, but it seems to have invigorated the growth of the tree. It is all and more than all you claim for it.

Very respectfully,
THOMAS BECK, U. S. Appraiser.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

F. B. LOGAN—Santa Clara Co.
JOHN G. H. LANPADIUS—San Benito Co.
G. W. INGALLS—Arizona Territory.
WM. WILKINSON—San Joaquin and Stanislaus Co.'s.
A. F. JEWETT—Tulare Co.
E. H. SCHAEFFLE—El Dorado and Amador Co.'s.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
R. G. HUSTON—Montana Territory.

THE catalogues of hardy northern-grown seeds advertised and for sale by Westcott Bros. of this city, are now ready and can be had on application to them at 406 Sansome St., S. F.

THE Innesfallen greenhouses at Springfield, Ohio, are owned by Chas. A. Reeser, whose advertisement is of interest to those who love splendid flowers.

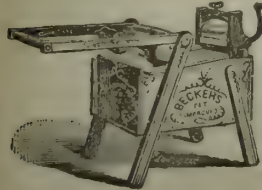
FORCE PUMP AND SYRINGE.—The claims set forth in the advertisement of Lewis' Combination Force Pump and Potato-Bug Exterminator may seem large, but from personal trial we do not think them to be overstated.—*The Cultivator and Country Gentleman*, Albany, N. Y.

HAVE you read Tokology? 99,000 copies already sold. No work more popular among women. Written by Dr. Alice B. Stockham and sold by agents.

Sacramento, February 4, 1888.

TO THE PUBLIC: Having withdrawn the "New Becker" Improved Washer from Wholesalers and Jobbers, we now offer them, for 30 days, to the first applicant at Agents' prices. We desire to introduce the "N. B." only through County Agents, to whom we will allow Special Terms.

Yours, very truly,
INSTALLMENT SUPPLY CO.,
E. W. MELVIN, Manager.



PACIFIC COAST WEATHER FOR THE WEEK.																																				
[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]																																				
DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
Jan. 26-Feb. 1.																																				
Thursday.....	.19	43	Nw	Cy.	.00	66	SE	Cy.	.00	54	Nw	Cy.	.00	56	Cm	Fr.	.00	48	NE	Fy.	.00	62	E	Cl.	.00	58	E	Fr.	.00	58	S	Cl.	.00	58	N	Cl.
Friday.....	.42	52	SE	Ry.	—	—	—	—	.22	54	SE	Cy.	.16	56	SE	Cy.	.14	60	S	Cy.	.00	60	S	Cy.	.00	59	S	Cy.	.00	59	SE	Fr.	.00	52	NE	Cy.
Saturday.....	1.02	54	S	Ry.	—	—	—	—	.02	56	S	Cy.	.00	58	S	Cy.	.00	57	S	Cy.	.00	62	E	Cy.	.00	59	S	Cy.	.00	62	S	Cl.	.00	58	Nw	Cy.
Sunday.....	1.58	50	SE	Cy.	—	—	—	—	.54	54	S	Ry.	.32	56	SE	Cy.	.12	58	S	Cy.	.00	64	SE	Fr.	.00	57	S	Cy.	.00	54	W	Cy.	.00	54	Nw	Cy.
Monday.....	.46	50	SW	Ry.	—	—	—	—	.56	54	SE	Cy.	.00	60	SE	Cy.	.23	58	S	Cy.	.00	62	S	Cy.	.00	53	S	Cy.	.00	58	W	Cy.	.00	56	NE	Fr.
Tuesday.....	.31	42	Nw	Cy.	—	—	—	—	.04	54	S	Cy.	.00	58	S	Cy.	.63	53	SE	LR	.00	62	SE	Cy.	.15	52	E	Cy.	.00	54	E	Cy.	.00	66	SW	Cy.
Wednesday.....	.25	46	SE	Ry.	—	—	—	—	1.02	52	S	Cy.	.24	54	SW	Cl.	.48	53	W	Fr.	.12	54	N	Cy.	.22	53	W	Fr.	.29	58	W	Fr.	.50	66	Nw	Cy.
Total.....	4.23								2.40				1.60				.12				.37				.24							.50				

EXPLANATION.—1 for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature, wind and weather at 12 o'clk (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

ROOFING!

BLACK DIAMOND BRAND

PREPARED ROOFING

CHEAPEST & BEST ROOF

YOU CAN PUT IT ON YOURSELF.

FIRE AND WATER PROOF

FOR ANY ROOF AND ANY CLIMATE.

M. EHRET JR. & CO.

SOLE MANUFACTURERS.

113 N. 8th St., ST. LOUIS, MO.

W. E. CAMPE, AGENT.

LOW RENT AND FREE WATER!

160 Acres Rich, Level Land.

To some one who will cultivate well, will be furnished free water and use of 160 acres of good land (S. E. Sec. 13, T. 21, R. 23) with 9 miles of Tulare, S. W., for one-tenth of crop. Forty acres formerly plowed. Land on all sides cultivated and pastured. Water for irrigation, if needed, free. For particulars call on E. M. DEWEY, 7 miles S. W. of Tulare, or A. T. DEWEY, 220 Market St., San Francisco.

DIVIDEND NOTICE.

THE CALIFORNIA FRUIT UNION.

At a meeting of the Board of Trustees of the California Fruit Union, held at its office, 507 Montgomery Street, San Francisco, January 17, 1888, a dividend of 6 per cent on all fully paid stock was declared, payable after February 1, 1888, at the above office.

Also a rebate of six-tenths of one per cent on the total gross receipts of their shipments through the Union was ordered to be made to shippers, payable same as above dividend.

H. A. FAIRBANK, Sec'y.

To Dairymen, Fruit-Growers and Farmers!

SITUATION WANTED.

An experienced man, with wife, wants a situation. Understands Dairying, Irrigating, and General Farming. Can give the best of references. Address, H. B., Box 361, San Francisco.

WANTED:

A position as Manager or Foreman of a Nursery or Fruit Farm by a party with a long experience in the East and on this Coast, who also has a good knowledge of general agriculture and live stock. Address, A. B., P. O. Box 225, Santa Barbara, Cal.

TOKOLOGY A book for every woman.
ALICE B. STOCKHAM, M. D.
Sample pages FREE.
The most popular work for
99,000 sold Cloth, \$2.00
Mor., \$2.75
SANITARY PUBLISHING CO., Chicago, Ill.

PERCHERON HORSES.

FRENCH COACH HORSES.

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511 PURE-BREDS Now Actually on Hand.

Experience and Facilities Combined for Furnishing the Best Stock of Both Breeds at Reasonable Prices.

Separate Catalogues for each breed, with history of same. Say which is wanted. Address

M. W. DUNHAM, WAYNE, DU PAGE CO., ILLINOIS.

CACTUS BARB WIRE,

Twisted Ribbon,

FLAT STEEL RIBBON FENCING,

PLAIN WIRE,

WIRE STRETCHERS,

FENCE STAPLES,

Mesh Wire and Steel Garden Gates.

Special Prices Quoted for Large Lots.

SEND FOR PRICE LIST.

A. J. ROBINSON, Agent, 26 Beale St., S. F.



GOULD'S SPRAY PUMP

—WITH—

Bamboo Extension all fitted up, Complete with Hose, Barrel and Spray Nozzle.

This cut shows in faithful operation our Gould's Spray Pump; they are utilized for spraying Fruit Trees, Orange Groves, Vines, and in fact, all trees or shrubbery infested with the destructive insects which infest and do so much injury in Orchards, Vineyards, Orange Groves, etc. They are made entirely of brass, with the exception of frame and handle, and are strong and heavy; the valves being made entirely of metal, will not be affected by the corrosive solutions such as Caustic Soda, Acids, Lye, or any other solution that may be used to kill the destructive insect.

Send for Special Circular and Prices.

No More Scale!

ONGERTH'S LIQUID TREE PROTECTOR FOR SPRAYING TREES

(PATENT APPLIED FOR)

Is to be applied by means of a spray-pump; it kills and destroys all fungoid growth and spores, and all kinds of insects and their eggs, such as Red Scale, Black Scale, Oystershell Scale, White Cushion Cottony Scale, San Jose Scale, etc.

It is not poisonous and does not injure the tree, but on the contrary will give it new life and strength, so that it will produce better fruit; therefore its use is also recommended on perfectly healthy trees that have not yet been infested by any insect or fungoid parasite; leaves and blossoms may drop off, but soon new, vigorous ones will spring forth in their stead; one thorough application will protect the tree for years; especially if the wounds and cuts are protected by ONGERTH'S GRAFTING COMPOUND.

As this liquid adheres to the bark and imparts to it a soft dark color it is easy to detect the parts which have not been touched by it.

This liquid can be used in any kind of weather, hot or cold, windy or calm, as neither the heat nor the wind dries it up as is the case with other washes.

It is not affected by rain, even if it should rain immediately after application to the tree. In the fall of the year remove the soil from trees attacked by woolly aphids, so as to expose the neck of the root and apply to the same the undiluted liquid. Wash your trees as soon as the leaves have fallen off; the best time to spray evergreen trees is after blossoming season; oranges, lemons, limes, etc., at the time when the fruit has attained the size of a hazel nut. Game thares and deers will not browse upon trees which have been washed with Ongerth's Liquid Tree Protector. To secure the growth of trees which are to be transplanted or to be shipped, wash them (but not the roots) with Ongerth's Liquid Tree Protector, thus preventing them from drying up and the bark from shrivelling. Ongerth's Liquid Tree Protector must be diluted in order to be sprayed. A dilution in equal parts is the best to spray the trunk with; for spraying leaves, a dilution from four to eight or ten parts of prepared water to one part of Ongerth's Liquid Tree Protector is recommended. For spraying black smut (capnodium) and green lice, take four to eight parts prepared water to one part of Ongerth's Liquid. Send for one gallon for sample.

ONGERTH'S IMPROVED GRAFTING COMPOUND.

(PATENT APPLIED FOR.)

This Compound protects all wounds or cuts on trees and vines from the influence of the atmosphere and water; it increases the formation of Cambium, thereby producing a rapid healing of the wound, and is therefore a perfect substitute for bark. It further keeps all animal and vegetable parasites from the wound, and prevents the decay and molding of the wood. Grafting is made absolutely successful by the use of Ongerth's Compound. Special attention is drawn to the fact that it is absolutely necessary to protect the grafting wounds on grapes.

SEND FOR SPECIAL PRICES AND CIRCULAR.

WOODIN & LITTLE, 509 & 511 Market St., San Francisco.

JAPANESE "UNSHIU" ORANGE TREES.

Kinkan, Bushiukan, Satsuma, Canton Hybrid, Daidai and Kinokuni,
ALL FREE from Scale, 3 to 5 feet high, Healthy and Bushy Trees at LOWEST PRICES.
3000 CAMPHOR TREES. 1000 ROOTED GIANT BAMBOOS.
ORIENTAL IMPORTING CO., 520 Front St., S. F.

460 ACRES.

INCORPORATED 1884.

CALIFORNIA NURSERY COMPANY TREES FRUIT & SEMI-TROPICAL. GRAPEVINES, SMALL FRUITS, ETC. Largest Stock on the Pacific Coast!

SPECIALTIES:

PLUMS, PRUNES AND APRICOTS, ON MYROBOLAN STOCKS.

Facilities for Packing and Shipping to Distant Points are unsurpassed.

SEND FOR CATALOGUE. ADDRESS

CALIFORNIA NURSERY CO., Niles, Cal.

JOHN ROCK, Manager.

160 ACRES NURSERY! 1,500,000 TREES AND VINES!

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SEMI-TROPICAL AND GENERAL

NURSERIES Fresno, Cal.

We would respectfully call the attention of the public to our very complete list of Nursery Stock for the ensuing season, consisting of a full line of all the Standard Varieties of

APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, NECTARINE, Etc., Etc.,

BESIDES A LARGE STOCK OF THE GENUINE

WHITE ADRIATIC FIG,

Guaranteed, and the NEW LYONS CLING PEACH. We have an immense stock of ROOTED VINES, comprising 86 varieties. We carry also a full line of CITRUS FRUITS, well grown and warranted free from all pests and true to label.

Send for Catalogue and address all correspondence to FRESNO, CAL., Box 175.

ORANGE AND LEMON TREES

In Large or Small Lots, both Wholesale and Retail,

Cheaper than Ever Before Offered on this Coast,

— AT THE —

CAPITAL NURSERIES, SACRAMENTO, CAL.

These Trees are all budded with the very best known varieties and are true to name and free from insect pests. We also have an immense stock of all kinds of Fruit, Shade and Ornamental Trees, Vines, Plants, etc. In fact everything in the nursery line at lowest market rates. Also a complete assortment and large stock of Field, Garden and Flower Seeds at lowest market rates, either wholesale or retail. Our Seeds are all tested before sending out.

Send for Seed and Tree Catalogue. Call, if possible, and see our stock. Special rates (very low) given on large orders. Correspondence solicited. Address all communications to

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Our large and profusely illustrated Catalogue for 1888 has been made still more attractive by the addition of a richly illuminated cover, beautiful colored plates, and numerous life-like illustrations of rare and beautiful flowers and choice vegetables, including many novelties of rare merit, will be mailed free to customers of last year, and to all others, upon receipt of Ten Cents, which will be refunded with first order. B. K. Bliss, surviving partner of B. K. Bliss & Sons, is now with us, and respectfully solicits the patronage of former customers.



QUICK! HARDY! PRODUCTIVE!
EVERY WAY SUPERIOR! For Proof try our Specials. No. 1-9 Garden Packets. No. 2-11 Flower Packets. No. 3-7 Garden and 3 Flower Packets. Either collection, post paid, 30 cts. 2 or more, only 25c. each. **ORDER NOW!** NO DUMMIES! NO DISAPPOINTMENT! We want "West-Test" Seeds known at once throughout the U.S., therefore make a good offer—the Best of the Season, at YOUR MONEY RETURNED.

SURPLUS STOCK.

CHERRIES—5000 Royal Ann and Black Tartarian.
5000 Bartlett Pears.
5000 Plums, Coe's Golden Drop, Kelsey's Japan, Washington and other good sorts.
Also some Apricots, Peaches and Apples.
1000 Camellias in pots and open grounds. 25,000 Cypress transplanted in boxes. 1000 Cypress, 2 years old. 10,000 Gums, Blue and Red, in boxes. 2000 Laurus Tinus. 2000 Palms, 1 year old in pots. 1500 Pines, 2 year old. 2000 Peppers, pot grown. 25,000 Roses. Also an immense assortment of Pot Plants and Flowering Shrubby at bedrock prices. Address

GILL'S NURSERIES,

Twenty-eighth Street, near San Pablo Avenue, OAKLAND, CAL.
Send for Catalogue and Price List.



A few SHRUBS, a Bed of ROSES, CLEMATIS on the VERANDA will work a complete change in your premises

PRICES LOW. JUST READ!

14 Continuous Flowering Roses \$1.

28 Everblooming Roses, including Princess Beatrice \$2.00.

14 elegant Carnations, all different, including Mrs. Cleveland \$1.00.

14 Fairy flowered Chrysanthemums, from the wonderland Japan \$1.00.

10 magnificent Begonias, scarlet, white, pink and crimson flowered, with ornamental variegated foliage; they succeed with all \$1.00. Plants and Seeds of all kinds.

CATALOGUE FREE. IT WILL PLEASE YOU. No exaggerated Descriptions. Exact facts about every tested variety. Address

HILL & CO., RICHMOND, INDIANA.

CHOICE ALFALFA SEED

In Lots to Suit.

Grangers' Business Association,

108 DAVIS STREET, SAN FRANCISCO.

ORANGE and LEMON.

All the leading varieties of Orange and Lemon Trees. Genuine Washington (Riverside) Navels, Mediterranean Sweet, Jaffa, Malta Blood, Homassasa, Parson Brown, etc. Unshiu on Grape fruit stock, Tangerines and Mandarin.

In Lemons, Villa Francha, Sicily and Eureka, Sweet and Sour Seedlings in any quantity.

Catalogue and price list free. Address

H. L. WHEATLEY, Altamonte Nurseries, Altamonte, Orange Co., Fla.



Warranted Seed.

I have founded my business on the belief that the public are anxious to get their seed directly from the grower. Raising a large proportion of my seed enables me to warrant its freshness and purity, as see my Vegetable and Flower Seed Catalogue for 1888, FREE for every son and daughter of Adam. It is liberally illustrated with engravings made directly from photographs of vegetables grown on my seed farms. Besides an immense variety of standard seed, you will find in it some valuable new vegetables not found in any other catalogue. As the original introducer of the Eclipse Beet, Burbank and Early Ohio Potatoes, Hubbard Squash, Deephead Cabbage, Cory Corn, and a score of other valuable vegetables, I invite the patronage of the public. JAMES J. H. GREGORY, Marblehead, Mass.



ELL VEN PACKETS FOR 25 CENTS.

CHOICE FLOWER SEEDS

For 25c. in Postage Stamps or money, we will send by mail one pkt. each of the following rare and valuable seeds: ASTERS, Dwarf French Bouquet, mixed. BALSAMS, Perfection, fine double. DANDELIONS, Double Dandelion Pinks, all varieties. GIANT GERMAN PANSIES. PETUNIA, large flowering. PHLOX DRUMMONDII, grandiflora, very rare. VERBENA, all five shades. NEW ZEBRA ZINNIA, bright colors. A Splendid Everlasting Flower. The beautiful Moon Flower, the most elegant climber with DOZENS OF 10 (Cape Gooseberry) excellent for puns. Fruits 1st year from seed. 11 pkts. 25c. 5 collect for \$1. with directions for culture. Our beautiful 98 pp. Catalogue accompanies each order. Address SAMUEL WILSON, Mechanicsville, Bucks Co. Pa.



SPLENDID OVER 1500 DIFFERENT VARIETIES FLOWERS

All strong Plants, each labeled, delivered safely by mail. Largest Assortment. Low Prices. In business 18 years. Guaranteed satisfaction. Stock comprises all desirable varieties. Only mature plants sent. My new Illustrated Catalogue sent FREE before sending for my NEW CATALOGUE. All lovers of flowers should have it. Everyone wanting new and choice PLANTS should send for it. Everyone who has a garden should have a copy of my catalogue of SEEDS. All the new and standard varieties. Valuable books on Floriculture given to purchasers. CHARLES A. REESER, (INNISFALLEN GREENHOUSES) SPRINGFIELD, OHIO.

ORANGE TREES.

Plant Trees Grown in Your Own Section. They do much better than others brought from a distance.

THE ALOHA NURSERIES,

Penryn, Placer Co., California,
Off rs a large home grown stock of Orange Trees, California Fan Palms and Pepper Trees, Limes, Dates, etc., at prices to suit the times.

FRED. C. MILES, Manager.

John Saul's Washington Nurseries

Our Catalogue of New, Rare and Beautiful Plants for 1888 will be ready in February.

It contains list of all the most beautiful and rare Greenhouse and Hothouse Plants in cultivation, as well as all novelties of merit, well grown and at very low prices. Every plant lover should have a copy. Orchids—A very large stock of choice East India, American, etc. Also, catalogues of Roses, Orchids, Sea's, Trees, etc. All free to applicants. JOHN SAUL, Washington, D. C.

Bartlett Pear Stock for Sale.

5000 Bartlett Pear Trees, one and two years old, for sale at bed-rock prices; special rates to dealers. H. B. MURCOTT, San Bernardino, Cal.

ROOT GRAFTS AND SEEDLINGS

Apple, Pear, Cherry, Plum.

WRITE FOR PRICES.

BLOOMINGTON (PHENIX) NURSERY, SIDNEY TUTTLE & CO., Props, Established 1862. Bloomington, Illinois.

VITIS CALIFORNICA SEEDS.

Five pounds and over, \$1 per pound; less than five pounds, \$1.50 per pound.

Vitis Californica Seedlings, Phylloxera Proof.

\$10 per 1000.

C. MOTTIER, P. O. Box 8, Middletown, Lake Co., Cal.

FOR SALE.

Grapevines and Cuttings, OLIVE TREES and CUTTINGS. RIPARIA SEED.

Apply to OLARENCE J. WETMORE, 204 Montgomery St., S. F.

THE NEW BRADLEY SQUARE CORNER GANG & SULKY PLOWS

Are, Without Any Exception.

THE BEST PLOW MANUFACTURED.

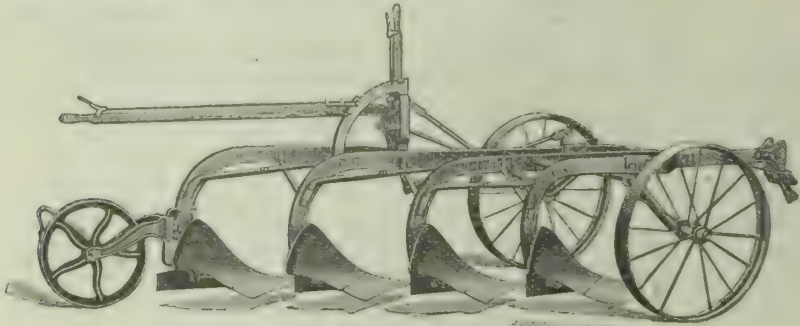
SENT ON TRIAL!

EVERY ONE GUARANTEED.

If not satisfactory we pay all freight

You Run no Risk in Ordering.

They are used by the largest farmers on the Coast. The Shares are 5-16 inch STEEL, not pot metal. This cut does not show shifting clevis.



No. 4c.—NEW BRADLEY 4 GANG WALKING PLOW. 10 INCH.

BEFORE YOU BUY ELSEWHERE

NOTE THE POINTS OF SUPERIORITY:

1. Extra hardened soft center steel molds.
2. Lightness of draft—Plow is carried on wheels.
3. They are Steel Beams, stiff and strong, don't bend.
4. They will plow from 2 to 12 inches deep.
5. They will turn a square corner without taking out of ground.
6. We give you Cast Steel Shares 5-16 inches thick.
7. They work with or without a pole.
8. They are used by all the best farmers.

Our Square Corner Sulky is the best Plow manufactured for the vineyard. It will plow from 14 to 16 inches deep. It is a fact that the BRADLEY SQUARE CORNER GANG PLOW Runs Lighter, is Handled Easier, and that the Shares last longer than any other Gang Plow sold on the Coast. All the Bradley Plows have the extra hardened Soft Center Steel Molds. WRITE FOR PRICES.

GRAND ISLAND, COLUSA COUNTY, CAL., December 22, 1887.

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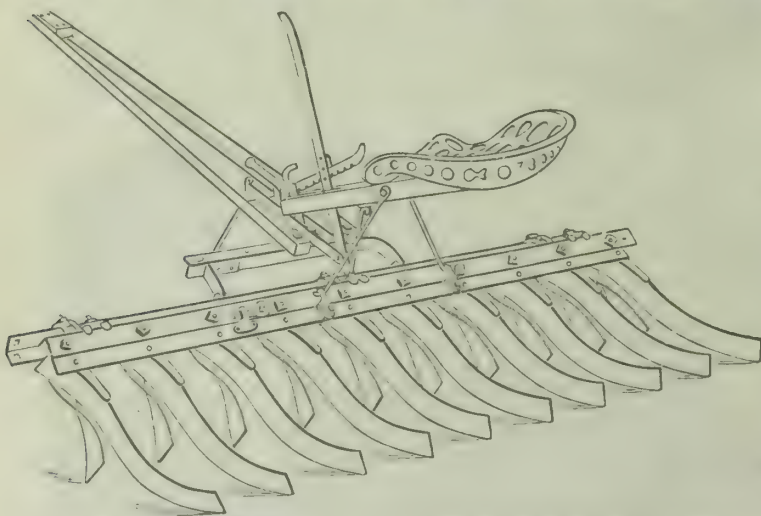
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TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 6.

SAN FRANCISCO, SATURDAY, FEBRUARY 11, 1888.

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The Visiting Horticulturists.

The members of the American Horticultural Society did not arrive in San Francisco in a body, but by installments. The president and secretary were both detained and did not ar-

San Jose, we secured portraits of the president and secretary, whom we shall introduce to our readers at another time.

First in official position in the society is T. V. Munson of Texas, vice-president. He is a thoroughly scientific horticulturist as well as a

readers from the frequent mention which we have made of his excellent work. He is a resident of Kansas and has made a lifelong study of fruit matters.

Mr. T. S. Hubbard of Fredonia, N. Y., is widely known as an extensive cultivator of

largely engaged in fruit growing, and is a valued member of the society.

Mr. J. B. Durand of Prairie City, Mo., is one of the leading practical horticulturists of his State. He is largely interested in orchards, giving especial attention to apples.



Evans. Pepper. Ohmer. Smith. Hubbard. Budd. Bubach. Munson. Van Deman. Rudisill. Durand.

A GROUP OF THE MEMBERS OF THE AMERICAN HORTICULTURAL SOCIETY.

Taber Photo, S. F.

rive until the opening of the meeting in San Jose. There were other members not included in the first party to reach the city. For this reason we were not able to carry out our idea of giving our readers a large group of those whose presence in the State has been the occasion of such demonstrations of welcome. Our representative succeeded, however, in capturing a group from the early arrivals, and by the aid of Taber's kindly lenses fixed their form so that our engravers could prepare the photoplate presented on this page. Afterward, at

practical fruit-grower. He is an authority on American species of the grapevine, and his classification was published in the *RURAL* a few years ago.

Mr. J. C. Evans of Harlem, Mo., is the treasurer of the society, and is also president of the Missouri Horticultural Society. He is one of the leading fruit-growers of his State.

Prof. H. E. Van Deman, Chief of the Division of Pomology of the Department of Agriculture at Washington, is already known to our

grapevines, being one of the most prominent growers of the East. Mr. Hubbard is also a noted horticultural writer.

Mr. N. Ohmer of Dayton, Ohio, is the ex-president of the Ohio Horticultural Society. The soundness of his judgment and his wide experience have made him famous.

Mr. J. M. Smith of Green Bay, Wis. is the president of the Wisconsin State Horticultural Society, and is one of the foremost cultivators of small fruits and vegetables.

Mr. H. J. Budd of Mount Holly, N. J., is

Mr. Geo. P. Pfeffer of Pewaukee, Wis., is one of the pioneers of horticulture in the Northwest and is especially prominent in Wisconsin. He has originated several excellent varieties of fruit.

Mr. J. G. Bubach of Princeton, Ill., has made a name as a cultivator of strawberries, and originator of new varieties.

Mr. M. B. Rudisill of Greencastle, Ind., is not a practical fruit-grower, but seemed to enjoy the California visit just as well notwithstanding.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Progress and Profits at Lucerne.

EDITORS PRESS:—The two liberal showers we received about Christmas, with the nice rain we had last week, together with the damp morning fogs that we are now daily receiving, have brought about a most agreeable change in the outlook for a year of prosperity with the farmers of Lucerne.

Within the last decade, with but one exception there has not been a better prospect for a really good season than we have at present writing.

Last year was with us a very dry one, as scarcely enough rain fell to sprout wheat sown outside our irrigation districts. But from present indications we will have good wheat crops throughout the entire valley this year.

Lucerne, for 15 years known as one of the best wheat-producing countries of its size in the world, is fast changing its staple productions from wheat to fruit and stock. It has been discovered that land which formerly yielded about 15 sacks of wheat to the acre yearly, worth about \$20, can in every instance, with a little more labor, be made to return an annual income of from \$200 to \$400 per acre, if devoted to fruit culture. Or if stock-raising be preferred it will yield double the return, with half the labor required, than if devoted to wheat culture.

From present indications another decade will witness all our large wheat-fields of the present planted to fruit trees and vines or sown to alfalfa.

Though all kinds and varieties of fruits grown upon the Pacific Slope can be cultivated here with profit, yet it is the writer's opinion that the apricot, peach and grape are best adapted to the soil and climate of Lucerne.

Most of our orchards and vineyards now in bearing were planted either for family use or for experiment, and are therefore not large, but we have several large ones which will come into bearing this season or next, and I can confidently say that the whole area of orchards and vineyards of Lucerne will be doubled in size this year.

That your readers may know something of what we are doing here, I will give you a brief statement of the returns some of our fruit-growers received from their products last year, which as I have already stated was a very dry season, and therefore by no means a fair test of the productiveness of the country.

C. M. Blowers of Grangeville took from his 20-acre orchard of peaches and apricots a few hundred pounds over 200 tons of green fruit, besides a considerable amount wasted in gathering and from ripening too fast for the force occupied in handling, etc. His orchard is a comparatively young one, and the yield of peaches and apricots about the same number of pounds to the acre. Mr. Blowers' vineyard of six acres yielded him a little more than 60 tons of Muscatel grapes, which he does not consider an average return.

O. C. Brown of Lemoore received for the product of his 20-acre orchard and vineyard, much of which has but recently come into bearing, \$4700.

The orchard and vineyard of J. T. Woodward, which adjoins that of Mr. Brown, did about as well.

W. R. Maschmeyer, whose place is also near Lemoore, gathered and cured 18 tons of raisins from 5000 vines of the Muscat of Alexandria variety. The vines are, I think, eight years old, and are planted six feet apart.

From 5½ acres set to vines Peter Seazighim of Grangeville received a return of 13 tons of Muscatel raisins. This year we expect to do better.

Hanford, Cal.

A. F. JEWETT.

Yolo Industries.

EDITORS PRESS:—Yolo county is making rapid strides toward success, and if the increase of fruit-raising continues she will rank in a few years among the banner fruit counties. It will be found, by referring to those valuable statistics published in your last issue, that the notion that all or nearly all the fruit shipped East is sent from the southern portion of the State is a mistaken one. The figures show that Central California is the largest shipper, and the amount of Southern California's exports falls far behind.

Grain-raising is still the main industry in this county, but it will soon be supplanted by the more remunerative occupation of fruit-raising. Here, it is claimed by many, orchards need no irrigation, but others assert that we need irrigation to secure perfection in the crop. The former claim that with careful and thorough cultivation only fruit trees will bear a good paying crop. The only reason to be assigned for the fruit-growing industry remaining behind is that the farmers followed grain-growing before fruit-raising was known to be a success in this locality, and now they very naturally "stick to the rut."

Stock-breeding is also a very important occupation here, and the Yolo breeders generally rank high in their respective lines. Sheep, cattle, mule, horse and hog raising are extensively carried on by their devotees, and those who pursue these callings to the exclusion of

all others win handsome revenues; they even claim that it is more profitable than horticulture. But, notwithstanding the objections, I think the fruit industry will soon lead in Yolo. Davisville, Jan. 29, 1888. W. O. R.

Hawks' Corners.

EDITORS PRESS:—Regarding the above popular name for the town of Elliott, mentioned by your correspondent, "W. W." in the PRESS of Jan. 14th—Hawks' Corners would have been a corner but for John Hickey. He owned quarter of a mile on both sides of the half-section line to Dry creek, where the best crossing was, and where a free bridge could have been had, making a direct line from Staples' ferry. I owned and controlled 1½ miles, and secured the right of way for a road from the "corner" to the vacant land near the ferry.

Hawks of Sacramento was about to fail and started Walt Estes in a branch store, and parties in and about the store gave it the name. As there was at that time a strong probability of a road from Staples' ferry to Dry creek on the half-section line, I had the name of the postoffice changed from "Orr's Ranch" to Elliott.

I agitated the taking of water of the Mokelumne river till they talked of taking me to Stockton for irrigation on the brain.

Cambria, Jan. 17, 1888. G. W. PROCTOR.

THE VETERINARIAN.

Anthrax in the Bay Counties.

The epidemic among horses and cattle now and for some time raging along the shores of Contra Costa and Solano counties, opposite the smelting works, has caused considerable alarm and controversy as to origin and cause. The farmers and losers of horses and cattle by death have made a strong claim to the theory that their loss is caused by poisonous substances being deposited from the fumes of the smelting works on the pastures surrounding, even to a radius of ten miles, while the proprietors of the works, backed up by the opinions of veterinarians and chemists, deny it in toto, and attribute it entirely to a very dangerous disease in horses and cattle and properly called anthrax. To further investigate the difficulty and differences of opinions, a Call reporter yesterday interviewed some of the leading veterinarians and chemists on the subject.

Dr. W. H. Carpenter of the firm of Dr. Carpenter & Sons was the first seen.

"Yes, I have not only heard of the epidemic over there, but was sent for by Mr. Johnson of Benicia to visit some valuable horses of his in the neighborhood that had been stricken with a locally unknown malady that was carrying them off to an alarming extent.

"They intimated that it was from being poisoned by gases and deleterious acids deposited on the surrounding pastures from the smelting works, which, when eaten by either horses or cattle, caused their death, and in substantiation of this theory claimed that horses fed and watered in the stable, and not pastured with the others, were entirely free from the disease.

"On cursory examination of the first cases shown me I admit I was puzzled, as I had never seen a case of anthrax in a horse on this coast, and before passing my opinion desired to make a more thorough examination. There was a gray mare tied with a hay rope adjoining Mr. Johnson's stable apparently in the last stages of the disease. Mr. Johnson and myself on our return from a visit to the surrounding farms found she had broken the rope and gone out of town about a mile, where she had dropped dead.

"I took the lungs, coccum or large intestine, stomach and spleen, and after securely sealing them sent them to this city, at Mr. Johnson's request, for a chemical analysis by Prof. W. T. Wenzell.

"I then informed Mr. Johnson that I was satisfied there would be no poison found, but gave him my opinion that the disease was anthrax. Although new to this coast, it is well known by all veterinarians. It has taken epidemic form in several foreign countries to an alarming extent, taking off in some instances 100,000 horses and cattle."

The reporter was then referred to his son,

Dr. H. E. Carpenter.

He was found at his residence and at once interested himself in the subject, as he had assisted in the chemical analysis made by Professor Wenzell of the stomach and lungs of animals afflicted with the disease not only in this neighborhood but in other sections of the State.

"In the chemical analysis made by Professor Wenzell and myself," said he, "no traces of any poison whatsoever were found, and Mr. Johnson, who came down and saw Mr. Wenzell, was so informed. I then notified him that if desired I would make a microscopical examination of the lungs, and associated myself with Professor Wenzell in such examination to verify my theory.

"After two hours' investigation bacteria in the blood was found to be very large and numerous, thus establishing beyond a doubt the fallacy of acid poisoning and the absurdity of the claim for the epidemic from any source other than anthrax, which is a contagious but

not infectious disease, and in its most malignant form.

Contagion and Infection.

"Another point I would like to state is with regard to the erroneous construction put on these two terms. This disease is admitted by all to be contagious, but I claim, like glanders, is not infectious. For instance, a horse with the glanders may be worked side by side or in the same stable with well horses for months and they will never contract the disease, unless they are inoculated in some way with the virus of the glandered horse, as the disease is not transmitted through the air. In this case, horses not inoculated with the virus will escape.

"There is no cure after it has once taken a hold on an animal, and the best authorities state that a human being is susceptible. There is no doubt in my mind of the importance that farmers and cattle-buyers should make a thorough investigation and examination of animals similarly afflicted, and at once remove and isolate the first and every case brought to their attention from contact in any way with their own or neighbors' stock."

Professor W. T. Wenzell.

Professor Wenzell was next seen by the Call reporter, at his laboratory on Market street, and corroborated everything said by Dr. H. E. Carpenter as to the analysis of the parts of animals brought to him, and further stated that it would be impossible for the metallic vapors to be carried even so far as a mile, as by their own weight they would descend sooner, and that it was an utter impossibility for them to be carried as far across water as claimed (three miles to the Contra Costa shore), for the water would immediately precipitate their descent.

Dr. A. De Labrousse.

The reporter next visited Dr. de Labrousse, who had not personally investigated any case, but judging from what Dr. Wenzell said he had found in blood, the doctor expressed the opinion that it was anthrax, a disease of the throat similar to putrid sore throat, and that it was incurable. He thought it could be prevented by inoculation. He said that in other countries the disease was always discovered by tumors in the lungs, and he had never seen a case without eruptions of the body or lungs. If bacteria had been found in the blood it was a disease of the spleen, or properly named anthrax.—Call.

Treatment for Cows.

EDITORS PRESS:—The after birth or "cleansing" of cows and other animals occasionally causes trouble by its retention, and sometimes the death of the animal occurs in consequence of want of knowledge on the part of the owners. Cows that have given birth to their offspring at the usual and proper time seldom have much difficulty in ridding themselves of this placenta or "cleansing." It is hardly necessary to state that the material consists of the membranes in which the fetus was enveloped. It is not unusual for a cow to retain them for three days and then expel them without any assistance. There are two criterions to guide a man in making some interference. Firstly, premature birth will almost invariably call for artificial aid. The reason for this must be evident. In such cases the arm of the operator should be carefully inserted into the uterus and all the after-birth removed. It will be found that it adheres to some button-like elevations on the mucous membrane of the womb. These are "cotyledons" and their function is to supply nutrition from the dam to the offspring. It is very important that the "cleansing" should be removed from these vascular bodies in a proper manner, i. e., by very gradual traction, as, if they, the membranes, are carelessly torn off, internal bleeding is the consequence. Secondly, surgical aid is necessary when a peculiar and most characteristic odor is perceived. This, of course, indicates that decomposition has commenced, and this may be communicated to the general blood circulation and produce blood poisoning and death. A method often adopted and much to be commended is to tie a brick or something of a similar weight to the protruded mass, and allow it by its weight to gradually detach the membranes from the womb. After the whole has been removed it is good policy to thoroughly wash or syringe out the uterus with warm water. Some also use a mild weak solution of some disinfectant. This is good practice, but it should be remembered that the solution must not be too strong. Medicines are sometimes recommended internally. Purgatives are good to assist in getting the system into a healthy condition. Tonics also, such as sulphate of iron and gentian, are to be commended. But, if any real local benefit is to be expected, it is necessary to use such medicines as are known to act directly upon the uterus or womb, causing that organ to contract and thereby expel the offending material. Such medicines are useful, but they ought only to be used by those who have had a proper medical education. Ergot of rye comes under this heading. Some cows as soon as they have discharged their after-birth will turn round and immediately consume it. Some say that on this account it should be at once removed, because it may occasion an impediment in the folds of the stomach. But with this doctrine I do not agree. If instinct prompts them so to do, she is not likely to be wrong. It surely must be nourishing to the system, although not of the same nature as her general food—herbivorous—she becomes for the time carnivorous.

ROBERT J. DAWSON, Veterinary Surgeon.
Willard's Brick Stable, San Diego.

ENTOMOLOGICAL.

The Fluted Scale.

Representative Felton has received the following letter in regard to the white scale:

Hon. C. N. Felton—MY DEAR SIR: Your letter of the 24th inst., referring to a memorial presented by you to Congress concerning the investigation of *icerya* or white scale, has been received and referred to the entomologist, who reports that the natural history of and remedies for this scale insect have been under investigation for some time, and that a full consideration of the subject will be found in the annual report of this department for 1886. He has forwarded to you by to-day's mail a copy of the author's edition of this report. Supplementary facts are published in Bulletin 15 of the Division of Entomology, a marked copy of which is also sent you by accompanying mail. He has satisfied himself since the publication of this bulletin, by an examination of types in Paris and by correspondence with naturalists in New Zealand, Australia, South Africa, Mauritius, and the island of Bourbon, that the *icerya purchasi*, common to California and to the first three countries mentioned, is specifically distinct from the *icerya sacchari* mentioned in the second article in the bulletin sent. The result of this conclusion is to render still stronger the hope of a practical outcome from the investigation of the parasites and other natural enemies of the species in these and other countries, and more particularly in Australia, where two important enemies of the scale have already been discovered.

You will see from the documents forwarded that much has already been accomplished in discovering the full life history of the species in California, and particularly in contending with it. I am happy also to state that as the entomologist informs me, the experimentation by the agents of the department the present year, the results of which are not published, has been very satisfactory, and the method of fumigating has been rendered feasible and practicable and the washes improved practically in the direction in which he has suggested in the bulletin. The history of all such cases of the destruction of insects introduced from other countries goes to show, however, that the introduction of these natural enemies that keep the white scale in check in its native countries will prove more effective than any other methods in subduing the pest, and at the same time relieve the fruit-growers of the large expense attending the employment of even the most satisfactory remedies. I am, therefore, heartily in sympathy with the purport of the memorial to which you refer, and shall be pleased to do anything to bring about a favorable consideration of it.

In conclusion I would say that there is nothing to prevent my carrying out the wishes of the fruit-growers of California in this particular regard as expressed by the resolution and by the memorial to which you refer, except the clause restricting traveling expenses for the Division of Entomology to travel in the United States. This restrictive clause has always seemed to me entirely unnecessary, as the Commissioner might, in his judgment and discretion, be left to decide on the advantage or the necessity of sending an agent to a foreign country when any emergency may arise to justify it. I believe that with the exclusion of this limitation the appropriation, even as it now stands, would justify the sending of an agent for the purpose indicated, though I should be still better pleased to have a special appropriation and special authorization made for that purpose. It would be particularly appropriate to make an effort in this direction the present year, because of the International Exposition at Melbourne, in which, by a resolution already passed, the Government is to take part. This exposition in many ways would further the investigation referred to in your memorial. In the hope that this information may meet your wishes, I remain with respect, your obedient servant.

NORMAN J. COLMAN, Commissioner.

THE SCALE EATER.—Dr. J. J. Shaner of Los Gatos writes to the San Jose Herald as follows: I find that the two-spot ladybug is playing havoc with the orange scale and red spider. I find the two-spot out in the brush working on the orange scale as well as in the orchard. While I was pruning my plum trees I found one tree with a few scales on it, and on examining the tree I found the two-spot. The two-spot's cousin has left. There are none of them to be found this year where there were millions last year. The striped bug has almost disappeared. Still, the fruit-grower must watch his enemies or they will overcome him, as they do not consist of bugs alone, but numerous bipeds that walk about in fine silk hats with kids on the hands. The San Jose scale is not giving much trouble. The white small scale on the Yerba Santa is giving but little trouble. I hope that the two-spot will find it as it has found the others. The two-spot is a very pretty little creature, but is very slow; still, it does good work, just as Professor Norton said it would nine years ago while I was attending the State Normal School. The cottony scale is not here as far as I know. The codlin moth is still with us and will be found even in the manzanita berries—at least, if it is not the genuine, it is a cousin.

THE GARDEN.

Potatoes at the East.

EDITORS PRESS:—We note your remarks on "Potatoes at the East" in your issue of January 7th, suggested by our New York contemporaries. We beg to object to "the best of potatoes coming from Scotland, having grown on light soils and very attractive in appearance." On the contrary the best of those varieties, the Magnums, don't begin to equal in quality or appearance the American Rose, Burbanks, Peerless or White Star, and the Regents and Champion grade, and sell rather below our second grade native stock mixed varieties. Why, first-class native and Nova Scotia potatoes command 80 cents to 85 cents per 60 pounds firm in New York, Philadelphia, Baltimore and Boston right along, and have for some time past, while Scotch Magnums reshipped from New York are unsteady at \$2 to \$2 20, Regents and Champions dull at \$1.70 to \$1 80 per 168 pounds. The latter are mostly dark and dirty, appearing to have all been grown on heavy, dark soil.

There seems to us to be some uncertainty about any continued higher prices ruling. See our letter circular. The situation may be strained and the charm broken, but "it is one of those things what no fellow can tell" certain. First-class new potatoes always sell high here early, \$10 down to \$5 per barrel wholesale, as to the season, etc. They frequently hold \$6 per bbl. for a couple of months, sometimes until June. PANCOAST & GRIFFITHS.

Philadelphia.

The Circular.

The following is the circular to which our correspondents allude, dated Philadelphia, Jan. 12th:

Potato Outlook.—Mid-winter and spring supplies, etc. We have canvassed the situation among holders, dealers and growers of potatoes, as searching and as far as possible to reach, which we present to you for what you find it worth.

In New York State and through the West it seems as though "everybody was confident that the crop would be light" everywhere, and most everybody put away a considerable quantity "without letting anybody know anything about it," and consequently in many instances there has been held an excess over previous years.

Ice-bound in the Canadian Provinces, our patrons tell us, there are great quantities held for spring shipping.

In the British islands the crop is large, and to catch the cream of our American markets (besides the numerous smaller shipments made already in January) much heavier shipments than usual are contemplated. Two steamers, on the way and loading now, are to bring 40,000 sacks each from London and Liverpool to New York, as a commencement only of the Scotch exports.

Our German correspondents say there is an immense stock of Dutch potatoes promised to America as soon as the weather permits.

It is evident that all—all—are holding for "big prices" in the spring, and it is equally apparent that there are "big lots" held.

It seems to us reasonable to repeat our good rule: *The best time to market any produce is while it is at its best quality and when it is in good demand at paying prices.* With us, first-class potatoes of desirable varieties are scarce and firm at 80 and 85 cents per bushel (60 pounds), and we are dubious about any higher ruling being maintained.

Potatoes in Chicago.

In addition to the foregoing we give the following dispatch recently sent out from Chicago:

Since the great crop failure of 1881 potatoes have not been scarcer nor dearer over the country than they now are. The crop last year in Michigan, Southern Wisconsin and New York, the three greatest potato producing States, was a total failure. The Illinois and Indiana crop was far below the average, and Missouri, Iowa and Ohio did not fare much better. During the early fall and winter the scarcity was not felt so badly, but since the railroads have been blocked by storms in the Northwest the scarcity has grown daily and prices have gone up. Since January 1st foreign consignments of potatoes direct from Scotland, Germany and Denmark have been made to this city. Other great distributing points, St. Louis and Kansas City, have been in a measure supplied with Colorado and Utah potatoes, but the supply has given out, and calls are being made upon this city which it will be difficult to fill, at least until the weather moderates.

The largest consignment made direct from Europe to any firm in this city was that which arrived Thursday to a local commission firm. It consisted of 8000 bushels from Rotterdam. The head of the firm said to a reporter to-day that until the recent blizzard set in, Manitoba had shipped a large quantity to this country, but since then the supply from there had been cut off and they are compelled to send to Europe. The potatoes cost in Europe 10 to 15 cents a bushel. In Chicago they are now bringing 90 cents, with a prospect of going higher. Chicago consumers use between 9000 and 10,000 bushels a day, and very little of the importations have been shipped away.

A Potato Trust.

The Lewiston, Maine, *Journal* has the following: The six largest potato dealers in Boston have combined in a trust known as the

Consolidated Produce Company, lately organized at Portland under the laws of this State, with a capital stock of \$400,000, of which \$100,000 is preferred. The object of this trust is said to be to regulate the price of potatoes, which for the past few years has been subject to so much competition and price-cutting as to take away all the profits of the business. The members of the company disclaim all intention of creating a monopoly, but the ten smaller dealers in Boston are not reassured by the report that the directors of the new concern are to meet daily to regulate and make prices for potatoes. It is expected to have things in working order by next month. Dividends are restricted to seven per cent per annum on either the preferred or the common stock, but the whole seven will have to be paid on the preferred before any on the common is due. This new movement is of no less interest to Maine farmers than to the smaller Boston dealers. It is in their power to break it up if they see fit.

HORTICULTURE.

Figs in Southern California.

The following paragraphs are taken from an essay on the fig written by John C. McCoy in the Orange (Los Angeles county) *Tribune* of recent date:

The fig is the coming fruit for profit in Southern California. There is no fruit that is attracting so much attention as the fig. Progressive and far-sighted fruit-raisers are planting largely of the new, but well-tested variety, White Adriatic. The failure heretofore to produce a first-class dried fig has been owing to the lack of the right variety, but the introduction some years ago of the White Adriatic has filled the long-felt want of the fig-producer.

There is but a small portion of the earth's surface where the fig can be successfully grown and cured, and we, in Southern California, have a lion's share of that small area. Are we not blind to our best interests if we do not improve our golden opportunities?

It is a thoroughly demonstrated fact that the fig tree will grow most luxuriantly, thrive and bear great crops on any of the land around Orange. The warm, dry, gravelly soil seems peculiarly adapted to its successful culture and curing. It will grow and bear good crops on land too dry to mature other fruits. There is no fruit that can be grown with so little care and risk, or that is more profitable in the end, provided the right variety is planted and the fruit is handled properly. A few trees will not amount to anything. We must have 5-acre, 10-acre and 20-acre orchards in order to make a market for the productions. In recommending the White Adriatic as one that will cure and when properly handled will be equal to our imported figs, I do so with samples before me that were grown and dried in California. This fig was imported from Dalmatia by a former resident, Mr. Milco. The native soil and climate closely resembles Los Angeles county, and this fig leads all others in commercial value. The fig has no insect enemies, begins to bear second year, grows rapidly, attains a great size and lives to advanced age, yielding larger and finer crops as it increases in size and age. I know of an orchard six years old that produces in one year 150 pounds of dried fruit to the tree. There is a small orchard 25 years old that yields from 600 to 1000 pounds of dried fruit per tree each year, while the ones spoken of above are the common purple variety. I am assured by those who have tested all varieties that the White Adriatic is the most prolific of them all. Aside from the commercial value of figs for drying, there is a rapidly growing demand for the White Adriatic and Brown Smyrna for crystallizing, canning, jamming and pickling. The establishments for crystallizing figs cannot get one-fifth as many figs as the business demands. I know of one such establishment offering to contract to pay \$40 per ton for all the figs that could be raised for 10 years on 20 acres of White Adriatic and Brown Smyrna. The present price is \$50 per ton, and it is not likely the price will be less for years, as the demand for figs, preserved in different ways, is increasing more rapidly than orchards are being planted.

The Brown Smyrna fig is excellent for crystallizing, preserving and pickling, but the skin is too thick for drying. For all purposes, especially drying, the White Adriatic fig leads all other kinds in California. The fruit-raisers of Orange would do well to carefully consider the advisability of planting figs for profit. One hundred acres in White Adriatic figs would be the means of bringing a crystallizing establishment to Orange; the nearer the orchard to the establishment the more easily can the fruit be handled. The demand for preserved figs is so great that any community that plants largely of fig trees will soon become the commercial center of fig industry. Are there not many persons who will plant five acres, and some perhaps ten acres, enough altogether to have 100 acres of figs in Orange? In a few years they would have an income larger than has been produced by any other fruit—and with less expense for cultivation. A tree four years old will yield 200 pounds of ripe fruit, and it sold at present price, 2½ cents per pound, would amount to \$5 per tree, and as 80 trees can be planted to an acre (for first six to eight years) you will see that one acre would give the enormous yield of \$400 with a very small outlay for cultivating and picking. You could

make a fortune at one-half the present price. The dried fruit will pay equally well, and the process of curing is simple and inexpensive. A tree six years old will produce 100 pounds of dried figs, at 10 cents per pound would be \$10 per tree (present price is 15 cents per pound). Can any other fruit equal the above in productions and pay a larger profit? I have a few samples of White Adriatic and Black Smyrna on exhibition at my new office (just west of Hotel Palmyra). I am not an agent for any nursery, or in any way connected with the business. Investigation of the subject for past year has produced the convictions that I have written above.

POULTRY YARD.

Roup and Its Preventive.

Thos. B. Geffrey of Lodi writes to the *Cackler* as follows:

Opinion is so divided as to what constitutes roup that it is difficult to say what is and what is not roup. It is, I believe, the most common form of disease among fowls kept in numbers, as there is apt to be a lack of attention to all the requirements of fowls to enable them to keep healthy and productive; and, although there are many *sure cures* advertised, and many believe in and use them, I think that if they notice closely they will find that it invariably shows itself again in the same fowl, even when there is no apparent cause, and my experience with roup fowls leads me to say that I do not believe that a fowl once sick with it is ever free from it after, although she may be relieved and apparently cured for a time. And so my cure for roup is hatchet and block, or, if not handy, to kill the fowl at once by the best means at hand, and either burn or bury the carcass deeply somewhere off the poultry range.

I do not believe that there is any cure for roup once a fowl has it, but I do believe that it can be prevented—perhaps not entirely where many fowls are kept together, but so that only an occasional case shall show itself, to be disposed of as above as soon as it shows itself, in order to not only save useless care and expense, but to prevent its being conveyed to healthy fowls from contact with them.

The best and only reliable way in which to prevent fowls from having it is to look with unremitting care to the cleanliness of their food and water, and of the vessels in which they are fed and watered, as well as to the thorough cleanliness, and proper ventilation of their houses, and that they be not crowded in their houses, or have a wet floor under them. Then, of course, in confinement or on limited range, one must supply them with what they would find for themselves if they were allowed to, or as nearly so as may be. A dust bath, part ashes and part dirt, with a little sulphur; with ground shells and bones, with very coarse, sharp sand or very fine gravel (sand the best); meat of some kind two or three times a week, or perhaps tallow will do as well cooked in with vegetables and shorts or bran, as preferred (I use bran, shorts and middlings mixed), and two or three times a week cayenne or red peppers broken finely; onions, also, and a supply of charcoal broken up for them, and a constant daily supply of vegetables or green stuff of some kind. Young corn, when about a foot or so high, is excellent, and eaten greedily when chopped for them; sugar beets, carrots, cabbage, young grain, and in fact almost any kind of fresh, tender vegetables. I throw a load of raw beets, carrots or cabbage to my fowls every day, as much as they will eat, and they eat a lot of it and pay me liberally in eggs, especially the larger breeds, with which vegetables, either raw or cooked, seem to supply the place of more solid food, more than with the smaller ones. My Langshans, with such care, have laid constantly summer and winter, and have been my principal reliance for eggs through hot and cold weather above my other breeds—Leghorns, P. Rocks and Wyandottes—and are my favorites.

Champion Pullet.

EDITORS PRESS:—I noticed in your valuable paper of January 7th the record of a Wyandotte pullet belonging to J. G. Warner. I have a Plymouth Rock of three-fourths blood that can cast J. G.'s into the shade. She was hatched April 13, 1887, and the 13th of September she laid her first egg. Began to set December 21, 1887; hatched nine chickens Jan. 11, 1888. At 7 months old she had laid 40 eggs, and at 8 months and 5 days old, 66 eggs. I think our folks call our hen Lib. O. E. NOBLE.

Gera, Washington Territory, Jan. 27th.

LINING EGGS.—An Iowa farmer says: "I quit two years ago selling my eggs for eight cents a dozen to speculators to be preserved and sold in the winter for 20 and 25c a dozen. For two years I have done my preserving and have pocketed that 20c a dozen myself. About the first of June I prepared a brine as follows: To a pailful of water I added two pints of fresh slacked lime and one pint of salt, thoroughly dissolved and well mixed. With a fluid prepared in these proportions I fill a barrel half full, then place my surplus eggs in it, and when eggs get up to 20 and 25c in the winter—they always do—I take them to market and they go for fresh eggs every time."

THE VINEYARD.

The Coming Grape-Growers' Convention.

J. H. Wheeler, Chief Executive Viticultural Officer, has issued a circular relating to the Sixth Annual Viticultural Convention, to be held at Pioneer hall, San Francisco, March 7th to 10th, 1888. There will be special attention paid to exhibits of grape products, and Mr. Wheeler's circular gives explicit information relating thereto. We quote such paragraphs as we can find room for in this issue:

The exhibits of wines and brandies for the coming convention will comprise two classes, viz., instructive and competitive. The instructive exhibit will be similar to that of former conventions and includes wines and brandies contributed for examination and study. Samples for this purpose must be accompanied by labels plainly expressing the varieties of grapes from which the same was made, with the proportions of each grape, if a blend; also the age of the sample with the maker's name and address. The examination of these samples, duly catalogued for study and comparison, will occupy the morning sessions of the convention.

The competitive exhibit will be made up of duplicate wines and brandies which growers, desirous of entering for competition, will forward, accompanying and labeled as the samples for instructive exhibition. On their arrival at this office such bottles will have their contents placed in two pint bottles, thus removing all marks of recognition and providing sample material for two committees. They will then be duly numbered, classed and catalogued by the secretary of the Viticultural Commission, who will preserve this record apart from the knowledge of any other person until the report of the final committee is rendered.

The samples from each county will be kept separate, and on the first day of the convention one set from each county will be turned over to a committee of wine-makers appointed from the particular county producing these wines. This committee will proceed to choose from the samples so offered those which they are willing to submit for competition, with samples similarly chosen from other counties. Thus the choice will be made without the committees having any knowledge of the producer or part of the county from which the sample originated.

The samples thus selected from the wines furnished by each county will be in turn submitted to a final committee for the State at large, who will, without any knowledge of the county from which the samples came, compare them and render a final judgment of them in accordance with their absolute merit. By this means, and this means only, it is thought that a true, unprejudiced determination of the relative value of various wines and districts may be arrived at.

One of the great troubles attending former efforts at competition has been the multiplicity of samples, in all cases so great as to place the matter of careful examination beyond the reach of any one committee. It is thought, however, that the above plan will so divide up the work among the committees as to give to each a simple task and one they can perform with accuracy and precision. The work will be particularly arranged in view of eliminating all possibility of prejudice.

The circular also gives explicit details concerning the classification of the exhibits. The following relates to sending specimens:

Samples for instructive examination should be sent in quart bottles—one bottle of each kind; the same being plainly labeled with the age, variety from which produced, and proportions of each, if including several varieties. They should be carefully packed in straw or tulle and sent by Wells, Fargo & Co.'s express, marked "State Viticultural Commission, Pioneer hall, Fourth street, near Market, S. F., Cal."

Samples for competition should be sent in a manner similar to the above marked for competition, being duplicates of those sent for the instructive exhibit.

Raisins.—Special attention this year will be devoted to the subject of raisins and raisin-growing. A committee will be appointed of competent and disinterested persons to pronounce on the relative merits of the products exhibited. All sections are invited to contribute samples, which should also be forwarded by express, marked as directed above for wines.

All samples should be sent to arrive in San Francisco not later than the 31st of March, that ample time may be had to classify them and prepare catalogue.

Miscellaneous Exhibits.—Manufacturers and inventors of wine making machinery, tools for working in the vineyard, or other viticultural appliances, are invited to be present at the convention and exhibit the same or models thereof. No special committees have been appointed to solicit or obtain sample products for exhibition, but each and every viticulturist is requested to forward samples as for former conventions, of whatever is likely to prove interesting to the vine growing or wine-making public.

Wines designed for exhibition should be drawn into bottles immediately, that they (new wines especially) may be decanted previous to sending, and thus be relieved of any sediment at the time they are examined. Nothing should be done to new wines, settling, alone, being sufficient. J. H. WHEELER, Chief Executive Viticultural Officer.

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Dr. Loring on Protection.

At the annual meeting of the Massachusetts Agricultural Society on the 7th instant, Hon. George B. Loring, Ex-Commissioner of Agriculture, delivered an address, of which an abstract has been telegraphed from Boston as follows:

"The value of the farmer's land and crops is vastly increased by neighboring manufactures—diversified industry being the law. The home market is the farmer's reliance, both for his staples and his local crops. A protective tariff develops the home market. An unprotected industry cannot succeed in this or in any other country. The reduction of the tariff below the point of protection has been fatal to the industries to which it has been applied. The American producer can sell dearest and buy cheapest in the markets of his own country, and the foreign market is to him unimportant. A policy which depresses labor destroys the farmer's market."

Following the outline of the argument pursued by Mr. Blaine in his famous letter, Dr. Loring showed that tariff taxes fall upon the foreign producer and not on the American consumer; they are the prices the foreign manufacturer is obliged to pay for the privilege of occupying our market. So declare the British manufacturers in their complaint of the tax which they have to pay for the admission of their goods into foreign countries. "And so the orators in Canada are clamoring for a reciprocity treaty. In view of the fact that the producer of grain gets more for his supply in the United States than in Liverpool, and more for his cotton in Lowell than in Manchester, it will be hard to convince the American farmer that he could save a large sum annually by transferring his trade to our English competitor."

"The argument that a duty on articles produced in this country enhances the price to the consumer, not only of what is imported, but of the whole domestic production, to an amount of which the duty is the measure, has been so often refuted that no refinement of free-trade reasoning can possibly revive it to a mind schooled in those business methods which have built up American manufactures and supplied a market to American agriculture. The practical mind of the English manufacturer would reject it at once if applied to his own business."

The doctor's audience of New England farmers received his speech with great enthusiasm.

Farmers' Petition to Congress.

The New York *Tribune* some time since invited an expression of opinion by individual farmers, agricultural societies and Granges regarding the influence of the tariff upon the agricultural industry and the changes in the tariff desired by farmers.

This drew out several thousand letters, which were handed to a committee consisting of Warner Miller, C. C. Carpenter, J. T. Rich, W. C. Morse, Edward Burroughs, J. D. Lyman, W. M. Grosvenor, J. H. Hale and Jas. Wilson. They were charged with the work of making up a consensus of the views of the farmers of the country as shown by the letters, and their report is accompanied by the following petition, which embodies the findings of the committee, and which farmers and farmers' organizations, who favor its propositions, are requested to sign and transmit:

To the Speaker of the House of Representatives: The undersigned respectfully pray that agriculture may be more effectually protected by preventing fraudulent importation of cattle on pretense that they are for breeding only; by a duty of 20 cents per bushel on barley, with a proportionate increase of the duty on malt; by duties of 25 cents per bushel on potatoes and onions, \$2 per 100 on cabbages, \$3 per ton on hay, 10 cents per pound on hops, 20 per cent on beans and peas, 5 cents per dozen on eggs, 30 per cent on fowls and poultry and on vegetables in their natural state, or in salt or brine, not otherwise provided for, with no removal or reduction of duties on market-garden products now dutiable; by such increased duties on flax and on woolen goods as will effectually encourage the preparation of the fiber and the manufacture of goods; by abolishing all duties on sugar, with a bounty to home producers; by permitting the imports of leaf tobacco suitable for wrappers at the duty imposed on other leaf tobacco and repealing all internal taxes on tobacco, and by restoring to wool-growers the substantial protection enjoyed under the tariff of 1867, modified so as to meet later forms of foreign competition and of invasion.

ENFORCED IDLENESS.—A dispatch from Sing Sing, N. Y., the 31st of last month, ran thus: "To-morrow 1200 men will become idle in the State prison here, and will be locked in their cells. The same condition will be that of 350 convicts in the Clinton prison. They will be confined in their cells for 22 hours daily, until the Senate passes the bill making an appropriation for manufacturing in prisons." This is a sad result of legislative laches; for the effect upon the convicts can hardly be other than demoralizing. And this enforced idleness of the prisoners is none the less to be regretted, on account of \$1,000,000 having been turned into the N. Y. State treasury from prison industries since July 1st.

Stockton Grange.

EDITORS PRESS:—Stockton Grange has removed to Pioneer hall, El Dorado street, near Levee, and nearer the postoffice. Several of our members are pioneers, and we feel very near the hardy settlers of our State. In the presence of a better attendance than usual, the accomplished niece of W. S. M., Overhiser was received and greeted in full membership after an absence of several years. The Grange was then highly pleased with a piano solo by Sisters Alling and Root; song by Bro. Barber, with much feeling, accompanied by his little daughter Lottie; recitations by Sister Merrill, who has a large class in elocution, and one of her pupils, Miss Kate Utt; readings by Sisters Cora Beecher and W. Lecturer Stowe; song by Sister Alling; and fine closing piece on the piano, Lizzie Root and Mrs. Alling. In two weeks the favored audience are to turn entertainers and return the compliment. We regret that some of our ablest members are too diffident to take part, but appreciative listeners are needed.

SISTER W. D. A.

Stockton, Feb. 6, 1888.

AMERICAN RIVER GRANGE conferred the third and fourth degrees upon four sisters at its last regular meeting and installed the following officers: W. H. Giffen, M.; A. A. Harris, O.; J. E. Beach, L.; F. F. Taylor, S.; Mont. Pike, A. S.; Martha Criswell, C.; W. F. Bryan, T.; Mary Cox, Sec.; Mrs. W. Oriswell, Ceres; Mrs. W. E. Kane, F.; Maggie Cox, P.; Josie Kane, L. A. S. After these ceremonies came feasting, music and pleasant social converse—so Sister Mary Cox writes the *Patron*.

LODI GRANGE discussed the tariff question for several hours last week, and came to the conclusion that jute should come into the United States free. Bro. J. D. Huffman, who writes the *Patron* about it, thinks the San Quentin directors ought to put standard bags at six or seven cents apiece, and sell them direct to farmers and to no one else; so that no syndicate could cinch the producing class on grain sacks.

THE TARIFF QUESTION continues to be earnestly debated. Bro. I. A. Wilcox of Santa Clara, in this week's *Patron*, combats the positions lately taken by Bro. S. T. Coulter, and the latter has another article on the subject in our "Public Affairs" department on page 118.

NORTH BUTTE GRANGE installed officers on the 28th ult. P. M., Otis Clark conducted the exercises, with Bro. W. T. Spillman as assistant. With 52 members and revived enthusiasm, this Grange appears to be very prosperous and hopeful.

MRS. HANNAH P. FLEXMAN, who died suddenly at Courtland early in January, was a faithful and honored member of Franklin Grange, which passed memorial resolutions last Saturday.

SOUTH SUTTER GRANGE had installation exercises January 28th, W. P. M., J. M. Jones officiating.

Mechanics' Institute Fair.

At a meeting of the trustees of the Mechanics' Institute on Tuesday evening, the Printing Committee submitted a draft of the preliminary announcement of the Twenty-third Annual Fair, setting forth that the fair will open on Tuesday, August 7, 1888, and close Saturday evening, September 15, 1888.

The Committee on Rules, Regulations and Awards presented a report proposing that a handsome certificate of merit be substituted for the medals and diplomas heretofore distributed, the certificates to contain space sufficient to inscribe briefly the merits of the articles for which they are given. It is not to displace the gold medals, but only those of silver and bronze, and it is believed that such certificates would be more satisfactory to exhibitors. The committee do not recommend any decrease on the schedule of cash premiums, which last year aggregated \$3855. After some discussion, the report was referred back to the committee for a more definite statement of the plan proposed.

General Agent Stout states that efforts are being made to interest the State Board of Trade in the fair, and committees of conference from both organizations are likely to meet in the course of the current month.

GREAT STOCK-GROWERS' MEETING IN DENVER.—President R. G. Head and Secretary Leary of the International Range Association have issued a call to members of the association for the annual meeting in Denver on March 28th, and make an earnest request for a large attendance, as the desire is to take some decisive steps to procure legislation for absolute immunity from contagious diseases and to prevent unjust discrimination against the beef industry, as well as other laws necessary for the success of the cattle business.

RETURNING GOOD BLOOD TO GEORGIA.—Col. Peters of Georgia sold the first Angora goat to a California breeder in 1861. Recently Col. Peters purchased of C. P. Bailey of San Jose the well-known Angora breeder, four choice bucks, and, after seeing them, purchased 16 more, making 20 in all which have been shipped to Georgia and for which it is said \$1000 or \$50 each was paid.

AGRICULTURAL NOTES.

CALIFORNIA.

Colusa.

FLOODING ALFALFA.—*Sun*, Feb. 4: All the alfalfa-fields in the vicinity of Colusa have been flooded this week and the gophers drowned out. This one flooding raises a good crop of grass, at least ten tons to the acre, either in hay or its equivalent of pasture. This could be greatly increased, of course, by flooding after the cutting of the first crop—increased so that the difference in one year would pay for the river branch of the Central canal. The difference between the product of the land flooded this week and the land that gets no water is more than double.

CROP OUTLOOK.—We have been from the north to the south of Colusa county in the last few days, we have seen every character of land, and everywhere it looks as though every grain of wheat had sprouted. Never before have we seen such a magnificent prospect for every class of soil. And there are more acres in wheat in this county this season than ever before.

Fresno.

BRISK BUSINESS IN THE NURSERIES.—*Republican*, Feb. 3: Trees and vines are being shipped from the Fresno nurseries to points in Kern, Tulare and the southern part of this county by the carload. The area of raisin grapevines in this and adjoining counties is being very largely increased the present season, and most of the acreage is being planted with rooted vines. In this planters show good judgment, for the saving of one year's growth more than makes up the difference in the cost of rooted vines over cuttings.

Humboldt.

COUNTY DOTS.—*Eureka Standard*, Feb. 2: Those diminutive feathered vagabonds, the English sparrows, have taken possession of the new courthouse. There they indulge in a love feast daily, from daylight till twilight, and such a chattering can't be listened to anywhere else.... Hog-cholera has caused a loss of over \$800 worth of fine porkers to J. C. Bull, Jr., since November. The mortality seems to have been kept very quiet.... Well-authenticated reports say that many sheep (or lambs) have died of late on the upper South Fork ranges.... On the 22d of January, Levi Wheat and Brady of Upper El river killed the largest brown bear which that section has afforded for many years. It was a monster, weighing, when killed, 700 pounds, and 600 pounds when dressed. The dogs followed bruin all day, and as he was too fat to climb a tree, bayed him until the hunters came up.... In two days A. P. Campton of Rohnerville had about 150 fruit trees girdled by jack-rabbits which were, no doubt, driven by high water from the lowlands along the river.

Kern.

HEALTHIER HERDS.—*Bakersfield Echo*: We learn that the disease among cattle, that caused a heavy mortality during the fall and early winter, is not so bad now. Stockmen generally report fewer deaths in their herds. The exact nature of the complaint has never been determined to the satisfaction of all. Some think it was caused from keeping the stock on alfalfa alone for a long time, which created a disease of the blood, while others think it came from changing them from green alfalfa to dry grass, thus producing indigestion and constipation. In some cases the liver was diseased. Carr & Haggin estimate their loss at several thousand.

SOWING AND PLANTING.—An unusually large amount of grain is being planted in the northern part of the county this year. A number of fields of several hundred acres each are being put in in what is popularly termed the Delano country. We are informed, also, that in that vicinity many of the farmers are planting out a portion of their land to fruit trees and vines.

Mendocino.

SHEEP ON THE RANGES.—*Mendocino Beacon*, Feb. 4: Abraham Kiser of Bear Harbor reports that the snowstorm a few weeks ago did not do so much damage to sheep on the immediate coast ranges, but back on the high ranges the loss is very large. Sheep around Garberville suffered terribly and a great many died. Feed, he says, is looking very well around Bear Harbor.

Nevada.

WELL PLANTED.—*Grass Valley Tidings*: Of 1400 fruit trees set out by John Rodda, on a hillside east of town, and within sight of this office, fully 98 per cent have rooted strongly and are shooting up in a manner warming to the orchardist's heart. Of 10,000 trees planted last season on Jos. Thomas' tract of land on Town Talk Ridge, only two per cent have failed to grow. Similar reports are made by many who have been questioned.

PRUNES AND PEARS COMING.—Wm. Loutzenheiser is engaged in setting out 400 trees on his Forest Springs place, 100 of the number being French prunes. This tree will do well here and its product always commands top prices. Penn Valley and Indian Springs farmers are preparing ground for the reception of Bartlett pear trees. A large acreage will be devoted to this remunerative product.

Placer.

FINE FIGS.—*Newcastle News*: J. W. De Lamater, who resides a mile and a half northwest of Newcastle, has about 100 genuine Smyrna fig trees, just coming into bearing. The

trees are about three years old, and give great promise both as to bearing and as to the quality of the fruit. We have been shown some of the figs from these trees that have been dried in the sun and dipped in salt water, and they will compare favorably with the best imported figs. They are very sweet and rich, and as white and transparent as any figs we have ever seen. We believe Mr. De Lamater and Mr. H. E. Parker of Penryn are the only growers of the genuine Smyrna figs in this county, and they have a bonanza if they only knew it.

Sacramento.

QUINCES.—*Record-Union*, Feb. 1: Perhaps there is no place where fairer and finer quinces are grown than in this section of California. The soil and climate here appear to conspire to bring the quince to its greatest perfection, and its flavor and beauty are even excelled by its productiveness. If the demand for this fruit was greater, its cultivation would become extensive, and there is little doubt that its consumption will increase. The quinces grown here are excellent keepers, and would bear transportation to almost any distance. Even the recent cold weather has not seemed to injure those of last season's crop which happen to remain upon the trees. There were to be seen this week, in the grounds of N. M. McCormick, in this city, fine large quinces, entirely sound and fresh, uninjured by the cold and still strongly possessing the aroma peculiar to the fruit.

HUGE WILD BOAR KILLED.—*Galt Gazette*, Feb. 4: On Sunday last Elmer Smith and Gerton Ferton succeeded in killing a mammoth wild boar that has for years past lived on calves, sheep, etc., down in the Pocket. The citizens of that locality for some time past have been trying to kill his hogship, and many shots have been fired into his carcass without effect. He was ready for the battle at any time, and only a short time since chased a man on horseback out of an open field. He was known and feared by all the settlers of the vicinity, and when the news of his death was confirmed last Sunday, three rousing cheers were offered for his captors. The men were in a wagon when they met him, and the boar showed fight right off. They peppered him with shotguns, which had no effect whatever, and clubs were effectually used over the animal's head. Two well-directed shots from a revolver finished him, and his captors hauled his carcass in triumph to a place of safety, where they skinned him and divided pieces of the hide among their neighbors. The skin and membranes, a piece of which can be seen at this office, measured from two to three inches in thickness.

San Diego.

COUNTY FAIR—APPLES AND ALFALFA.—*San Diego Sun*: At the meeting of the County Horticultural Society, held recently at Elsinore, it was decided to hold a fair at San Diego in the fall for the purpose of exhibiting all the products of the county, including fruits, vegetables, minerals, live-stock and manufactured articles.... Major Emely spoke of the fruit grown in Southern California and the market for it. He said the apples were the finest he ever saw, except those raised in Southern Arkansas, and the oranges were as fine as he ever saw anywhere. He compared the prices paid for hay and grain with those received for fruit, and claimed that the land was too valuable to be devoted to the raising of cereals.... Mr. Kuhns said he calculated that alfalfa could be made to pay 10 per cent on an investment of \$1000 per acre. He had six and eight crops out in the course of a year. L. Gates said alfalfa paid better than vegetables because it did not require so much labor.

POINTS FROM PEREIS.—*Cor. San Diego Union*, Jan. 23: The recent cold spell did no injury here. The orange trees, though only three years old, are full of nice oranges and fruit and trees were not damaged. The early sown barley and wheat are looking finely, and there is a larger acreage than any previous year. It is really a pleasure to look at our lovely grain-fields. A company is now forming in San Diego to put in a warehouse here for handling grain. The warehouse is to be built in the Y, where the road branches to San Jacinto on Blethen's addition. In addition to the increased grain interests here the farmers are all putting in a small orchard and vineyard, and later on this will be the place for the raisin grape, on account of our high altitude.

San Bernardino.

GOOD FOR THE EASTER BEURRE.—*Valley Echo*, Feb. 2: The Easter Beurre pear is a valuable variety and a splendid keeper. Capt. C. T. Hartley of Colton has this year sold 30,000 pounds from three-fourths of an acre, receiving for it \$600. A. R. Rockhill of Arlington sold this fall 1500 pounds, which had been picked three months, for six cents per pound. They were retailed by the purchaser at 10 cents. C. O. Perrine took East with him, in December, half a bushel of the same variety, and had some left in February, none having spoiled on his hands, though kept in a temperature of 60 degrees.

Santa Barbara.

FRUIT TREES IN DEMAND.—*Santa Maria Times*, Feb. 4: Jones, Maulsby & Co. inform us that they have ordered over 80,000 trees for this section, and find that they will not have near enough to supply our local demand; that more trees are being put out this season than in any two or three previous years combined. However, if it is possible, they intend to furnish all the trees needed, and O. W. Maulsby

left on Tuesday last to visit every nursery of consequence in the State, in order to select and purchase stock.

San Luis Obispo.

THRIVING GRAIN.—S. L. O. *Tribune*, Feb. 3: B. B. Pierce was in town the other day from the Estrella, where, he says, with a very little more rain toward the latter part of the season, large crops will be assured. All the early sown grain is up several inches and doing nicely. Nearly all the plowing is finished, and a much larger acreage is being sown than ever before.

Shasta.

TREE-PLANTING LIVELY.—*Cottonwood Index*, Feb. 2: Isaac Bird, agent for Strong & Co., has filled the following orders for trees for this neighborhood: T. J. McCabe, 500 peach and 500 Bartlett pears; John Korman, 57 apples, 200 pear, 120 peach, 25 apricots, 55 plums and prunes, 1000 grapes, cherries, blackberries, oranges, etc.; H. E. Clark, 250 French prunes; W. Schmieterer, 250 peach, 50 nectarines, 100 Bartlett pears and a few apricots, French prunes and almonds. Geo. P. Wright, 100 French prunes and a few cherries, peaches, olives, quince, chestnuts, oranges and lemons. E. Quirman, 200 French prunes, 50 almonds, 60 apples, 50 pears and 100 figs. J. H. Alford, 100 varieties. Rev. J. E. Jones, 100 peaches, 100 grapes, 25 pears, 10 apricots, nectarines, oranges, lemons, etc. A great many trees from other nurseries have been planted, which altogether foot up the largest number of trees ever planted in one season in this neighborhood. A great many people are not prepared to set out orchards and vineyards this season, who will plant extensively next, and so the good work will go on increasing year by year.

Sonoma.

PROFITS OF A YOUNG ORCHARD.—W. N. Gladden in *Healdsburg Enterprise*: I have not quite 25 acres of orchard in full bearing, consisting principally of peaches, prunes, Bartlett pears, apples and cherries. Ten acres of peaches and Bartlett pears are just coming into bearing, and five acres of orange and lemon-clings were planted a year ago. I also raise a few apricots, nectarines and several varieties of nuts. . . . Peaches, French prunes and Bartlett pears I depend upon principally for profit. Our soil and climate appear to be especially adapted to the production of these fruits, superb in size and of the very highest quality. Russian river and Dry Creek valley peaches for canning and drying are not excelled by any in the State, and our French prunes, for size and quality, stand at the head of the list, according to the principal purchasers and handlers of this fruit in S. F. My gross receipts in cash for fruit sold the past season were something over \$4000. I had a little over 100 tons of peaches, about half of which were sold to the cannery, the rest dried. They were bleached with sulphur and then sun-dried. Pitted plums were sun-dried without bleaching. My prune orchards are young, only 200 trees in partial bearing, producing a little over two tons of cured fruit. Altogether I feel satisfied with the result for the year, and, believing the prospects good for the future, I shall continue planting trees.

HARD ON SHEEP.—During the cold snap all the mountain men lost a good many sheep, the feed being unusually short before the cold weather set in, and the sheep in consequent poor condition to weather the hardship. The late copious and warm rains, however, have started the grass a "booming," and henceforth stock will pick up.

Tehama.

ORANGES.—*Record-Union*: The Central and Northern California Immigration Association Monday received from M. L. Higgins, at Red Bluff, a box of fine oranges which were picked from the trees in gardens in that flourishing town on Saturday last. Red Bluff is nearly 150 miles north of this city, and as much of the fruit was on branches, on which was bright green foliage, it would appear that the "cold spell" did but little harm in that vicinity.

COLD FROK ITEMS.—*Cor. People's Cause*, Feb. 4: The freezing weather is over, and the rains have begun again. The grass is starting fresh and green. Cold Fork was frozen over; one of the farmers walked across on the ice. . . . The coyotes and wildcats are making away with a great many sheep in this vicinity. The other morning as the schoolteacher was on the road to school he killed a wildcat with stones.

Tulare.

FEED COMING FORWARD.—*Visalia Delta*, Feb. 2: Wild feed is growing rapidly and in the foothills will soon be long enough for cattle to crop. For several weeks stock of all kinds have had slim picking, and the recent cold weather told severely upon those that were not fed hay or some other kind of fodder. In some places a number of cattle died. But the transformation of the brown, barren hills into verdant pastures is sudden in this genial climate, and in a very few days stock will be able to fill themselves with the nutritious wild grasses, which are always more forward in the lower hills than on the plain, although the valley, too, is being carpeted with green.

CITRUS TREES AT PORTERVILLE.—The late cold spell did not injure the orange trees in this vicinity, although some of the fruit was spoiled. A few trees in the bottom-land where the frosts were most severe were slightly injured. It was anticipated that all the lemon trees would be destroyed, but fortunately they were not damaged. On the higher and warmer ground

none of the citrus trees were injured in the least.

GRAIN OUTLOOK.—*Visalia Times*: The prospect for a good cereal crop was never before so good. The dry-sown grain was not damaged to any extent by the late freezing weather, though there may be here and there small parcels of ground where the wheat was frozen; but even this land can be resown at any time within the next six weeks and a fair yield expected. A large acreage had been put in previous to the first rains, and so far none of it is reported as having rotted, but, on the contrary, is springing out of the ground rapidly under the influence of the warm weather now prevailing. The soil in all parts of the county is now thoroughly soaked with water, and there is none that cannot be cultivated. This will stimulate plowing and seeding to a larger extent than heretofore, and with reasonable showers during the next two months, Tulare may expect to reap a more bounteous harvest next summer than was ever credited to her

Hon. Horace Davis.

On Tuesday of this week, Hon. Horace Davis of San Francisco was, by unanimous vote of the Board of Regents, elected president of the University of California. This is an auspicious beginning for an administration which we believe will be of exceptional importance and significance in the educational history of California, for Mr. Davis is a man of such culture that the advocates of the higher education will trust him, and of such wide experience in mercantile and industrial affairs that the classes enlisted in these pursuits will have confidence in him. It seems to us that the choice of Mr. Davis is singularly fortunate and wise, and so far as we have learned, public opinion, as expressed in conversation and through the pub-

he matriculated at Harvard college, from which institution he graduated with honors in 1849. Having selected the law as a profession, he entered the Dane Law school and commenced his studies, but failing health soon admonished him to forbear, and he was finally compelled to abandon professional pursuits and seek a more active occupation. He went to sea before the mast, gained a knowledge of the art of navigation and derived much benefit from change of air and exercise.

Mr. Davis arrived in San Francisco on the first day of April, 1853. Soon after his arrival, Mr. Davis entered the employ of the Pacific Mail Steamship Company, and for a time commanded one of the steamships running on this coast; but this occupation not being congenial to his tastes, he severed his connection with the company, and in 1860 established the Golden Gate Flouring-Mills, a manufacturing establishment which has since acquired a high reputation for the excellence of its product, for which there is an extensive demand, both foreign and domestic. The firm of Horace Davis & Co. is the oldest in the State in their line of manufacture, and its commercial standing is second to none. When the war broke out Mr. Davis was a staunch Unionist, exerting his influence to the utmost to induce California to stand loyal and true to the Government, and was a member of the Sanitary Commission.

Up to 1876 Mr. Davis had never entered the political arena, but preferred rather to serve the State in a private capacity, by adding to its material wealth and prosperity and developing its commercial and mercantile interests. In that year, however, he was nominated for Congress by the Republican party and elected. His course as a representative of the people gave such unqualified satisfaction that at the end of his term he was triumphantly re-elected. In February, 1875, Mr. Davis was united in marriage to Miss Edith S. King, daughter of the lamented Thomas Starr King, whose untimely death was mourned by every patriot and lover of liberty throughout the land.

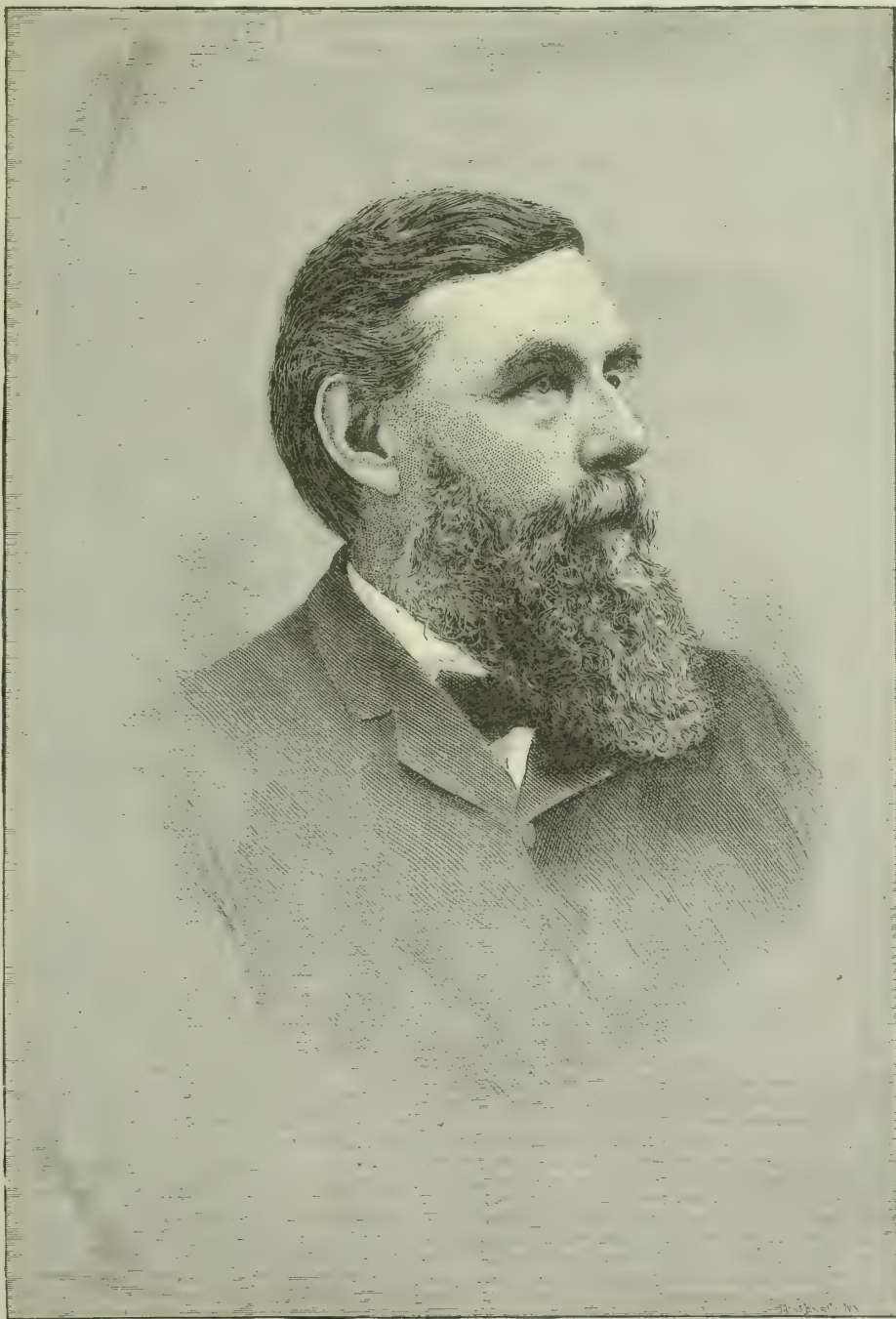
Notwithstanding the engrossing cares of a large and constantly increasing business, Mr. Davis has found time to administer the affairs of several important institutions in this community. In 1864 he was president of the Mercantile Library Association; from 1866 to 1876, 10 years, he was president of the Produce Exchange; in 1883-84 he was president of the Chamber of Commerce, and he is now president of the Savings and Loan Society, one of the oldest and most reliable banking institutions in San Francisco.

Though so widely engaged in active business affairs, Mr. Davis never has lost sight of the interests of learning and of culture. He has always been prominent in literary circles, and his papers and addresses have been marked by deep and careful thought and graceful style of expression. He has long been a member of the California Academy of Sciences, of the Geographical Society, and on the organization of the California Historical Society he was chosen president. He is also a trustee of the Leland Stanford Jr. University.

Mr. Davis is in the prime of life and in the full vigor of his physical and mental powers. He is easy in address, accomplished in manner, exceedingly cordial and genuine in his sympathies. While his record entitles him to the confidence of the people, his accomplishments, added to his personal character and qualities, will win him the respect and loyalty of the students, and thus doubly endow him for success in the new field to which he will give his full time and most zealous labors.

INTERSTATE COMMERCE.—Late Washington dispatches say that, in response to a communication sent out in October by the Interstate Commerce Commission respecting compliance with the law, a large number of replies have been received, representing a majority of roads. Officers of some roads claim that if they strictly observe the law it will force them into insolvency. The Burlington & Missouri admits that it does not respect the long-and-short-haul clause in its California business. The California Southern Co. says that it respects the law as to rates, except where there is competition with water carriers, and in those cases there has been some deviation.

BUYING A BIG CATTLE RANCH.—It is announced that Charles Goodnight of Palo Alto, Texas, and L. R. Moore of Kansas City, Missouri, have bought the Quit a Qua ranch in the panhandle of Texas for \$7,000,000. The purchase was made of Lady Adair of Ireland and others, and embraces 150,000 acres of deed land. Besides this there are 295,000 acres of leased lands, making the whole ranch 445,000 acres, all under good fence. It is stocked with over 30,000 head of high-grade cattle, all of which were carefully counted before being received.



HON. HORACE DAVIS, PRESIDENT OF THE STATE UNIVERSITY.

previously, notwithstanding the fact that she has heretofore been the banner wheat county.

Ventura.

EDITORS PRESS:—The heavy fog of the past two weeks has at last ended in a good rain, beginning yesterday at noon and continuing part of the night. This morning the sun is bright and clear, but there are threatening clouds hanging over the hills which in all probability will gather again and give us a shower before night. The rainfall for this season up to yesterday is estimated at 13 inches—more than enough to insure a good crop. Jack Frost, during his late tour through the State, gave Ventura a call, even stopping long enough to freeze ice a quarter of an inch thick, such a thing not having been known before for several years. The cold weather retarded growth of early sown grain and vegetation; but the last two weeks everything has been pushing forward as if trying to make up for lost time.—D., *Ventura*, Feb. 1, 1888.

Yuba.

AFTER THE FROST.—*Marysville*, Feb. 4: In Marysville and the surrounding country no loss to orange trees has occurred, and there are thousands of orange and lemon trees whose present condition is proof that they were not materially injured by the cold. The people here are adding to their orange orchards, and there never was so much confidence felt in the future citrus-fruit industry as at present.

lic press, is as unanimous in approving the election as the Regents were in making it. This being the case, we believe that a portrait of the new president and a brief sketch of his life will be of much interest to our readers.

The ancestors of Horace Davis came to Massachusetts from England as early as 1630, and the records show that many of the name have occupied high positions of honor and trust in the old commonwealth. John Davis, father of Horace, was a lawyer of distinction, and took an active part in public affairs. In 1840, he was elected Governor of Massachusetts, which position he occupied four years. He was a man in whom the people of Massachusetts placed the most implicit confidence. He was chosen to represent them in the councils of the nation for a period of 26 years—10 years in the House of Representatives and 16 years in the United States Senate. He married Miss Eliza Bancroft, daughter of Rev. Aaron Bancroft, and sister of George Bancroft, the celebrated historian. Their son, Horace, was born in Worcester, Massachusetts, in 1831, and received his early education in the excellent public schools of that town. After completing a preparatory course at the Worcester Academy,



Horticulture—Practical and Theoretical.

At an entertainment in honor of the visiting horticulturists, in response to the toast, "Horticulture—Practical and Theoretical," Prof. J. C. Ridpath of Indiana read the following verses:

To study much a fact called chemistry,
To learn earths, acids, alkalis and all,
To know all seeds, and name all bugs you see—
Is Horticulture Theoretical.

To reason much about the cause of things,
To make analyses and classify
All buds and bodies, leaves, legs, scales and wings,
And give them titles that may pass for high.

To talk for weeks how much of this and that
Is necessary that a plant may grow;
What rainfall, dewfall, sun, wind, cloud are pat,
And then tell others what you do not know.

To raise within a busy cranium
At least six crops before you plant at all;
To write long letters and for papers some,
Is Horticultural Theoretical.

To feel the sunshine and the morning dew;
To smell the ground in the first days of spring;
To have for company yourself and you;
To hear the robins and the bluebirds sing.

To hoe and harrow, and to put plain dirt
On living seeds, and then to wait awhile;
To be afieid in democratic shirt,
And use your muscles in plebeian style.

To take all nature in your hardened hands,
Train trees, train vines, plant, prune, protect and pluck,
Believe in self and in your fertile lands,
And have more faith in living than in luck.

And then at last to sit in welcome style,
With golden fruits heaped up in royal state,
Offered by beauty, with a gracious smile,
To strangers dwelling in the city gate.

To taste, to eat, to feel the throb of pride,
To rise rejoicing from the festival,
To clasp new friends with old ones by your side,
This, this is Horticulture Practical.

Margaret's Valentine.

[Written for the RURAL PRESS by FANNIE ISABEL SHERRICK.]

"Come in."

She looked so weary as she stood there on the doorstep that Mrs. Lynn had not the heart to send her away. She was only a book-cannasser, but she looked like a true woman and a lady in the fullest sense of that much misused word, and she seemed so young, too, too young to bear the burden of care that seemed written upon her fair face.

So kind Mrs. Lynn invited her in and placed a chair for her near the pleasant grate fire in the parlor.

The girl sank down in the easy-chair with a stifed sigh of weariness. All day long she had canvassed the city from early morn until the gathering dusk, and she was so tired. Indeed, no one knew how tired, nor how the heart ached in her throbbing young breast. Struggling for life in a great city! Who knows what this means to those who are lonely and poor?

"You are very kind," she said, her lips quivering a little as she looked up into Mrs. Lynn's motherly face; "few people are so kind. I have been denied admittance this day in many a fine home. Sometimes I do not meet with courtesy, much less encouragement, in my work."

"Poor girl!"

Something in her sweet, sad face reminded Mrs. Lynn of her lost Ethel. If Ethel had lived she would have been about this girl's age. It was three years, though, since the grass had grown over that cherished grave.

Mrs. Lynn turned away to hide the tears. Three years! And the house was as lonely as ever, with the sweet girl-voice hushed forever. She wondered why this girl had come to her door to remind her of that bright face that had made the whole world seem full of sunshine.

"What are you selling?" she asked presently. "It might be possible that I could buy."

The girl showed her the book she was canvassing. It was the life of somebody or other, a book that Mrs. Lynn did not care two straws for, but out of the kindness of her heart she brought forth her pocket-book and paid for one.

"Thank you," the girl said. "It is the only one I have sold to-day. I thank God for it, else the children might have gone supperless to bed."

"Why, my dear child!" exclaimed Mrs. Lynn, "do you mean to say that you have any family depending upon you for support?"

"There are four of us," the girl replied simply. "I am the eldest. My mother died a few years ago; last year, father—here the girl's voice choked a little, "father died and left us quite destitute. Brother James is now 16; he does all that he can, but last week he was thrown out of employment, and all that

we have to live on is what I make and the few dollars he had laid by. It is a hard struggle, this fighting for bread."

Something in the girl's face drew Mrs. Lynn right toward her. She went up to her and kissed her right on the forehead.

"Poor dear," she said softly, thinking of her own lost darling. What if her Ethel had had to struggle for life like this! And this girl looked very refined, too, and well-bred, as if she had not always been used to poverty or hard knocks. Her speech, too, was that of one well educated.

While the girl was putting on her wraps, which she had partially thrown aside, Mrs. Lynn slipped out of the room. She came back presently with a tray upon which was a cup of hot tea and some home-made cookies.

"Drink this," she said; "it will warm you and strengthen you for the walk home, and when you have eaten what you wish, slip the rest of the cakes into your satchel for the children."

"Thank you, thank you!" The girl took Mrs. Lynn's hand and placed it almost reverently to her lips. Here was a woman who might indeed be called a follower of Christ. Her hand had been reached forth to help the fatherless.

Before the girl went away Mrs. Lynn took her name and address.

"Margaret Sullivan!" Mrs. Lynn started as she read the name. "Surely that sounds familiar."

"Margaret was my mother's name," the girl said.

"And her former name was Hastings, was it?" Mrs. Lynn asked a little excitedly.

"Yes."

"Child, this makes me very happy. I knew your mother years ago. We were schoolmates at the convent. I knew she had married a Sullivan, but, dear me, so many years ago, I had almost forgotten. Yes, I remember her so well. She was a girl much liked. And so you are her daughter, and left alone in the world to battle with it. Who would have thought all this would have come to pass, when we two stood in our white robes of graduation, the world still untried before us."

In a moment the good woman seemed lost in reminiscence—then she took the girl's hand in her own.

"Margaret, I think God must have sent you to my door. Years ago at school your mother did me a kind service and I have always wished I might repay it in some way."

"And you have done so," Margaret replied. "Your kindness came almost as if in answer to my prayer. I came to your door heartsick and weary. I humbly, earnestly asked for help, and it came in a sweeter way than I had dreamed of, though, a much sweeter way. I am very grateful indeed."

"It is not much," Mrs. Lynn replied. "I would have done the same for a stranger. Yet I am glad the chance kindness fell upon the daughter of one I once loved."

Margaret bade Mrs. Lynn good-night with a grateful heart and hurried home through the darkness. On the way she stopped and purchased the simple supper which was to make the children happy.

The next day she started out bright and early, strengthened for the work by the thought of the encouragement she had met with the day before. Surely Mrs. Lynn was not the only one in the world who might be kind. Other kind hearts might be on the way to cheer her. She hoped for success anyway, and it proved to be the best day she had had.

She had almost forgotten it was St. Valentine's day. She smiled as she saw the host of valentines, comic and otherwise, strung up in the windows down town, wondering vaguely if there was any one in the great city who would have thought of sending her one. A few years ago she had always been remembered. But that time seemed long ago when she had been happy and prosperous.

She was tempted into a little piece of extravagance, though, as she saw the pretty valentines. It had been so long since Nettie and Mary had had any sweet surprises that she determined to give them one now. Besides, she had done so well that day that she felt quite rich. And the valentine-cards were so pretty, and only ten cents apiece. But she felt like a foolish little child again as she flew homeward with the two valentines in her pocket, sealed and addressed to "Nettie and Mary Sullivan" respectively.

Their home was a small one-story affair on one of the quiet back streets. She went up softly and slipped the envelope under the door, then hid herself around the corner of the house, peeping to see the fun.

And such a shout as there was when Mary opened the door and saw not Margaret—whom she expected to see—but the two suspicious-looking envelopes on the door-sill. She called Nettie, and they opened them, quite wild with delight, and Margaret, for the moment, was quite as much of a child as either of them.

She appeared very much surprised, of course, when she went in a few moments later and saw their treasures exhibited. She believed the pleasure was worth the few extra dimes she had thought were so foolishly spent, and she had the consciousness too of having earned enough that day to keep them for a week. Besides, another thing had made her happy that day—the prospect that her brother would soon be at work again with a promise of more wages than he had received before. She thought that she could afford to be a little happy.

And there was still another surprise in store

for her—"a valentine!" the children cried, holding it up to her with great glee.

"The postman brought it this afternoon," Nettie said triumphantly. "I hope it is as pretty as ours. And who do you think could have sent them?"

"This is not a valentine," Margaret said, holding it up to the light curiously; "it is a letter. But who could be writing to me, I wonder?"

Then she broke the seal and read:

My dear Margaret: After you left me last night I fell to wondering about you, and a plan occurred to me by which we might be mutually benefited. I am getting old, and I feel very lonely sometimes. I have a home, and you need one. Why not come and live with me? You can be my housekeeper and I will pay you for your services. The money will clothe yourself and the little girls while they are going to school. I have taken a great fancy to you, and I feel sure that I shall love you almost as a daughter. Since my dear Ethel died, life has held little sunshine for me. In your bright face I shall see it revived. The house will seem cheerful again with the voice of children in it.

If you cannot decide at once, at least come and talk it over with me.

Yours with kindest wishes,

EMILY S. LYNN.

It was a valentine worth having.

Margaret almost danced for joy. It did not take her long to decide.

In less than a week they were under Mrs. Lynn's roof, who felt, as she looked into the bright faces around her, that it was indeed more blessed to give than to receive.

They all grew to love and respect her as a dear mother, but Margaret, so like that dear lost Ethel, was the nearest and best loved of all. In her Mrs. Lynn found more and more comfort as the days and months went by, never having cause to regret that she had taken her into Ethel's place. Indeed she felt that even Ethel could not have been more patient, more loving, more tender, than this same sweet Margaret.

"And what was the service mother did you years ago?" Margaret asked one evening, when the children were safe in bed and she and Mrs. Lynn were busy with their sewing in the cosy sitting-room. She left her work and sat at Mrs. Lynn's feet on a low footstool, looking up into her face with something of a child's curiosity in her eyes.

"It is a long story, but it can be summed up in a few words. She cleared away a misunderstanding between the man I loved and myself. Had it not been for her, my life might never have been as happy as it has been."

For a moment they were both silent, Mrs. Lynn thinking of those happy days long since gone by, and Margaret dreaming of the sweet romance that must have been. Then Mrs. Lynn leaned over and pressed her lips against the girl's smooth white brow.

"Margaret, you know now why it has been such a happiness to me to make your life happy and bright."

Thoughts.

[Written for the RURAL PRESS by CHAS. P. NETTLETON.]

Most people can bear blame from enemies, but few can withstand flattery from friends.

Love is a paradox; beginning with regard for one, it is not diminished but greatly increased by being allowed to overflow on others.

Except love, nothing terrestrial satisfies a man so completely as to have a woman whom he likes jealous of him.

It takes much knowledge to confess our ignorance, yet, in these days, we deserve little credit by being thus humble.

A verbal promise is as binding morally as a written promise is legally.

Make a distinction between inherited and acquired nobility. The one we deserve no credit for, the other we deserve all credit for. Only in so far as we cherish and wish to cherish noble principles are we entitled to praise.

When we look back on ourselves as we were a year ago, we see wherein we were foolish and how often we committed evil. Let us be humble at the present time, for in a year from now we will again reach the same conclusion.

Unapplied wisdom resembles pearls in the mud.

No act is negative; it is either good or bad. The rule, silence is golden, is generally true, but there are times when silence is dishonoring.

One word of appreciation to a living person is to him better than 10,000 words after he has fallen asleep.

The highest test of love is the sentiment expressed by the phrase from Mrs. Browning: "You please me when you please yourself."

The Christian religion is the only religion which recognizes the brotherhood of man.

Throughout nature, as we know it, nothing is lost; opportunities destroyed, the object simply has assumed another form. So it is in the moral world, good words, bad deeds, all leave their weight.

All persons displease me in some way. Shall I, therefore, refuse to love them? Nay; I should rather exert myself to love them so much for the good that is in them all, that my thoughts of their good qualities shall outweigh my thoughts of their bad qualities.

The lightest joys are inseparable from the greatest griefs, and whether or no both shall affect us for good depends on ourselves.

He who never believes the simple statements

of others cannot expect to be ever believed himself.

Kind words and gracious deeds are pearls and diamonds which string themselves on a golden chain that draws us nearer to God because nearer to man.

Paradoxical, but true: The greater the heart, the less room in it for evil.

The heart that beats strongest for suffering man is the heart best capable of loving God most.

Would you have influence? Then be wise. Wisdom is one of the few good things that can sometimes come to man unsought.

True greatness is tolerant of others' scrutiny; the mean soul cannot bear investigation.

A man proud without reason is a most detestable creature; proud with reason, he is acceptable, but negative.

No truly great man ever lived who did not habitually control himself.

The man who is humble enough to acknowledge that others' opinions are sometimes better than his own is wise enough to be seldom wrong.

Woman and Home.

A correspondent of the *Rural New Yorker* having attacked the advocates of woman suffrage as destroyers of the home, Margaret B. Harvey writes that paper in answer:

It is the woman suffragists who, for forty years past, have worked to protect the American home as it has never yet been protected. Little by little unjust laws bearing upon women have been repealed; little by little more opportunities for work and education have been granted women; little by little barbarous social customs have been modified. It was woman suffragists who worked to raise fallen women—to provide honest work for poor women to keep them from falling—to give women their own earnings and the right to hold their own property and be guardians to their own children. From the woman suffrage associations have grown the children's country weeks, the cooking schools, the colleges for women, the kindergartens and kitchen-gardens for the poor, the hygienic lectures for women, the pamphlets on enlightened motherhood, moral education and proper modes of dressing, the peace congresses, the petitions for police matrons, the appointment of women physicians in hospitals and asylums for women. The latest phase of woman suffrage is its identification with woman's temperance work and the movement in favor of social purity. Woman suffragists are always ready to lend a hand to help any good work.

Thanks to this blessed gospel of woman suffrage, the woman who once would have been driven to a vicious life can now earn a respectable living; and she can have a home more artistically furnished, supplied with more hygienic cooking, and better kept in every way than her mother's was. She is better educated, too, than her father was; if she marries, she will know how to rear her children, and if she does not, she will be too busy to have time to grow old maidish.

But suffragists are not content yet. They know that their work cannot be fully done until women have the ballot. Then, and then only, can our homes be safe—then, and then only, can public morality flourish.

The Temple at Jerusalem.

The great glory of Jerusalem was the Temple, a monument rather of wealth than of artistic skill. Like all Solomon's buildings, it was designed by a Phœnician architect; and the skilled workmen who carved the wood and stone, and wrought the gold, and founded the brass, were citizens of Tyre and Sidon, only the rough labor being provided by the hundred and fifty-three thousand Canaanite settlers who were drafted off to the forests of Lebanon to hew timber, and to the port of Joppa to carry the materials from the seaboard to Jerusalem.

Of the architecture of the Temple we know little except its proportions, and that, like most temples of antiquity, it was divided into three courts, called, in this case, the porch, the holy place, and the holy of holies. It was extremely small, measuring only 135 feet in width, while the total length was only 105 feet; so that its impressiveness depended on its golden walls and pillars, floor and ceiling, its precious jewels, and the richness of the embroidered hangings that curtained off the sanctuary. And mingled with all this gold we read of brass, a compound that seems to have been scarcely less esteemed in those days, when the tin mines of Spain and Cornwall were among the recent discoveries of the Phœnicians, and the brass made at Tyre from the tin of Tarshish or Spain, and the copper from Cyprus was still a rare article, commanding a very high price.

The cost of this golden Temple was defrayed by the moneys left by David and by the offerings of the people; but heavy taxes were levied to create funds for the palaces, towns, and fortresses that arose in such ruinously rapid succession. No exchequer could long endure such a drain, no nation support so vast and sumptuous a court without murmuring; and though we do not know what was the relative value of gold and of the commodities of life, the stress laid upon the fact that all the vessels in the palaces were of gold, points to the conclusion that this provision was as sumptuous in those days as it would be in our own.

YOUNG FOLKS' COLUMN.

Nettie's Valentine.

[Written for the RURAL PRESS by REIS SAMSON.]

"Good morning, Valentine;
First 'tis yours, then 'tis mine,
So please give me a Valentine."

"Mary Hopps, Lena, Jennie, all the girls of my class, come here; I want you, every one," cried Stella Hays, standing at the schoolhouse door as the pupils were coming out for lunch.

"I have something very important to tell you," she continued as the girls left their ranks and clustered around her, "so bring your lunch-baskets and come down to the brook just as soon as you can."

"Shall we like what you are going to tell us, Stella?" asked Mary Hopps.

"I guess so. Yes, I know you will."

"Is it good to eat?" asked some one.

Stella laughed, "Not exactly good to eat, Lena," she replied, "but it is about something good enough to eat, anyway."

"Oh! I know what it is," cried Jennie Ashley.

"No, you do not. I am the only girl in the school who does, and I only found it out accidentally. But, girls, do get your baskets, as the bell will ring before I shall have told you what it is."

With a merry laugh the girls dispersed and Stella ran down to the brook. There was an old summer-house near it, which Stella and her friends considered their special property, and they ate their lunches in it every day.

When Stella entered the summer-house she was surprised to find it occupied by Nettie Russell, one of her classmates, but with whom she and her friends rarely played, because she was what they called "a charity pupil."

"Well, Nettie," said Stella rather impatiently when she saw her, "what are you doing here?"

"Either Lake told me that you wanted all the girls of your class," answered Nettie, timidly.

"But I never meant for you to come, Nettie."

"Oh," said Nettie, blushing, "I did not understand that or I should not have come. I can go away, though, and I am sorry I disturbed you."

"Since you are here you may as well stay," said Stella, carelessly, "only what I am going to tell the others will not interest you very much. That is to say, you may not have a part in it, even though it does interest you."

"Why not, Stella?" asked Nettie, curiously.

"Because, because—never mind the reason; you will find out when the others come."

"Is it because I am poor, and dress badly?"

"I wish you would not say such things, Nettie; you know we do not care for your clothes at all; but—ah! here are the girls," she cried, pleased to have the conversation interrupted.

"We thought we should never be able to get here," said Jennie Ashley, throwing herself on one of the benches and fanning herself with her hat.

"What was the trouble?" asked Stella.

"Nothing much, except that we met Madame Marchand in the hall, and she was trying to explain something to us about the French lesson this afternoon, but none of us could understand a word she said."

"The idea! Jennie Ashley. I understood every solitary thing she told us," said Mary Hopps indignantly.

"Well, then, if you did, why did you not translate it for us, instead of making us wait there so long, picking out each word? I am sure Stella must have been tired waiting for us, were you not, Stella dear?"

"Yes, indeed I was," said Stella, opening her lunch-basket and taking out a piece of mince pie.

"Now that we are here, Stella, suppose you tell us what you want us for," said Susie Ellis.

"First, I must see if you are all here," said Stella, looking around. "Mary, Jennie, Susie, Lena—"

"Present, present, present, present," cried the girls together.

"Good," said Stella; "now for my news. I have made a discovery."

"Of what—a passage to the North Pole?" asked Susie Ellis.

"No, but that to-morrow will be Valentine's Day, and—"

"Everybody knows that," said Lena Wallace.

"And Miss Stowe's birthday," continued Stella without noticing the interruption.

"Miss Stowe's birthday!" cried Susie Ellis; "how did you find it out?"

"I am not at liberty to tell, but I thought that since we are all so fond of her it would be a good idea if, instead of buying valentines for one another, we should get them for Miss Stowe. We can buy them this afternoon, when school is out, and to-morrow morning we can put them on her desk and she will be so surprised and pleased."

"It will be lovely," said Mary Hopps; "but, girls, do any of you know why we send valentines on the 14th of February?"

"I don't believe I ever heard," said Susie Ellis.

"My mamma did tell me once, but I have forgotten," said Stella Hays.

"Provided I receive plenty of them, it makes

no difference to me why they are sent," said Jennie Ashley.

"I wish I knew," said Mary thoughtfully.

"If you like, I can tell you, Mary," said Nettie Russell, coming forward. "I asked my mamma last evening and she told me all about it."

"Yes, indeed, I should like you to tell me. You want to know too, do you not, girls?" asked Mary.

"Yes, tell us, Nettie," cried the girls.

"Well, you see," said Nettie, "a long, long time ago, there lived a good man called Valentine. He was quite rich and spent his time in visiting the poor and bringing them presents of things that they needed. He was put to death by one of the Roman emperors, and his friends, wishing to honor his memory, continued the custom of giving presents to the poor, but instead of doing it all the time, as St. Valentine did, they chose one day in the year which they called Valentine's Day, and from that has originated sending cards with pretty love-verses to our friends. But mamma said it would be much nicer if we followed St. Valentine's example and went about doing good."

"I think so too," said Mary, "and I propose, girls, that instead of sending valentines to-morrow, we shall take our money and give it to the Children's Hospital."

"That is a good idea, Mary, and I am willing to do it if the others are."

"You are very unkind, Mary and Susie, to spoil my plan about Miss Stowe," cried Stella angrily.

"I don't want to send my money to the hospital," said Jennie Ashley. "I prefer buying a handsome valentine for Miss Stowe."

"So do I," said Lena Wallace, "and I have ninety-five cents I can spend."

"I want to give Miss Stowe a valentine, too," said Susie Ellis; "so, Mary, suppose we give some of our old toys and books to the hospital."

"All right," answered Mary, "but I have money enough to do both."

"Then, girls, you all agree to give Miss Stowe a valentine," asked Stella.

"Yes, we all agree," answered the others.

"Well," said Stella, "as soon as school is over meet me in the cloak-room and we can go down to Percy's together; but mind, say nothing about our plan to anybody."

"Of course we shall not, or we should have all the girls doing the same thing," said Lena; "but there goes the bell; let us see who will reach the house first."

Mr. Percy was rather astonished that afternoon to see five little girls arm in arm walk into his store and ask to look at his prettiest valentines. Nettie Russell, who had followed her classmates, opened her eyes wide with amazement when she saw the gorgeous pictures Mr. Percy spread upon the counter. There were Cupids riding upon swans and Cupids bearing letters, dainty satin sachets with flowers painted on them, hearts bound together with wreaths of roses; there were valentines like books, others with satin ribbons, which, when pulled, opened and reopened upon half a dozen different scenes.

"Oh!" thought Nettie, "how happy I should be if I could buy one of those for Miss Stowe."

"Well, little girl," said the storekeeper's voice breaking in upon her thoughts, "the other ladies are suited; now what will you have?"

"I was only looking at the valentines, sir," said Nettie in a low voice.

"That is right, perfectly right; look well before you choose and you will be suited. But what do you think of this one?" and Mr. Percy held up a blue satin heart, ornamented with bunches of pink rosebuds.

"I think it is beautiful, sir," answered Nettie, smiling.

"And it is only seventy-five cents. Shall I put it in an envelope for you?" continued Mr. Percy.

"No, sir, I do not wish it, thank you."

"Not pretty enough, eh? I must say you are rather hard to suit, my little lady. How will this do? It is only twenty-five cents, still it is very neat," and Mr. Percy handed her a small sheet of lace paper covered with flying doves, holding valentines in their beaks.

"That is very pretty, too, but—" and Nettie hesitated.

"Surely it is not too dear, but I have some cheaper ones—two for five cents."

"It is not that they are too dear, sir, but I cannot buy them; I have no money."

"No money?" cried Jennie Ashley, turning around; "what did you come here for, Nettie Russell?"

"I wanted to see the valentines."

"The best thing you can do, Nettie Russell, is to go home, if you have no money to buy anything; we do not want you with us," said Stella Hays.

The tears rushed to Nettie's eyes; she left the store and hurried to reach home.

"If I only had something pretty to give Miss Stowe!" she murmured, "a card or anything. To-morrow, when she sees that I have not given her anything, she will think I do not care for her. But I do, I do; I love her more than all the others, she is so kind to me, and I can never forget her."

When Nettie reached home, she ran to her little room and began to look among her treasures to see if she could find something worthy to give to her teacher. But there was nothing; the two or three cards, which were pretty enough, had advertisements of "French kid

boots" or "Eureka stove polish" on them. With a sigh, Nettie closed the box and put it back in the bureau drawer, and then went downstairs to set the table for tea.

"Nettie! Nettie!" cried her brother, rushing into the room an hour later, "I have had the jolliest time imaginable. Dr. Cox drove out to old Mr. Hinkley's this afternoon, and he took me with him to hold his horse while he went into the house. While we were going through Jefferson's woods, I saw a great big patch of the most beautiful violets. I knew how much you liked them and I wanted to pick you a bunch, but Dr. Cox was in a hurry. I'm awfully sorry, sis, because I know they would have pleased you, and they're the first of the season, too."

"You are a real good boy, Dick, and I thank you just as much; but come to tea; we waited for you."

The next morning Nettie awoke just as the clock was striking five. "I am not one bit sleepy," she said, sitting up in her bed and looking out the window. "How funny it looks outside. I wonder how it feels to be up so early. I have a great mind to get up and go for a walk. Some one told me it was good luck to take a walk Valentine's Day before the sun rose. Oh! I know what I shall do," she continued, excitedly, jumping out of bed and beginning to dress. "I shall go to Jefferson's woods and pick a big bunch of violets for Miss Stowe; they will be my valentine to her."

Nettie crept softly downstairs, wrote a few lines to tell her mother where she had gone, and putting a slice of bread in her pocket, she opened the door and started for her walk.

"Let me see," she mused, "I have four miles to go, two each way, and I am sure it will take me at least two hours and a half to go to the woods and back; that will leave me half an hour to pick the violets. I need not arrange them until I reach school."

Nettie munched her bread as she walked, and almost before she knew it she had reached the woods. How dark and lonesome they looked! For a moment Nettie stood still, frightened to go further, then, laughing at herself for being so foolish, she ran along between the trees till she reached the spot where the violets grew. Throwing herself on the grass, Nettie picked a handful of the fragrant blossoms and kissed them, saying: "Oh! you dear, sweet little things, how I love you for blooming so soon! I am sure you are a thousand times prettier than all those old valentines at Percy's, and you don't cost a penny, either. I do hope Miss Stowe will be pleased with you, you darlings."

Talking in this manner, Nettie picked and picked until she had gathered a bunch so large she was scarcely able to hold it in her two hands. After arranging them tastefully with a few sprays of delicate ferns, she tied on her hat and turned her face homeward. She was very tired and the way seemed much longer, but she kept bravely on, humming a little song to cheer herself. When she reached the schoolhouse she found her classmates in a state of great excitement. Hiding the violets under her apron, she slipped into the classroom and laid them on Miss Stowe's desk, tying a card to them on which she had written: "My valentine to my dear teacher."

When Miss Stowe entered the classroom a little later she was indeed surprised to find her desk covered with dainty envelopes, each one containing a handsome valentine, and her pupils felt fully repaid when they saw how pleased she was. She said nothing about the violets, and all the morning poor Nettie struggled to keep back her tears of disappointment; she was sure her little gift had not pleased Miss Stowe. But as the pupils were leaving for lunch at 12 o'clock, Miss Stowe motioned Nettie to remain. When they were alone she put her arms around the child, saying: "My dear little girl, I want to thank you for your beautiful valentine. I know the weary walk you must have had to gather these fragrant flowers, and each one brings me a message of your love and gratitude. I cannot make you understand, dear, the pleasure your violets have given me, nor how much I appreciate the thought which prompted you to bring them to me. I cannot always keep your violets so fresh and fragrant as they are to-day, but in my heart I shall preserve a lasting remembrance of my little Nettie's valentine."

Alameda, Cal.

A Friend.

[Written for the RURAL PRESS by D.]

Is there anything we value more than a true friend? One whom we can look to for sympathy and advice in our sorrows or joys, and feel his interest and love is ever ours. He may sometimes wound us, but it is that his heart is so truly ours, he grieves to let our faults pass uncorrected. It is not always those who flatter us when in prosperity that are our friends, and when in trouble, we find, too late, their professed friendship false and hollow. What a pleasure to share with those we love our joys, and what comfort to take to their true heart our sorrows and know we are ever welcome to their sympathy.

A young man in his wild career too seldom pauses to think how many loving hearts he wounds in his downward course, for surely none are so hardened but the thought of mother's love and prayers would cause them to falter before taking another step.

DOMESTIC ECONOMY.

SPONGE CAKE ROLL.—Take two teacupfuls of sugar, two teacupfuls of sifted flour, two heaping teaspoonfuls of baking powder; into this break six good-sized eggs; beat all well together, turn into square jelly tins, and bake in a quick oven to a light brown. When done, turn out on a molding board, and spread quickly with jelly; roll carefully out, wrap each roll in a clean napkin and serve. The eggs are not beaten separately, and the quicker the cake is put together the better it will be.

FRICASSEED CHICKEN.—Choose a dry-picked young fowl; cut it into joints, strip off the skin, rinse in warm water, dip in cold water, drain and dredge with flour. Put the pieces in a warm saucepan and cover with hot water. Add a bit of lemon peel, salt and pepper and a sprig of parsley; simmer two hours and remove the chicken. Beat up the yolk of one egg with a gill of cream, add the warm sauce and whip thoroughly. Place the chicken on a dish, pour sauce over.

CHEAP CREAM PIE.—One cup of sugar, three coffee-cups of milk and one teaspoonful of salt. Let these get boiling hot. While they are heating, stir free from lumps one and one-half cups of flour into one coffee-cup of cold milk; then pour it into the boiling milk, stirring constantly till it boils again, then add one teaspoonful of extract of lemon, and set it away to cool. This will make three pies; bake six crusts and fill them with the mixture.

STOCK FOR SOUP.—Have a large kettle on the back of the stove, put in lean beef, either cooked or raw, in the proportion of one pound of beef to one quart of water, add pork rinds with all the fat taken off. Let this cook slowly for two or three days. When cold, skim off all the fat and put it in another vessel. By adding either barley, rice, sago, vermicelli or macaroni for thickening, this stock may be used for any soup requiring meat broth.

WHITE FRUIT CAKE.—Two cups of white sugar beaten to a cream with one cup of butter, one cup of milk, two and a half cups of flour, whites of seven eggs, two teaspoonfuls of baking powder. When all has been thoroughly mixed, add one pound each of sliced citron, raisins, blanched almonds and figs.

CHOCOLATE MACAROONS.—Three-quarters pound blanched almonds, one pound powdered sugar, one-quarter of a pound of grated chocolate, the whites of three eggs beaten to a froth; mix all together to a stiff paste; drop them on a sheet of white paper on a pan, and bake in a moderate oven.

SPICE CAKE.—One and one-half cups of sugar, two-thirds of a cup of butter, one cup of seeded raisins, two-thirds of a cup of sweet milk, three cups of flour, two eggs, one heaping teaspoonful of cream of tartar, one-half even teaspoonful of soda, cinnamon, nutmeg, cloves to taste.

RICE FRITTERS.—Boil the rice till perfectly done in water, then put in one-half pint of sweet milk, and salt to flavor, beat flour in milk till stiff enough to drop from spoon; have lard hot and drop this in, a spoonful at a time, frying till well browned.

GINGER POUND CAKE.—Three cups of flour, one cup of buttermilk, one cup of molasses, one-half cup of sugar, one-half cup of butter, two teaspoonfuls of saleratus, two teaspoonfuls of cinnamon, one teaspoonful of ginger and two eggs.

DOUGHNUTS.—One cup of sugar, three cups of flour, a piece of butter the size of an egg, one cup of milk, one half teaspoonful of soda, one teaspoonful of mace. Mix together; roll out and cut in shape. Fry in hot lard.

WAFFLES.—One pint of sweet milk, two eggs, one pint of flour, one-half cup of butter, one teaspoonful of cream of tartar, one-half teaspoonful of soda, a pinch of salt. Bake in waffle-irons well heated.

FRIED EGG PLANT.—Peel the egg plant and cut in slices one-half inch thick, pepper and salt; lay one slice upon the other and let them stand 10 or 12 hours; drain off the liquor, dip in flour and fry brown.

NOODLES FOR SOUP.—One egg, a pinch of salt, mix with enough flour to make stiff like pie crust; roll out very thin; let remain one hour before cutting in narrow strips; put in boiling soup and cook 15 minutes.

CORNMEAL PUDDING.—One cup of cornmeal, one cup of flour, one cup of milk, one cup of chopped suet, one cup of raisins, one-half cup of molasses and a little salt. Mix all together and boil 2½ hours.

OMELET.—Four eggs, yolks and whites beaten separately, and 1½ tablespoonfuls of milk. Mix the whites and yolks together, and add a little salt and pepper, and turn into a buttered spider.

SCRAMBLED EGGS.—Melt a piece of butter in a frying-pan; when it is hot, drop in the eggs, which have been well beaten, season with pepper and salt; stir constantly three minutes.

HOMINY PUDDING.—One cup of boiled hominy, 1½ pints of milk, three eggs, one tablespoonful of butter, one cup of sugar. Pour into buttered pudding dish, and bake 20 minutes.

FEATHER CAKE.—One egg, one cup of sugar, one cup of sweet milk, one-third of a cup of butter, two cups of flour, two heaping teaspoonfuls of baking powder.

Bounty or Protection.

The San Francisco Chamber of Commerce gave considerable time last week to a discussion on whether the beet-sugar interest of California, present and prospective, could be better served by the maintenance of a tariff on sugar or by the removal of the tariff and declaration of a Government bounty on home-grown sugar.

The proposition for removal of tariff and payment of bounty was introduced by R. G. Sneath and vigorously maintained by him and a few other members of the Chamber. The proposition to petition Congress for maintenance of existing duties was supported by Messrs. Gibbs, Rankin and Dimond. After reference to a committee composed of all the gentlemen named above, the matter came up for discussion upon a majority and a minority report, in support of each of which the members were arranged as noted above.

The majority report began with a lengthy preamble, setting forth that the suggested appeal to Congress for a bounty on beet-root sugar was a step in the reduction of the duty on importations into the United States of foreign sugar, and therefore pointed in the direction of free trade, which is regarded as dangerous to the best interests of the country and particularly menacing to the commercial growth of San Francisco. The introduction of a free-trade policy, it was believed, would be an act of bad faith toward the Hawaiian islands, and was not in harmony with the sentiment of the best people of the United States, and would cripple, if not destroy, many important manufacturing industries that have to contend against the underpaid labor of foreign countries.

Mr. Sneath's report was in support of this proposition:

Resolved, That our delegation in Congress be, and they hereby are requested to use their influence to secure the passage of a law, whereby the Government will grant a bounty, not to exceed two cents per pound, on all raw sugar manufactured in the United States for a period of five successive annual sugar seasons.

He took the position that the placing of a bounty on home sugar was in the public interest. Mr. Sneath declared that "it has been essentially proven that white refined sugar can be made in California profitably at five cents per pound, even to the extent of our national wants. If this is correct, then the people are now paying two cents and over per pound more than it cost, including a reasonable profit. Every cent equals \$25,000,000 on the total consumption, and to-day we are paying, at seven cents a pound, a profit sufficient to more than pay a bounty on the whole consumption."

George K. Porter, the leader of the opposition, strongly urged the adoption of the minority report. Wheat, he said, had been the great staple of the State, but it had now ceased to be so, and fruit-growing was going to be the leading industry in future. Sugar was needed in that pursuit, and in large quantities. The possibility of obtaining a bounty on home sugar was remote, but nevertheless we needed it. It was good logic and sound economy to foster these industries. If sugar can be made and sold for five cents, why not do so? And if it comes to a question of employing thousands of people throughout the State in the making of sugar, what objection could there be to doing so?

R. G. Sneath said that if a bounty was established it would be a magnificent thing for the Pacific Coast. Thousands of dollars would be invested, and an unknown era of prosperity ensue. If Congress could be prevailed on to grant a bounty in five years, the population of the State would be doubled. How granting a bounty could affect the tariff he could not see,

when it was asked that the tariff be kept on sugar in order to obtain funds with which to pay the bounty.

The chief speech in support of the majority report was by Gen. Dimond. Among other things he said:

"A movement fraught with much danger to us is the proposed bounty on beet sugar. It is really a sop thrown to compensate us for the protection now afforded by the tariff on low-grade sugar, which is proposed to be removed.

"This bounty is not sought by the beet-raisers of California. It would not be offered if it was not the intention of its proposers to attack the tariff on sugar. We do not want the former, while we must have the latter.

"By means of this tariff and the reciprocity treaty with the Hawaiian islands, the refiners of this coast are enabled to compete with their Eastern rivals, who possess the advantages of cheaper labor and fuel.

"With the continued protection now afforded by the tariff, it is only a question of a few years when the Southern States, with their late improvements in the manufacture of cane sugar by the diffusion process, together with California, will produce enough sugar to settle the question of a treasury surplus from this article.

"The sugar-refining interests of this coast are already extensive. With the expected increased attention to the culture of beets this interest must rapidly develop and add largely to the material prosperity of the State."

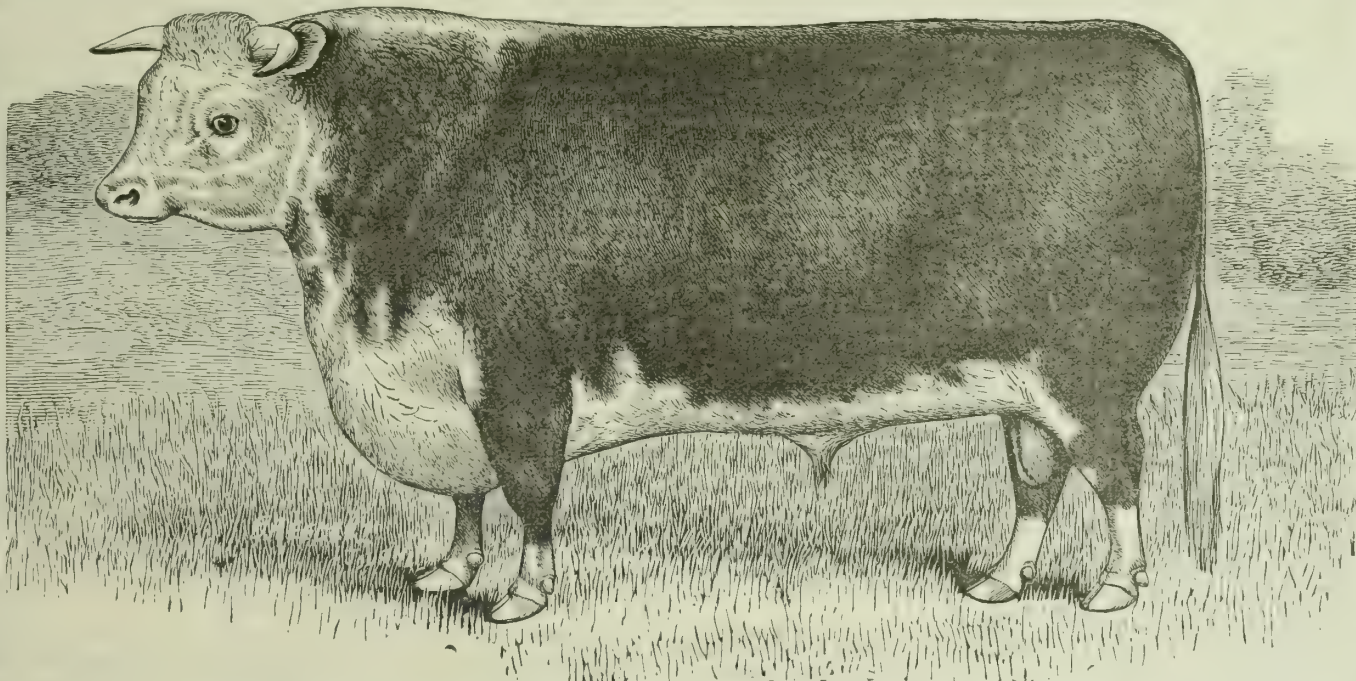
Such in brief were the points advanced on the mooted subject of bounty or protection. The decision was reached in a vote being taken on the adoption of the majority report, which

son ever known. It has not been lower than 26° Fahrenheit this season, which, although extremely cold for Pasadena, is not severe enough to injure the oranges. No serious damages result to oranges from cold while the temperature is above 24°. Twenty-four degrees or lower, however, Dr. Congar says is fatal to fruit.

Ivington Wilton.

We give this week a picture of a Hereford bull, owned by T. E. Miller, Beecher, Ill. This animal was dropped May 25, 1880, and was sired by the champion prize bull of England, Lord Wilton 4057, who was sold when ten years old for the most money that was ever realized for a Hereford, viz., \$19,800. Lord Wilton won his first reputation as a sire and attracted great attention by his sons winning as steers the first honors at England's great fat-stock show, held at Smithfield (London). After that his progeny were used as sires in many of the best herds.

Wington Wilton was very successful as a sire in Mr. Miller's herd. The first draft of heifers of his breeding were sold at public sale at Chicago, and averaged \$506 per head. This was one of the first sons of Lord Wilton that ever came to America. One of his half brothers was afterward purchased for \$3500 and brought over. John Price of England paid \$1500 for "Monarch." "Iroquois" was used in the Arkwright herd, "Truro" was used in the Goode



HEREFORD BULL-IVINGTON WILTON 4057, OWNED BY T. E. MILLER, BEECHER, ILL.

was not in favor of asking Congress for a bounty on sugar, which resulted in its adoption by a vote of 34 to 8 against Mr. Sneath's report in favor of a bounty.

DOES NOT RECOGNIZE HIM.—There has been not a little talk about the position of Captain John Mullan at Washington, where he is apparently working to obtain certain plums for California, in the shape of public lands, at a large commission for himself. Our Congressmen do not seem to take kindly to his mission, and Gov. Waterman has done his best to choke him off by writing a letter in which the following occurs: "I wish you to distinctly understand that I do not recognize your authority to act in behalf of California in the premises, you never having been appointed by any competent authority for that purpose and all the necessary care and attention having been paid to the matter by the Senators and Representatives from California. As you are acting entirely in a private capacity, without any sanction from myself, I prefer receiving all further communications in regard to the matter from the duly accredited representatives from California in the Senate and the House." If we had received such a note as that we should consider ourselves sat on somewhat heavily, but what Captain Mullan thinks does not yet appear.

WHEN ORANGES FREEZE.—Dr. O. H. Congar, who has resided in Pasadena for 14 years and kept a careful meteorological diary during that time, tells the *Union* that the mercury has not dropped as low by two degrees this winter as it did six years ago, which was the coldest sea-

son ever known. It has not been lower than 26° Fahrenheit this season, which, although extremely cold for Pasadena, is not severe enough to injure the oranges. No serious damages result to oranges from cold while the temperature is above 24°. Twenty-four degrees or lower, however, Dr. Congar says is fatal to fruit.

The Herefords are a grass cattle which do well upon the range; they are hardy, with short legs and strong constitutions; mature young, and have given good satisfaction in Nevada and Oregon, and are very popular on the range east of the Rocky mountains.

IMMIGRANTS COMING NORTH.—The *Record-Union* learns from Railroad Officer Lee that large numbers of immigrants are arriving in Sacramento from the south. The southern overland train now brings one and two carloads every day, and it is expected that in the near future they will be coming in on a larger scale. They state that their intentions are of settling in Colusa, Yuba, El Dorado, Placer, Amador, Sacramento and other northern counties, and going into either general farming or fruit-raising.

THE PACIFIC LIVE-STOCK COMPANY has been incorporated to buy, sell, raise, graze and otherwise deal in and with cattle, sheep, horses and all other kinds of live-stock, and for that purpose to purchase, or lease, and deal with ranges and pastures. The capital stock is \$1,000,000, of which \$5000 has been subscribed. The directors are N. H. A. Mason of Lyon county, Nev., J. Le Roy Nickel, John H. Bolton, Henry Miller, Jr., of S. F., and Charles Z. Merritt of Oakland.

Anthrax or Something Else

Perhaps nothing shows more forcibly the need of a State Veterinarian in this State than the existing cattle trouble in Contra Costa county. Whenever any such trouble breaks out there should be a competent officer in whose opinion all could have confidence to proceed at once to the place, investigate the evil and report for the public benefit. Our live-stock is usually healthy, and yet there are now and then serious diseases breaking out and destroying much property. We need veterinary advice in the public interest almost as much perhaps as we need health officers and boards of health. As it is, there is very serious doubt whether the disease in Contra Costa county is that most malignant malady *anthrax* or not. On another page we give the opinion of one veterinarian that it is anthrax, and now comes the following in the *Martinez Gazette* of last Saturday:

Dr. A. de Lebrouse of San Francisco, a distinguished veterinary surgeon, speaking of the stock epidemic along the shores of Contra Costa and Solano counties, says that although he has not examined the afflicted cattle, he is of the opinion that from the symptoms described to him it is not anthrax.

"By the symptoms to me reported, I think the stock were affected with blood of spleen, which at the autopsy may present a striking analogy to anthrax. In the blood-spleen there are no tumors, and in the anthrax they always appear hard and painful. This disease, the blood-spleen, is very rapid in its action. The animal stops eating, looks stunned, his lips tremble and he dies in convulsions, with emissions of blood from the mouth and nostrils."

Now we have the decisions of two veterinarians offset against each other, and it does not appear that either has made local study but gives judgment upon manifestations currently reported. This is not the best way to get at the truth, and yet we cannot well expect a veterinarian to leave his local practice and go out to investigate such matters merely for the love of it. We need a thoroughly educated veterinarian in the service of the State to go forth at once when

such appearances are reported, study up the malady on the ground and make a report as soon as possible informing the public of the nature of the disease and proper steps to take to arrest its progress.

Our live-stock growers should have this help from the State just as our fruit-growers have insect inspectors and official publication of effective insecticides. The College of Agriculture through the reports of Prof. Hilgard has emphasized this need and has asked for an officer who could give instruction to young men and at the same time serve the people as indicated in case of emergency. Funds have not yet been available for this purpose, but should be forthcoming. With all the popular ignorance on the subject of diseases of animals, and the amount of quackery in veterinary practice, it is certainly desirable that there should be competent advice in the public interest, and the sooner it can be furnished, the better.

COL. M. L. McDONALD, we see by the *Sonoma Democrat*, has been appointed Forest Guardian for that region. It is his duty to take such steps as may be necessary to prevent forest fires and prosecute those who violate the forestry laws. During the coming season he will cause to be posted throughout the county notices to farmers warning them against carelessness in burning brush and setting forth the penalties attached to the violation of the law in that respect.

MAD and Eel rivers in Humboldt county were very high, early last week, and considerable damage to farm-lands, fences, roads and bridges are reported.

A. F. JONES, President.

FRANK McLAUGHLIN, Vice-President.

E. W. FOGG, Treasurer.

H. C. HILLS, Secretary.

Thermalito Colony Comp'ny

INCORPORATED DECEMBER 31, 1887.

THE HOME OF THE ORANGE, OLIVE, VINE & FIG.

— ONLY —

429 LOTS LEFT. 429 LOTS

In this famous Colony Tract out of 1440 lots offered for sale June 8, 1887, and but 250 lots remaining in the Association in which an investment of only \$360 is SURE to secure you an admirable town lot 50x150 feet, and may secure a HOTEL now being erected at a cost of \$20,000. Eleven chances to secure a cottage worth from \$875 to \$2500; ten chances for 10-acre lots; 90 chances for 5-acre lots; 50 chances for 2-acre lots; 50 chances for 1-acre lots; 100 chances for lots 90x160 feet, and 200 chances for lots 50x150 feet. Terms easy; \$30 cash and balance in monthly installments of \$15.00 per month.

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Offers the following advantages which no other Colony offers:

1. The most healthy location in Butte County, outside of the mountains. This is substantiated by the fact that a location for the Butte County Infirmary was selected there by prominent and well-posted citizens.
2. The soil cannot be surpassed for fruit culture, being a rich, red gravelly loam, strongly impregnated with mineral and from 6 to 20 feet deep, and has 10,000 flourishing orange trees from one to ten years old on the tract.
3. Its water supply and facilities are unequalled, its supply being 3600 inches, and conducted in PIPES on the tract under a pressure of from 75 to 150 feet, which is sufficient not only for irrigation, but for fire and household purposes. This water is furnished FREE FOR THREE YEARS, and after that at the low rate of ten cents per inch (miners' measurement) for 24 hours.
4. The value of the land is rapidly increasing. It is now offered at \$100 per acre, while much of it has been resold at \$150. The owners of the tract cannot raise the price above \$100 without violating their promise made to the public six months ago, and they have steadfastly refused to break any promises, no matter how the boom may affect the land. Terms of sale: One-third cash, one third in one year, and one-third in two years at 8 per cent per annum.
5. The Company is spending over \$100,000 in improvements of their own money, and hesitate at no outlay that will prove advantageous, and FURNISH LABOR on the tract for purchasers, and will plant and care for your groves at cost.
6. The location of the tract for scenery is unsurpassed. It has gained the name of "THE BEAUTIFUL," and justly so; it is also called "Wonderland."

All we ask is to COME AND SEE for yourselves. The Company is at all times ready to take you to the tract, and invites inspection. Address

THERMALITO COLONY COMPANY, Oroville, Butte County, California.

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Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES
At \$75 per Acre,

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. Maps and further particulars of

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Improved and unimproved lands to any extent from 5 to 5000 acres with good, comfortable homes and all necessary conveniences, for sale on desirable terms. These lands require no irrigation, Railways convenient, ample supply of water, and the climate cannot be surpassed. Apply as above.

A NEW COLONY

On the new extension of Southern Pacific Railroads, on the lands belonging to R. T. BUELL, Esq., near Los Alamos, Santa Barbara county, Cal. Parties desiring to visit the property now, can go via San Luis Obispo and take the cars from thence to Los Alamos, thence by stage to the Colony. 20,000 acres of the best lands in California, subdivided into 20, 40 and 80-acre farms; \$20 to \$30 per acre. INTERNATIONAL IMMIGRANT UNION, 401 California St., San Francisco

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529 feet has been sunk in 10 hours. Either our Encyclopedia of 800 Engravings of Well Machinery and Diamond Pointed Rock Drills, or OUR TRUSS ON NATURAL GAS, will be mailed for 25 Cents. We are sending parties for infringing our Patent Hydraulic and Jetting Machinery. The quality of our goods has won us a great reputation. Mention this Paper.

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THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil. TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for colonies or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

E. de la CUESTA, Agent, Santa Ynez.

McCLUNG & PRAY, Agents, 325 Montgomery St., San Francisco.

SIDNEY LACEY, Agent, Los Angeles.

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Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

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DEWEY & CO., { No. 250 MARKET ST. } PATENT AGENTS.
Elevator 12 Front St.

Opening the Sierra Region.

EDITORS PRESS:—The boom is beginning here. Land has advanced about \$50 per acre in price within the past six months. The newly built branch railroad running from Fresno City has laid out a new town within two miles of us. This will be the terminus of the lumber flume and railroad that will open up the high Sierras, the "Switzerland of America," to the outside world, while a number of large mills are being constructed in the big forests of these mountains that will supply us lumber and timber, and open the high Sierras to tourists and pleasure-seekers—"The High Sierras" of which I wrote in the RURAL years ago—the grandest mountain scenery, the highest waterfalls, forests of the largest trees, blue lakes of transparent water, crystal atmosphere, broad meadows of green grass and beautiful lilies, kalmias and other flowers, rivaling their kind produced by the gardener's skill elsewhere. Trout, grouse, deer, bears in the dense jungles, ice-cold water and the health-inspiring balsamiferous odor of the pines, that makes mere existence a pleasure, these, always heretofore within our expanse of vision, are now to be brought to our

for the future tens of thousands who shall yet make their homes there. W. A. SANDERS.

Make the Hares Pay.

The Visalia Delta again broaches the notion of starting a cannery for the express purpose of preparing jack-rabbits for market. Potted hare

potted hare being something of a novelty, would bring a better price.

At this season of the year jack-rabbits are fat and will weigh four to six pounds each; and they are plentiful in all parts of the valley. If farmers could receive enough from the sale of the slaughtered pests to pay the cost of making and moving the corrals into which they are driven to be killed, they would be satisfied

Butte County.

Description of the Citrus Fair Held in Oroville, December, 1887.

BY M. C. B.

The Citrus Fair recently held in Oroville,

the County Seat of Butte county, has attracted considerable attention and as we understand already placed Butte in a prominent position among the counties of the Golden State. Butte county for years has been known as a mining center, but in consequence of the shutting down of the mines the inhabitants turned their attention to the raising of crops and growing of fruit. The mining days are now almost forgotten and all are busily engaged in the production of citrus fruit. For some years past the more prominent and energetic citizens, by intuition or otherwise, learned, that they were located in land adapted for the growth of the orange, lemon, etc., and having fully realized the fact by repeated tests year



TABLE MOUNTAIN EXHIBIT, BY JOSEPH ENTZMAN, AT OROVILLE CITRUS FAIR.



EXHIBIT OF THE THERMALITO COLONY AT OROVILLE CITRUS FAIR.

very doors, for the enjoyment of our wives and children, without, as heretofore, paying a terrible price in mule travel for the privilege of enjoying them.

Two rival lines of railroad have been surveyed between us and the foothills, nine miles away—verily, the good time of which I've always prophesied is near at hand. In the Sierra foothills there are yet thousands of places of Government land where English walnut, olive and other trees can be made to produce wealth

is considered a delicacy, and this valley, says the Delta, could supply the demand for awhile. Recently when rabbit-drives have been held the slaughtered animals have been shipped to San Francisco, and sold on the ground before being shipped at 30 cents a dozen. In Chicago they are worth three or four dollars per dozen, just as killed, in carload lots. They could be dressed and frozen and shipped East at a profit, or killed and canned. In Chicago canned beef is worth 20 cents a pound, and

that anyone else should make a further and greater profit on them. If such a cannery were in operation there is no doubt that it could be kept busy several months—in fact during the whole time when hares are fat and fit for eating. There must be millions of them in this valley.

A BAND of gypsies, with a herd of performing bears, are making a tour through the northern part of California.

after year, resolved to show others what they themselves could do.

The Citrus Fair duly contemplated for a few months was quickly arranged and held last year in Christmas week. As no building sufficiently large could be obtained a tent was suggested and approved of although the time fixed was midwinter. The pavilion (all sides and roof canvas only) 150 feet long and 50 wide located on the north side of the

court-house, had on its east-side in large evergreen letters the following inscription:

FIRST BUTTE CO. CITRUS FAIR, 1887.

The entrance was an archway covered with oranges and flowers, displaying sufficient indications suggestive of the interior. The displays were by all deemed far in advance of what had been expected, and the people of Butte themselves were agreeably surprised at the result of their own exertions. The decorations were costly and artistic. All around were designs and inclined shelving, and in the center a line of magnificent decorations.

On entering, the first display seen was that of Mrs. H. C. Bell; the next, a remarkable aggregation of fruit and flowers contributed and presided over by Mrs. E. W. Fogg. The exhibit by D. N. Friesleben and Miss Fannie Friesleben commanded much attention. D. K. Perkins represented the Congregational church, which attracted general admiration. The Central house display kept its place well in the midst of many adjoining exhibits, which seemed to vie with it. Chico and Messilla valley were fully represented, but, as we shall specially refer to Gridley, Chico, Messilla valley, and Butte county exhibits generally, we shall confine ourselves to those represented by engravings in our columns this issue.

The Thermalito exhibit consisted of a large palm tree, about 20 feet high, with large spreading leaves, surrounded by hundreds of young, semi-tropic plants taken from the company's nursery in the new colony. The oranges were in profusion, as represented in the engraving, and, with the arrangement of flowers, one might easily per consimself standing in a choice conservatory. The chief promoters of the new colony, E. W. Fogg, Col. McLaughlin and Senator Jones, the manager, informed us that all the exhibits were taken from the colony of Thermalito, and at the time similar trees, oranges, etc., were growing across the Feather river in Thermalito.

The Table Mountain exhibit by Jos. Entzman appears in our columns, and the productions come from the Thermalito locality. Mr. Entzman's ranch sent in for exhibition fruits and vegetables second to none in California. The oranges, like those from Thermalito, were sound and with a clear skin, fit for transportation over the world. He exhibited a variety of fruits and vegetables which seemed very superior. Some of the pumpkins weighed over 200 pounds. Success seemed visible on every side, and we shall have much pleasure in giving more space in subsequent issues and with further engravings, including the miniature church by D. K. Perkins of Oroville.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Injurious Insects of the Orchard, Vineyard Field, Garden, Conservatory, Household, Storehouse, Domestic Animals, etc., with Remedies for their Extermination,

By MATTHEW COOKE.

Late Chief Executive Horticultural Officer of California. Illustrated with over 750 wood-cuts and 25 pages of classified illustrations. This book is designed for the use of orchardists, vineyardists, farmers and others interested in the subjects treated. It is designed to convey practical information concerning some of the species of insects injurious to the interests of cultivators of the soil, and those interested in earth produce generally. Price \$4, postpaid. For sale by DEWEY & CO., publishers, 220 Market St., San Francisco.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

Gabilan Rancho,

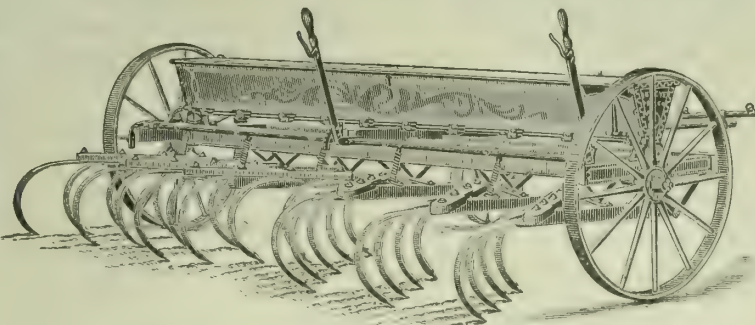
Containing 7685 acres, situated near Salinas City, Monterey County, is offered for sale. For particulars address J. C. HOAG, 312 Van Ness avenue, San Francisco, or TYLER BEACH, San Jose, Cal.

100,000 Fruit Trees for Sale

At reduced prices, consisting of Apple, Pear, Peach, Apricot, French Prune, Walnut and other trees. Palms, Grevillas, Monterey Cypress, etc. Trees are guaranteed to be absolutely free from scale or other insects. MILTON THOMAS, P. O. Box 304, Los Angeles, Cal.

— THE — New Buckeye Combined Spring-Tooth BROADCAST SEEDER AND HARROW

NO CHAIN GEAR USED.



CANNOT CLOG.

Is the ONLY PERFECT SPRING-TOOTH HARROW and SEEDER MADE.

Having the same feed and driven by gears—same as the well-known "Buckeye" Drills—makes them a perfect Seeder, and the Spring Teeth arranged in sections, as shown in cut, prevents any clogging with trash or stubble, consequently no bunching of grain; makes them a perfect Cultivator or Harrow.

BUCKEYE HOE and SHOE GRAIN DRILLS,
BUCKEYE BROADCAST SEEDERS and CULTIVATORS,
BUCKEYE VINEYARD and ORCHARD CULTIVATORS,
BUCKEYE SULKY RAKES,
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BUCKEYE PUMPS.

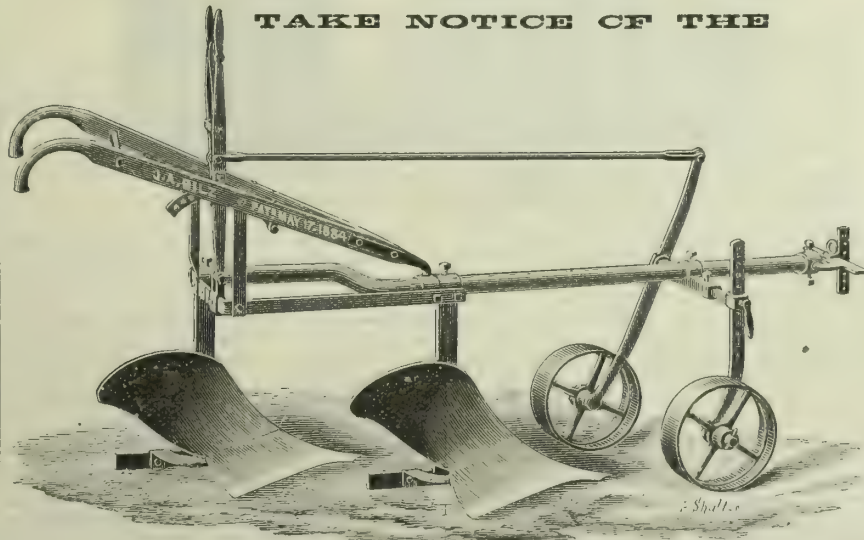
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J.A. BILZ 2-Horse Gang & 1-Horse Plow

Which the Cuts Represent. Patented October 19, 1886.

First Premium Awarded at Mechanics' Fair, 1887.

These Plows have been in market for the past two seasons, and those that use them would not do without them at any price. All claim to save from \$2 to \$2.50 per day over any other plow. Not only for orchards and vineyards, but also for field plowing, where a two-horse single plow is used.

The Plow cuts 18 inches, weighs 160 pounds, and two horses will pull it as easily as a 12-inch plow, and does better work than a single plow. No trees are barked and sticks in vineyards pulled over where my Patent Double-trees and Singletrees are used. For Extra Shares send to me.

I ALSO MANUFACTURE ALL STYLES OF

CARTS, BUGGIES, SPRING WAGONS, CARRIAGES

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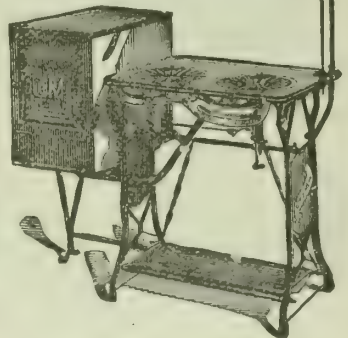
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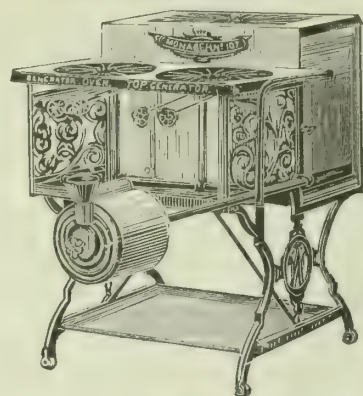
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WOOD AND COAL RANGES.—Royal, No. 116, No. 7, \$20. Pacific No. 6, \$18. No. 7, \$25. Lamps, 20c. to \$10. Hanging Lamps, \$2 to \$20. Agate Ware, Tin Ware, and Kitchen Ware at low prices.

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Emerson's Anthem of Praise, \$1; per doz., \$9.
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American Anthem Book, \$1 25; per doz., \$12.
Order with Ditson's imprint.
Dresser's Sacred Selections, \$1 50; per dozen, \$13.50.
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Santoral, Palmer & Trowbridge, \$1; per doz., \$9.
Vox Lauds, tr. st Leslie, \$1; per doz., \$9.
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Perkins' Easy Anthems, \$1; per doz., \$9.
And many others. Please send for lists and descriptions.

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Also the Choruses of the Oratorios. (See lists.)
Cantatas (Classic) as Mendelssohn's Christus, 40 cents;
Rheinberger's Christoforus, \$1; Three Holy Children, Stanford, \$1; Fair Melusina, Hofmann, 75c.; Wreck of the Hesperus, Anderson, 35c.; Battle of the Huns, Zollner, 80 cents.
Cantatas (Scenic), Joseph's Bondage, Chadwick, \$1; Ruth and Naomi, Dambrosch, \$1; Rebecca, Hodges (easy), 65 cts; Esther, Bradbury (easy), 60 cents.
Also more than a hundred Masses, containing the best and sweetest of sacred music.
Any book mailed for the retail price.

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THE IRRIGATOR.

A Great Enterprise in Merced County.

On Wednesday, Feb. 1st, the proximate completion of one of the most extensive and expensive irrigation enterprises ever prosecuted in California was celebrated in Merced county. The affair was of such moment that the Governor of the State participated in the exercises and the whole community took part. The usual concomitants of American celebrations, orations and addresses were not wanting. The history and features of the enterprise are so interesting that we take from the *Spirit of the Times* an account which we imagine was written by Mr. Boruck, the private secretary of Governor Waterman:

About 15 years ago, several farmers of Merced county, appreciating the value of irrigation, undertook the work of building a mammoth canal from the Merced river to Bear creek at a point about seven miles east of the town of Merced. The expense was found much greater than at first estimated for a work of the magnitude contemplated, and 10 years later found the work moving in a very feeble and unsatisfactory manner, the company having expended about \$180,000 and carried a small 20-foot ditch through the first ridge, about two miles from the initial point and under a range of hills two or three miles further on, and dropped the water thus conveyed into Canal creek, which carried it to the railroad seven or eight miles further, and about five miles northwest from Merced. Here the most of the water was utilized by Peters & Milco on their Buhach plantation, which has since become famous as the point from whence comes the insect powder sold throughout the country under the name of Buhach.

From this point a branch canal had been partly constructed to Livingston, some eight miles further north, but for some reason, presumably scarcity of funds, it had been abandoned, and it appeared that the whole outlay was destined to be lost, at least so far as any practical benefit to the immediate vicinity of Merced was concerned, and that that town, commenced under such favorable auspices, would be left to drag on a slow existence, dependent alone on the somewhat precarious grain crop.

At this stage of proceeding C. H. Huffman, an extensive grain-grower and warehouseman of Merced, looked over this ground and decided that an outlay of a million or so of money on the canal could be made to produce a change of conditions in the vicinity of the town which would build up the whole surrounding country, of course, to his own great benefit. With Huffman, to think is to decide, and to decide is to act. He needed capital to accomplish his ends, and to secure this he went directly to Charles Crocker and laid the proposition before him, which he felt assured would pay a fair interest on the investment, besides making the lands owned by Crocker and his associates around the town of Merced, as well as his own possessions, very valuable. Mr. Crocker was impressed with the plan, as well on account of its apparent feasibility as from the evident earnestness of Mr. Huffman, with whose reputation as a keen, shrewd, and far-seeing business man he was quite familiar. He sent engineers on to the ground, looked carefully into all the circumstances surrounding the enterprise, received favorable reports from all sources, and the result was that these two men, with several others associated for the purpose of incorporation, formed a stock company under the name of the Merced Canal and Irrigation Co., bought the franchise and works of the pioneer Farmers' Canal Co., and began operations on a large scale, which have been carried on for the past five years with a force ranging from 150 up to 700 men and from 200 to 500 horses and mules, and is just now practically completed so far as the heavy engineering is concerned, and is prepared to supply water to Merced and the immediate vicinity, and all the territory lying to the north and west of the town.

Five years of steady, unremitting labor; five years of continuous outlay of money; five years of faith in the ultimate success of the great enterprise of his life, a faith which refused to be discouraged at unexpected obstacles which might well have appalled a stouter heart and unnerved a stronger arm. These are what Huffman has stood up to; this is the quality of metal he brought into the work, and nothing less firm would have ever carried the undertaking through. And now that the mental strain is over, with what pride this man must look upon the result of his energy and fortitude.

The works as completed now consist of a dam in the Merced river, about five miles above the town of Snelling, with headgates well protected by rip-raps above the highest water-mark—gates aggregating 100 feet in width, constructed of the best material and costing \$250,000; a canal 70 feet wide at bottom and averaging 100 feet at the top of its embankments, 10 feet deep, with a carrying capacity of 3400 cubic feet of water per second. This canal runs 27 miles through a hilly country, with several deep cuts through sandstone and cement formations; and two tunnels, the first 1600 feet long through a hill of solid rock. This tunnel is the same referred to above as having

been constructed by the Farmers' Canal Company; but the cost of enlarging it to accommodate the increased capacity of the canal was almost as great as if it had all been dug anew. This was also the case with that portion of the old works from the dam to the first tunnel, and at some points the labor required was even greater on account of the wastage of earth from the former cutting. After the successful completion of this tunnel another was determined upon 12 or 14 miles further on, which saved the building of five miles of open canal. This is constructed 2000 feet through ground so unstable that it was necessary to timber the whole length of the tunnel, a work which required over 1,000,000 feet of Santa Cruz redwood, at a cost of over \$20,000 for the raw material, and a total cost of construction of about \$100,000.

Yosemite Lake.

The 27 miles of main canal ends in a grand artificial lake, located about five miles north of Merced, and calculated to hold water enough to supply the town and several thousand acres of land immediately around it for three months of low water, thus securing this section a safe supply even in the driest seasons. This lake or reservoir is formed in a natural basin of the gravel hills lying to the north and east of Merced, and is surrounded on three sides by hills 80 feet high, with a comparatively narrow outlet on the side next the town, across which the company has constructed a dam 250 feet thick at the base, 60 feet high in the deepest part of the valley, 30 feet wide at the top and about half a mile long at middle height, and giving an average depth of about 30 feet of water over 800 acres of land. Just within the



PUBLIC SCHOOL-HOUSE AT LOS GATOS.

breast of the dam a tower rises from the bed-rock foundation, 20 feet in diameter at the base and 9 feet 8 inches at the top, reaching an elevation of 80 feet, or 20 feet above the parapet. This tower has openings at intervals, fitted with pipes and machinery for letting water into the conduits which are to supply Merced, and which leave the foot of the tower by a tunnel constructed through the foundation of the dam. This machinery is so arranged that water can be drawn from any level within the lake. It is believed the purest supply can be obtained at about the middle depth of whatever store may at any time remain within the great storehouse. The 16-inch pipes for supplying the town with water have been ordered from Philadelphia, Pa., and are now on the way by vessels which are expected to reach San Francisco about the last of March, and will be laid as fast as they can be delivered at Merced.

Several thousand acres of land are now ready for irrigation, and before the dry season sets in the company will have branch and lateral canals completed, sufficient to supply all the land that can possibly be prepared for water by that time.

The cost of this great enterprise has been nearly a million and a half of cash, and when it is completed as to necessary distributing branches, etc., it will run considerably over that amount. But as the company and its individual members own or control about 60,000 acres of land under the canal and subject to irrigation, the most of which they propose to divide into small tracts and sell to actual settlers on reasonable terms as fast as it is needed, and without interfering materially with other colonizers, it is plain that their profits in the natural enhancement of land values will go far toward reimbursing them the vast outlay they have made. It is also understood that when the section to be watered demands the service, the main canal will be extended south from the Yosemite lake to Mariposa creek, a distance of 16 or 18 miles. This will almost double the extent of land susceptible to irrigation.

A Fine Section of Country.

A Pen Sketch of Los Gatos and Surroundings.

EDITORS PRESS:—The Santa Clara valley has long been noted as the "Garden Spot of the Pacific Coast." The writer has traveled over a large proportion of the country bounded by the Rocky mountains on the east and the Pacific sea on the west, and is frank to confess that he has seen no district of equal size to rival this valley for beauty, salubrity, fertility and climate. A combination of these advantages were doubtless what led the mission fathers to adopt in this region their first experiments in agriculture over a hundred years ago. It is asserted that since that early period the hand of the husbandman has been constantly blessed with an abundance of the diversified products which the soil is capable of producing—such a thing as a crop failure never having been known. The country of Santa Clara contains nearly a million acres of land, about one-fourth of which is valley, 300,000 acres rolling hills and mountains, well adapted to fruit, the residue valuable, principally for pasturage. The warm belt is a tract upon the slopes of the hills that environ the valley, the altitude of which is between 250 and 800 feet.

During the past week or two I have been sojourning in the neighborhood of Los Gatos, laboring to extend the circulation of your journal and gathering data of interest to the many readers acquainted with the resources, advantages and attractions of this portion of

tion of the last two years. The location of the town is quite picturesque. To the eastward stretches out the charming valley dotted with the thousands of homes in the midst of the vast orchards for which the county is becoming famous. To the right and left, the once useless hills are rapidly undergoing transformation into vineyards and orchards, while in the background rise the Santa Cruz mountains, which are dotted to the very summit with homes.

The citizens feel a just pride in the social condition of their new town. The public-school building, which is represented by an engraving on this page, is one of the institutions that marks the public spirit of the place. Ample church privileges are provided, and most of the fraternal associations have organizations here. The Odd Fellows have a neat hall and a membership of 60. The present Noble Grand is E. A. Kennedy, and Permanent Secretary, A. E. Wilder. The Ancient Order of Workmen claim a membership of 67. The Master Workman is Thos. W. Cox and the Recorder, R. F. Robertson. The Masons, I am informed, are about to take steps to institute a Lodge here also.

The town is well provided with hotels, the principal of which is the Los Gatos house, which is ably managed by C. W. Holden, the proprietor. For plain, good living, the Central house, conducted by Mrs. Parr, is popular.

The Ice Manufactory

Is another of the enterprises of which Los Gatos boasts. The ice has given such great satisfaction that the capacity has been increased to ten tons per day. As the cost of freezing is merely the expenditure of abundant water-power, ice can be manufactured cheaper than it can be cut from a pond, and it can be furnished at any season of the year. Some time ago the company purchased the right for the United States and for England and her colonies, in view of which the plant at Los Gatos is likely to work a revolution in the ice business and become the beginning of a vast industry. The Los Gatos Co-operative Winery, of which John Cilker is president and W. B. Rankin secretary and superintendent, is located near the center of the town. The company manufactured 125,000 gallons wine and 4500 gallons brandy last season. It is proposed to more than double their output this year.

Located on the road between Los Gatos and Saratoga, about two miles north of the latter, is the Los Gatos and Saratoga winery, inaugurated in 1885. The product of the first year was 8000 gallons; in 1886, 80,000 gallons; in 1887, 110,000 gallons. The capacity of the winery is 192,000 gallons. All the stockholders are vineyardists, while the section in which the winery is located is conceded to be among the best for the raising of grapes suitable for clarets. A. Malpas is the business manager, and H. A. Merriam the superintendent.

It is impossible for me to notice but a small per cent of the objects that suggest themselves as worthy of attention in this beautiful and productive district, for it is almost a continuation of orchards and vineyards in all directions. The land is being divided up into small tracts and sold to new-comers, who at once fall into line planting it to fruits. Thus old settlers confess themselves to be strangers in their own neighborhood.

I lately visited the comfortable homestead of the Kennedy brothers, one mile south of Los Gatos. They are among the old-timers of the country, and are extensively engaged in fruit-culture and the nursery business. Their plantation is admirably located for fruit, and they make a specialty of producing citrus trees. The nursery contains 5000 marketable orange trees and a general stock of 20,000 seedlings. Some of the tips of the leaves showed slight effects of the frost, but no serious injury is apprehended from it. One variety, the Emperor Mandarin, which the gentlemen pointed out, did not show a particle of injury from the cold weather. They think that this orange will become quite popular among orchardists, as it is one of the earliest and best flavored, as well as the hardiest that has been experimented with in the country. The Queen Olive of Commerce was imported by the Kennedys from Spain a few years ago. It is one of the most popular varieties of that country.

Another of the enterprising gentlemen whose place I visited is A. N. Van Fleet, who is making the fruit-drying and canning business a specialty. With Waiter's patent drier he dried 1300 tons of various kinds of fruits last year, and employed 85 hands during the season. All his fruit has been marketed and brought handsome returns.

I neglected to state in the proper connection that as a health and pleasure resort, Los Gatos also claims a share. The place is abundantly supplied with clear, cold, and delicious water; is connected by the narrow-gauge railroad from your city to Santa Cruz; and, except on rare occasions, is free from fog. The tourist will find in addition to this a hospitable and intelligent community, among which to while away his dull hours. The writer acknowledges favors from many, among whom, Mr. Hughes, editor of the *Mail*, and Mr. Trantham, editor and associate proprietor of the *News*, to whom the *RURAL* is indebted for the engraving of the Los Gatos school-house, which I send with this communication.

F. B. LOGAN.

THE Siskiyou County Jail is empty; there is not a pauper in the county, not a single individual is being cared for at the county expense.

GOOD HEALTH.

Cure for Dandruff.

EDITORS PRESS:—One of your "Constant Readers" asks for a dandruff cure. If the directions I am about to give be faithfully carried out, dandruff will disappear at short notice. My wife being troubled considerably that way, I applied to Dr. L. W. Case, professor of skin diseases at the Rush Medical College of Chicago, and he prescribed as follows: At night before retiring rub the scalp, in fact, saturate it with oil (hair oil, lard, olive oil), anything will do. Spend 15 minutes in rubbing it well into the scalp, tie a towel around your head and retire. Next morning wash the scalp with sulphur soap thoroughly, then rinse off every particle of oil and soap with clean, warm water, rub dry and comb. After the head is perfectly dry and all soap and oil have disappeared, make a mixture of four ounces of rose-water, one ounce of glycerine and five drops of carbolic acid, and use this once a day for a week, in place of hair oil, rubbing well into the scalp, and thereafter as often as you like in place of other hair oil, but not less than twice a week. This mixture can be perfumed to suit. Friction keeps the scalp healthy, and at least five minutes should be spent every morning rubbing the head with the tips of the fingers. If these directions are followed, dandruff will disappear and the hair will stop coming out. Wash the head once a month with sulphur soap, after saturating with oil the day before.

Chicago, Ill.

WILLIAM WEHNER.

PHTHISIS AND THE HOUSE FLY.—The mosquito's share in the economy of nature, says the *Medical Record*, has always remained a mystery, except that it seems to bring out an interesting cutaneous eruption and reduce the price of board in certain districts of New Jersey. The house fly, however, has been credited with some general usefulness as a scavenger. This important function, if it really exists, is offset by the facts now accumulating which show that the fly is at times a carrier of contagion. M. M. Spillman and Haushalter, in particular, have recently shown at the Academy des Sciences the important role which the house-fly may play in the dissemination of tuberculosis. The intestines of flies that have fed on phthisical sputum, and the excreta of these insects, are found to contain the bacilli of tuberculosis. Flies that have fed on such infected matter may deposit the bacilli on windows, tables, food, and indeed may spread potential infection everywhere throughout an apartment. When the fly dies its body desiccates, setting the bacilli free and still capable of growth. The house-fly has thus an immortal part in the shape of pernicious microbes. The idea that this insect may carry contagion is not a new one. The contagious ophthalmia of Egypt is believed to have been spread largely through the flies. Bacteriologists have noticed how readily cultures may become infected by flies, and Koch admits that these insects may be the vehicles for the distribution of cholera. Yellow fever has been spread, it is thought, by mosquitoes, and perhaps also by flies. Facts are accumulating to show that the fly may be not only an annoying but a dangerous factor in a household.

OATMEAL AS A FOOD.—Oatmeal as an article of food is fast becoming popular with the English-speaking races, as rice is with the Orientals. It is deservedly popular because it contains nearly all the elements that make perfect nourishment for the physical nature. It has 65 per cent of starch, 20 per cent of the nitrogenous principles, and some sugar, gum and oil. But little more is needed for developing a healthy body, and, as an example of its use, we have the yeomanry of Scotland, with whom oatmeal is almost exclusively the article of diet. As a result, we find a people possessing all the characteristics of perfect health and vigor of body and mind. The firm, well-rounded muscle, the clear complexion, the silky glossiness of the hair, are more the result of their oatmeal diet than of any other one thing. Years ago, when Dr. Johnson first published his dictionary, he defined oats as a grain, which in England was fed to horses, in Scotland to men. An old Scotchman foundly remarked: "And where else do you find such horses, and where else do you find such men?"

BOVINE VIRUS, or that taken directly from the cow, is undoubtedly the best that can be used as a preventive from smallpox, where proper precautions and arrangements are made for obtaining it, and where it can be obtained fresh and pure. Such virus is always reliable and is to be recommended. But there is strong reason to believe, and such is the opinion of the highest authorities on this subject, that humanized virus, obtained from the arm of a healthy child, loses none of its protective efficacy, even when propagated through generations.

LONGEVITY.—The three most remarkable cases of long life are those of Thomas Parr, Henry Jenkins, a Yorkshireman, and the Countess of Desmond. Parr lived to be 152 years old; Jenkins is said to have reached 169 years, though the case is not so well authenticated. The Countess of Desmond reached 142 years. It would appear from the recent reports of individual cases that the present was about to become a special era of longevity.

Pomologists at Glendora.

The Los Angeles County Pomological Society held its eleventh quarterly meeting on the 12th ultimo at Glendora, in the San Gabriel valley, 27 miles from Los Angeles. The hall wherein the meeting was held had been tastefully decorated with evergreens and flowers, and excellent music was furnished by ladies and gentlemen of the local glee club. Fine exhibits were made of oranges, lemons and apples from Duarte, Covina, Azusa, Gladstone and Glendora. The visitors were many and attentive, and 15 new members were added.

An interesting address of welcome was given by Geo. D. Whitcomb, and responded to by Hiram Hamilton, president of the society.

The first subject discussed was "Crystallization and Evaporation of Fruit." It was thought much greater attention should be given to the drying, canning and crystallizing of our fruits. Let the fruit-growers combine, build their own canneries and reap what profit there may be in that industry.

"The Curing of Lemons" was next considered. The Eureka, Lisbon and Genoa were thought especially desirable. The Eureka is a thornless, sweet-rind, seedless lemon, and seems preferable to all other varieties. Lemons should be picked before they are fully yellowed, placed in piles on the ground under the trees, and covered with alfalfa hay, or straw, until they have passed through the sweating process. They may then be carefully packed with an assurance that they will keep well for months.

"Fertilization of Orchards" was discussed at some length, and the prevailing opinion appeared to be that there is little danger of getting any soil too rich, especially for citrus culture.

The president and secretary of the society were deputed to request our Senators and Representatives in Congress to give their earnest aid toward the establishment and generous support of agricultural experimental stations in the various States, as contemplated under the Hatch bill, and that an especial effort be made in behalf of such a station in Southern California.

The people of Glendora entertained their guests so hospitably that it was voted to hold the next (which will be the fourth annual) meeting at the same place on Thursday, April 5th, when papers are to be presented as follows: "Irrigating Vines and Deciduous Trees," by Milton Thomas of Los Angeles; "Alkali in Soils and Methods of Reclamation," Hiram Hamilton of Orange; "Cold Storage," W. R. Barbour of Azusa; "Best Varieties of Citrus Fruit and the Best Methods of Culture," T. A. Garey of Los Angeles.

After taking measures to have the county's splendid fruits worthily represented at the fair in Riverside this week, the meeting adjourned.

"Can't Afford to Do Without it."

We received the following, last week, from a gentleman in Contra Costa county:

Please find inclosed \$3 for the RURAL PRESS for 1888. My father (recently deceased) has been a subscriber since its beginning, and pronounced it the most valuable agricultural paper on the coast, and I can't afford to do without it. Please send Dewey's Patent Elastic Binder, also.

Black Scale.

December 29, 1887.
Messrs. Woodin & Little, 509 and 511 Market St., S. F., Cal.—GENTLEMEN: Referring to Prof. Ongerth's Liquid Tree Protector, I desire to say that about two months ago I found quite a percentage of my olive trees infested with the black scale. In some instances the tree was entirely enveloped by a black smut, while the branches, to the very extreme tips of the tender shoots, were covered with the young scale. I sprayed my trees once only with the Tree Protector. The effect was wonderful. It not only completely and entirely destroyed the scale, but it seems to have invigorated the growth of the tree. It is all and more than all you claim for it.

Very respectfully,

THOMAS BECK, U. S. Appraiser.

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This fertile tract of land, containing 7725 acres, has been platted into 60 farms suitable for mixed farming and fruit growing. It is four miles from Salinas City, Monterey County, and will be sold at low prices and on liberal terms. Address J. C. Hoag, 312 Van Ness avenue, San Francisco, or Tyler Beach, San Jose, Cal.

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To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,

T. A. SLOCUM, M. C., 181 Pearl St., New York.

SAMUEL WILSON, Seedsman, Mechanicsville, Pa., whose advertisement appears in this issue, is not only a large grower of flower and vegetable seeds, but makes a specialty of introducing new and good varieties of corn, oats, potatoes, etc., besides dealing in all the best and finest breeds of poultry. His illustrated 100-page catalogue will be sent free to a 1 who apply for it.

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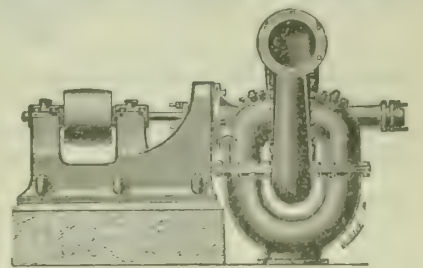
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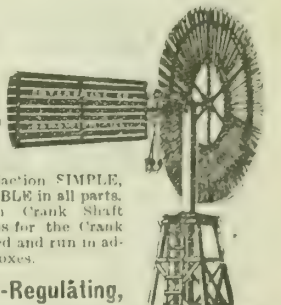
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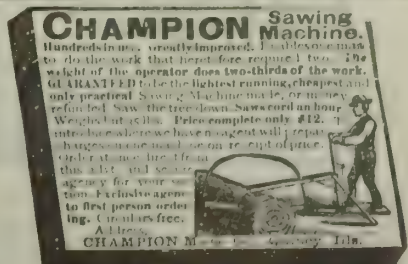
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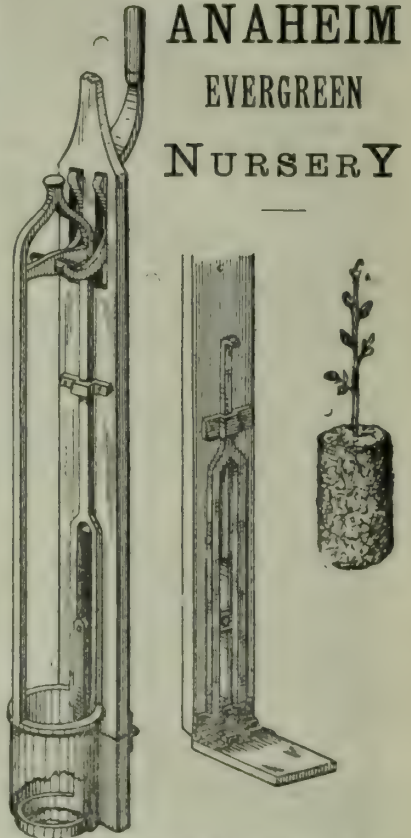
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they can obtain elsewhere. Send for free circulars of infor-
mation. Office of the MINING AND SCIENTIFIC PRESS and
PACIFIC RURAL PRESS, No. 220 Market St., San Francisco
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ORANGE TREES FOR SALE

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The Oldest Established Nursery in Los
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100,000 1 and 2-year old Orange and
Lemon Seedling Trees.

150,000 Blue Gum and Monterey Cypress
IN BOXES.

A large stock of Italian and Weeping Cypress, Pines
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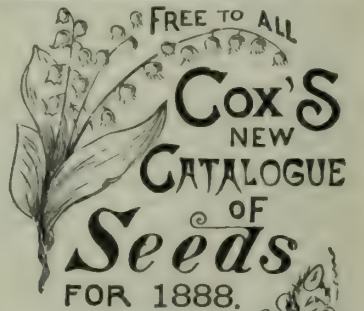
50,000 Fruit Trees of all kinds.

The Evergreen Trees are taken up with my

PATENT TRANSPLANTER,

With a ball of earth around the roots, just as if they
came out of a flower pot.

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Box 61, Anaheim, Los Angeles Co., Cal.



Our New Catalogue for 1888, mailed free on appli-
cation, contains description and price of Vegetable,
Flower, Grass, Clover, Tree and Field Seeds; Australian
Tree and Shrub Seeds; native California Tree and Flower
Seeds, Fruit Trees, and many new novelties introduced
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Catalpa Speciosa White
Ash European Larch,
Pines, Spruces, Arbor
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ciosa Seed. Forest and
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Bartlett Pear Stock for Sale.

5000 Bartlett Pear Trees, one and two years old, for
sale at bed rock prices; special rates to dealers.

H. B. MURPHY, San Bernardino, Cal.

Seeds, Etc., Continued on Page 130.

LOOK AT THIS.

Parties willing to invest in an Improved
Grape Picking Implement, as well as some other
improvements in Horticultural and Garden
Tools, efficient and cheaply made, will do well
to address

R. F. TALMADGE,
SANTA ROSA, CAL.

Labor and the Laborer in California.

A Report to the State Board of Trade.

The California State Board of Trade recently appointed a committee, of which Hon. M. M. Estee is chairman, to prepare a report on labor and the conditions affecting the laborer in California. The following report was submitted at the meeting on Tuesday of this week:

We know of no place where the man who seeks employment can do better than in California. The success of men who toil depends largely on the three questions of, first, steady employment; second, good wages; third, cheap living.

Steady employment is all-important. The opportunities that laborers have in California to get work and the facilities for doing the work they have make this the best place for the bread-winner to live in. In this State and in almost every field of industry where skilled or unskilled labor is employed, the worker gets a fair reward; for the labor market of California has never yet been fully supplied. Owing to the salubrity of the climate a man can work more days in the year and accomplish more in a given number of days than in any other place, for the heat is never oppressive and the cold is never severe.

And if he can work here more days than elsewhere, he necessarily receives more wages, because the employer can afford to purchase labor the year around if the work can be well done and seasonably done, in winter as well as in summer. There is nothing in the climate of California to prohibit even farm work from being done during all the winter months.

Then we submit that as steady employment is of the first importance to the man who must work even at the wages paid elsewhere, he can earn more and save more here.

The bricklayer in California can work at his trade at least ten months in the year; the plasterer can work every day in the year; cold weather never impedes or interferes with the exercise of his trade. The carpenters and builders construct houses in all of our cities and towns the year around, and although during the rainy season they may be obliged to stop work for a week at a time (if the building is not inclosed), yet, as a rule, building goes on in California from one year's end to the other without any permanent or marked intermission.

The farmer in California commences plowing the moment the rain falls, say in November, and plows and sows until his grain is all in, say in February. Then if he has a vineyard or an orchard, he commences to prune and cultivate, and continues to plow and cultivate them until about the time haying and harvesting begin, which is in May of each year. From that time on he harvests his grain until the last of October. Rain never injures his crop or stops his work.

It will thus be observed that the laborer who does any portion of his work outdoors has more time to do it in California than in any other part of the United States. That the farmer has more time to sow his grain and a longer time to securely harvest it than in any other place in the world. This is attributable to the fact that we have no severe winters or heavy frosts, and that the summer is rainless and warm with cool nights. To be exact, our winter is simply a rainstorm and our summer is rainless.

Wages.

The wages of unskilled farm-hands in California is from \$20 to \$30 a month. The average wages is \$1 a day and board. This includes ten months of the year. The other two months of the year during the harvesting the same man gets from \$1.50 to \$2.50 a day and board.

Lumbermen and loggers receive from \$40 to \$90 a month and board, depending on what they do. Mechanics in every branch of skilled labor receive in California from \$3 to \$6 a day.

I have been informed by the officers in charge of the railroad works shops at Sacramento, where nearly 2000 men are employed, that the mechanics there receive from \$3 to \$5 a day, depending on the department they work in and their ability to do.

It is stated by the heads of the Educational Departments in this State that the average salaries paid female teachers throughout the State is from \$60 to \$85 per month. As a rule they board themselves. Girls as house-servants receive from \$20 to \$30 a month and board. Good teamsters are never paid less than from \$25 to \$40 a month. And the demand for all of the above classes of labor has never yet been fully met.

Price of Labor East.

The most instructive lessons as to the advantages of our State over any other State of the Union, relative to the labor question, can be obtained by comparing the prices paid for labor in other States of the Union with the prices here, the amount of time in each year that the laborer here and there can work, the opportunities to get work in the two sections and the prices paid for living here and there.

In New York, Boston and Philadelphia, wages of skilled laborers in all the various trades practiced in these cities average from 10 to 35 per cent less than they do in California, and except only in large factories these skilled laborers cannot get work at their trades but a part of the year.

It was officially reported by the heads of some of the industrial societies in the East that carpenters did not average to work more than seven or eight months of the year; plasterers

not over six months of the year; bricklayers not to exceed six or seven months of the year, and it is a well-known fact that farm hands only get employment, as a rule, from six to eight months of the year.

We learn from official sources that in all the great Central and Northern States of the Union, farm laborers receive not to exceed from \$14 to \$20 a month for a term of six to eight months of the year. In the Southern States labor is not near so high. Female house-servants get from \$8 to \$12 a month in New York, Boston and Philadelphia, and female school-teachers throughout New England and the Central States of the Union receive only from \$16 to \$50 a month, and that for but a part of the year. Not one of the above list of toilers has continuous employment except the house-servants.

There is a large class of people working in factories in New England, New York and Pennsylvania, who mostly work by the piece, and who have continuous employment, but they labor for such small wages that continuous employment only serves to give them continuous bread.

Cheap Living.

California is especially a food-producing country. The supply of all the breadstuffs, fruits, meats and fish far exceeds the demand. The result is that all the foods are cheaper in San Francisco by from 10 to 50 per cent than in any seaport town of the United States.

Good meats are cheaper in San Francisco, according to the published schedules of prices, than they are in New York by 30 per cent. Fruits are cheaper in San Francisco than anywhere in any of the large cities of the Eastern States by over 50 per cent. And so along the entire list of what man eats, California furnishes the necessities of life cheaper than any other State of the Union, excepting possibly Oregon.

To show the condition of the laboring classes of California, we refer to the report of the Bank Commissioners of this State, in which it appears there are on deposit in the banks of savings of California, sixty-two millions of dollars. The population of our State at this time does not exceed 1,150,000. The population of the whole Union has been estimated at 65,000,000 of people. By returns from the proper authorities it appears there are less than \$1,200,000,000 in all of the savings banks of our country. It will thus be seen that California has one-twentieth of all the money deposited in the savings banks in the country, and yet our population is only about one fifty-sixth of the population of the whole nation. And although this is a new country, and isolated from the great populous and monetary centers of the world, yet our laboring people—those who make deposits in savings banks and who live by their toil—are better off by a vast percentage than any other like number of people in the United States or in the world.

Our products here are so varied, and the lines of labor so many, that the opportunities for every man and woman who wishes to toil to get remunerative employment surpass any other place within our knowledge.

In this connection, and to add to what has been already said, we may observe that as grain is sown at a different season in this State than in any other State in the Union, and that harvesting continues for a much longer period here than elsewhere, the interval between the sowing of the grain and the harvesting of it is so large that the intermediate time is filled up and more than filled up by the use of labor in the great and growing industry of horticulture and viticulture.

To repeat, our grain-fields are sown and cultivated in the winter months. Our orchards and vineyards are cultivated during the months of March, April and May. Our harvesting and haying are done chiefly during the months of June, July and August, while our vintage is carried on during the months of September and October.

Thus every hour may be well employed, and for these reasons. There is not a day in the year when there is not a demand for farm labor, and this demand is increasing most rapidly. The unquestioned salubrity of our climate and our freedom from malarial diseases gives to the laboring man a greater certainty and stronger probability of continued health and the physical ability to work than in any other place. Add the further fact that men of families require less fuel here to supply their homes and less clothing to secure warmth to their children, makes California the most attractive place on the face of the globe for a poor man to live in.

Our productions are so varied, the establishment of new industries is so rapidly increasing, that the chances for a poor man to establish a business for himself and his family are greater here than in most countries. For be it known that the public lands of this nation are nearly all occupied, so that now when one undertakes to make a home of his own, or build up a business for himself, he must do it outside of the generosity of the nation or the liberality of the land laws of the country.

The great ranches of California are now being divided up and sold in small parcels, and on long time and liberal terms, so that men of small means can find favorable investments for the little they now have, and for the accumulations they hope to have in the future. Small fruit farms pay in California because more fruit, and as a rule better fruit, is produced from the same amount of land here, and by a like amount of labor than anywhere else.

In conclusion we say: If a genial climate, a

fertile soil, sunny skies, a balmy, health-giving atmosphere, and scenery of unsurpassed beauty are useful and attractive to any man, they ought to be to the man who lives in their presence, he who toils.

M. M. ESTEE, Chairman.

D. B. WIER of Lacon, Ill., is well known among the fruit-growers of the United States for the interest he has taken in developing native plums. He was at the San Jose session of the American Horticulturists, and on Friday of last week made a short call at the PRESS office, accompanied by Mrs. Wier. They then expected to attend the second meeting of the society, and we trust they are now enjoying the session and show at Riverside.

COMMISSIONERS AT MELBOURNE. — Under recent Act of Congress, the President is to appoint the Chief Commissioner and four Assistant Commissioners to take charge of the American exhibit at the Melbourne Exposition. Representative Morrow has been consulted respecting the choice of a man for Chief Commissioner, and it is possible that Wm. T. Coleman may be selected.

HE DID NOT SAY IT.—An erroneous statement, ascribed to Prof. W. G. Klee, State Inspector of Fruit Pests, has been going the rounds of the papers to the effect that all orange trees under four years of age in the Sacramento valley were killed by the cold snap of last month. We understand that Inspector Klee has stated no such thing.

ANNEXATION OF CANADA.

The Disastrous Attempt to Accomplish It by Force—A Famous Retreat.

The present agitation concerning the relations between Canada and the United States recalls the time when the annexation of that country was proposed to be brought about by force of arms. The project was intruded to the brave General Montgomery, assisted by the famous patriots, Colonels Ethan Allen and Seth Warner. While engaged in this invasion Ethan Allen was taken prisoner by the British and sent to England, where he experienced very harsh treatment.

It was Colonel Warner who twice conducted his men safely home, though the march was constantly surrounded by dangers. Once Montgomery sent them home because their time was out, and though they were willing to continue in service, they were without sufficient clothing, and none could be had in that country.

Colonel Warner had hardly arrived home before he heard that Montgomery had been killed, and the cause, as well as the lives of the men, were put in great jeopardy. He collected his men again and at once started for Canada to assist his countrymen in their extremity. But his efforts were of no avail, and it was soon found necessary to take up the line of retreat.

It was the dead of winter, and only necessity sanctioned moving the troops. The terror of pursuit, and the rigor of the season, furnished sufficient cause for alarm and haste. Colonel Warner remained with the rear of the army, and aided them in many ways most effectually, as he was a man well posted in caring for the sick, and this knowledge now came into excellent use.

He must keep the army in motion, not a day must be lost, and yet he was without any chest of medicines. But he understood the medicinal use of roots and herbs, and of proper care at critical times, and with these allies he made an effectual fight against disease among his men.

When Ticonderoga was reached and the roll called, thanks to Seth Warner, but few vacancies in the ranks appeared.

Colonel Warner saved the lives of hundreds of men in this way, and he did a noble work, but it remained for his namesake, H. H. Warner, head of Warner's Safe Cure establishment, to give the same kind of remedies then used to the people of to-day, in "Warner's Log Cabin Remedies." These remedies have been adopted after thorough trial and investigation, and they are remedies of established reputation. Being wholly vegetable, they can be used without any fear as to the results.

Among the new remedies is a Sarsaparilla for the blood, Hops and Buchu for the stomach and digestion, Cough and Consumption Remedy, Scalpine for the head and hair, Rose Cream for that terrible disease, catarrh, a Log Cabin Liver Pill, a Log Cabin Plaster and an Extract for internal and external use. Our readers may rest assured that there is merit in every article.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING JANUARY 31, 1888.

377,352.—HAND-CAR—Deodatus Chapel, S. F. 377,007.—HARVESTER—J. B. Gemmill, Red Bluff, Cal.

377,115.—TESTING THE FAIRNESS OF ENGINE CRANK SHAFTS—John Paterson, S. F.

377,272.—AMALGAMATOR—N. L. Raber, Corvallis, Ogn.

377,274.—TRACTION ENGINE—D. L. F. Remington, Woodburn, Ogn.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

F. B. LOGAN—Santa Clara Co.
JOHN G. H. LAMPADUS—San Benito Co.
G. W. INGALLS—Arizona Territory.
WM. WILKINSON—San Joaquin and Stanislaus Co.'s.
A. F. JEWETT—Tulare Co.
E. H. SCHAEFFLE—El Dorado and Amador Co.'s.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
R. G. HUSTON—Montana Territory.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to anyone who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

BONNIE BELLE THE SECOND is the name of a notable cow owned by Col. A. Younger of San Jose, the portrait of which was painted by A. P. Hill, and appropriately exhibited at the Citrus Fair at San Jose. The animal is a fine thoroughbred, and Hill's painting a remarkably good counterfeit.

CORRECTION.—By a very annoying blunder in our article headed "Cook Stock Farm," our types last week spoke of "Steinway," at a four-year-old, showing 2:51, when the figures should have been 2:21. We desire to take off that half minute!

THE SEED AND PLANT CATALOGUE of Sevin Vincent & Co. (whose advertisement may be found elsewhere in this issue) contains, besides many well-executed cuts, two full-page colored plates of vegetables and Trimardean pansies in variety.

The Woolly Aphis.

WALNUT GROVE, CAL., Jan. 5, 1888.

Mr. Charles J. Woodbury, 123 California St., S. F., Cal.—DEAR SIR: Yours of the 3d inst. to hand last evening. In regard to the Woolly Aphis, I can only give you my experience. When I came here, my apple trees were badly infested with Aphis, so I washed them thoroughly to exterminate and have not seen any signs of the Aphis since, which has been over two years. Yours respectfully, L. D. GREENE.

I will remark that I have known of no case where my tree-cleaner has not been perfectly successful as an antidote for the Woolly Aphis.

Full directions accompany its use. Price, 3½ cents per pound in cases, 80 pounds in a case; in 8-pound cans same price, 15 cents extra for can. In barrels, 3½ cents per pound, 10 per cent off, 400 pounds in a barrel. I also manufacture the fine Anti-Gumming Farm Machine Oils and General Lubricating Oils.

Address CHARLES J. WOODBURY, 123 California St., S. F., Cal.

Ongerth's Tree Protector.

WOODIN & LITTLE, Agents, 509 and 511 Market St., San Francisco, Cal.—GENTLEMEN: In reply to yours of the 29th ult., as to effects of your Liquid Tree Protector on the tree you treated for me last April, I would say that where the wash was applied the insects of all sorts are certainly killed. The wash is still on the tree, and the bark under it shows a healthy and lively appearance. I was afraid for awhile that owing to its gummy feeling and appearance the pores of the bark might be closed to the great detriment of the tree, but so far I am glad to say there have been no indications of any ground for my fears. I am so well satisfied of this that I shall entirely paint the trunks and larger branches of all my trees with your preparation this winter.

I would add that your Grafting Compound is the best preparation I ever saw for covering wounds on trees, and it is apparently not affected by any sort of weather. Yours very truly, R. D. FOX, Proprietor Santa Clara Valley Nurseries, San Jose, Dec. 5, 1887.

THE reader will observe a change in Mr. Atherton's advertisement of lands to be leased in Monterey county. While some portions of the tract are suitable for grazing, others can be rented for cultivation, if desired.

Now is the time to subscribe for the RURAL PRESS, the best agricultural paper published on the coast. It is worth \$10 a year to every farmer.—Shasta County Index.

ROOFING!

BLACK DIAMOND BRAND

PREPARED ROOFING

CHEAPEST & BEST ROOF

YOU CAN PUT IT ON YOURSELF.

IN USE

FIRE AND WATER PROOF

FOR ANY ROOF AND ANY CLIMATE.

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SOLE MANUFACTURERS.

113 N. 8th St., ST. LOUIS, MO.

W. E. CAMPE, AGENT.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Record Short Hens and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. E. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen-Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Geo. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

JERSEYS—THE BEST HERD—All A. J. C. C. registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands; Angrie's and Case Strains. Punch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

POULTRY.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

JAS. T. BROWN'S successor, A. C. Ruschhaupt, 18 Georgia St., Los Angeles, Cal., importer of Thoroughbred Poultry of the leading varieties. Fowls and Eggs for sale. Price list free.

JAS. MITCHELL, St. Helena, Cal., breeds only Wyandottes from choice imported stock.

PIEDMONT POULTRY YARDS, cor. Piedmont Ave. & Booth St., Oakland. Wyandottes, L. Brahmas, P. Rocks, Langshans, B. Leghorns, B. B. R. G. Ban'tams. Eggs \$2 for 13; circular free; Mrs. J. N. Lund, Box 116.

THOS. WAITE, Perkins, Sacramento Co., importer & breeder of thoroughbred fowls of all leading varieties.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, L. Brahmas, Houdans. Eggs, \$2.

H. J. GODFREY, Box 135, San Leandro, Cal. Thoroughbred Plymouth Rocks. Eggs, \$2 per 13.

T. D. MORRIS, Sonoma, Cal. Tuolouse and Embden Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

O. J. ALBEE, Lawrence, Cal., breeder and importer.

D. H. EVERETT, 1616 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

E. C. CLAPP, South Pasadena, Cal. Light Brahmas (Williams-Foot stock), Plymouth Rocks (Kieffer-Conger stock). Fowls and Eggs in season. No circulars; write for wants.

SHEEP AND GOATS.

F. BULLARD, Woodland, Cal., importer and breeder of Spanish Merino Sheep. Premium band of the State. Choice bucks and ewes for sale.

J. B. HOYT, Bird's Landing, Cal., importer and breeder of Shropshire Sheep; also breeds cross-bred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer, South Down of Long John Wentworth herd for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

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E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

SWINE.

I. L. DICKINSON, Central Point, Merced Co., Cal., breeder of thoroughbred Essex Hogs. Pigs now ready for sale. Prices reasonable.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

ABERDEEN ANGUS CATTLE!



A. B. MATHEWS has arrived from KANSAS CITY, Mo.,

32 Head of the famous Polled-Angus,

THOROUGHbred BULLS & HEIFERS,

Which he Offers for Sale.

These Cattle are now on view at No. 70 New Montgomery St., San Francisco. Intending purchasers and others interested in FINE BEEF STOCK are cordially invited to inspect them.



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FOR ALL KINDS OF

BRITISH HORSES.

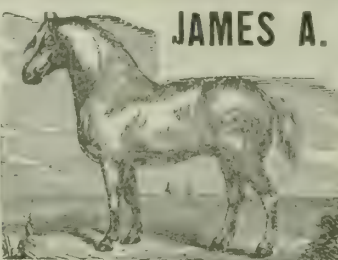
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Of Janesville, Wisconsin, have imported during the present season over 200 STALLIONS, including:

Clydesdale, English Shire, Suffolk Punch, Hackney, Cleveland bay, and Yorkshire Coach Horses.

More prize winning, high-class stock, imported by us than any three firms in America. Superior horses, fashionable pedigrees and all guaranteed good breeders. Prices and terms to suit everybody. Visitors cordially invited. GALBRAITH BROS., Janesville, Wis.



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OF RIVER VIEW STOCK FARM, WILMINGTON, ILL.
IMPORTER AND BREEDER OF

French Draft Horses,

Is now located at PETALUMA STABLES, at Petaluma, Cal., and has for sale the finest collection of

FRENCH DRAFT STALLIONS

Ever brought to Petaluma, which he offers for sale at uncompetitive terms and prices. Catalogues and full information promptly sent to parties wishing to buy. Address

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BY APRIL NEXT, WE HAVE DECIDED TO OFFER OUR

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300 CLEVELAND BAYS AND ENGLISH SHIRES. 300

All Young and vigorous Stock, nearly all Imported as yearlings and grown upon our farms here, therefore thoroughly acclimated. Stallions and Mares of all ages, and Choicest Breeding. Also our Celebrated Herd of 150 HOLSTEIN-FRIESIANS at very much reduced prices rather than incur the expense and risk of an auction. A rare opportunity to secure first-class stock at low figures. Send for Illustrated Descriptive Pamphlet, and mention this paper. GEO. E. BROWN & CO., Aurora, Kane Co., Ill.

HOLSTEIN-FRIESIANS, CLYDESDALE, FRENCH COACH AND HAMBLETONIAN HORSES.

LAKEVIEW STOCK FARM has



The only Cow that has given 26,021 lbs. 2 ozs. of milk in a year.
The only four-year-old that has given 23,602 lbs. 10 ozs. in a year.
The only two-year-old that has given 18,454 lbs. 13 ozs. in a year.
The only herd of mature cows that has averaged 17,166 lbs. 1 oz. in a year.
The only herd of two-year-olds that has averaged 12,465 lbs. 7 ozs. in a year.
The only two-year-old Holstein-Friesian that has made 21 lbs. 10 1/2 ozs. of butter in a week.
Fifty-two cows in this herd averaged 20 lbs. of butter in a week.
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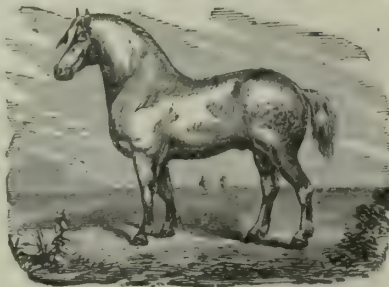
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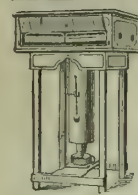
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Insoluble Phosphoric Acid......2.83 "
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use by the cultivators of the soil generally, in Cali-
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culture.

BERKELEY, Nov. 20, 1886.

Dr. J. Korb—Dear Sir: I take pleas-
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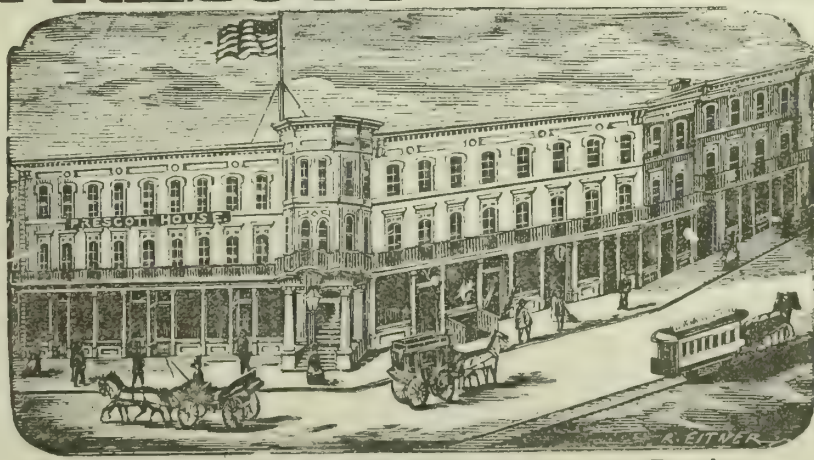
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So can you. Proofs and catalogue free.
J. E. SHEPARD & Co., Cincinnati, O.

S. F. MARKET REPORT

Weekly Market Review.
DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 8, 1888.

Fine weather the past week allowed of active outdoor work, which was taken advantage of in all parts of the State. There was more trading the past week in farm products, with considerable fluctuations in some lines. The Eastern and European wheat markets advanced under war rumors, up to Monday, when they eased off, owing to Prince Bismarck's peace speech. To-day's cable from England is as follows:

LIVERPOOL, Feb. 8.—Wheat—Depressed. California spot lots, 6s 5d @ 6s 8d; off coast, 33s 6d @ 33s 9d; just shipped, 33s 9d; nearly due, 33s 6d; cargoes off coast, slow; on passage, very dull; Mark Lane wheat, quiet; French country markets, turn dealer; wheat on passage to Continent, 169,000 qrs.; wheat and flour on passage to U. K., 1,385,000 qrs.; wheat and flour in Paris, firm.

Local Markets.

BAGS—The market for Calcuttas is not so firmly reported by the pool. The demand is slack. Quotations given are 7½¢ to 7¾¢ for June-July delivery.

BARLEY—Under continued hammering of bears on Call, and freer offerings of poor feed, at almost any price, buyers are trying to get choice feed down, but as yet without success. Both brewing and malting are stronger. On Call, trading the past week was fairly active. Futures advanced 1½¢, which was lost on Tuesday and today. To-day's sales are as follows:

Morning Session: Buyer season—100 tons, 85½¢ @ ctt. Afternoon Session: Buyer season—100 tons, 85½¢ @ ctt. 200, 85½¢ @ ctt. 400, 85¢ @ ctt. 600, 84½¢ @ ctt. Buyer 1888—600 tons, 90½¢ @ ctt; 100, 90½¢ @ ctt.

BUTTER—The market is easy at the lower quotations. Some very choice western in tubs is on the market, which finds good custom owing to the low prices and actual weight given. Receipts of Californian are increasing.

CHEESE—New is in better receipt, but prices are unchanged, owing to a good demand in a small way.

EGGS—Heavy receipts of good to choice eastern and freer receipts of Californian have caused the market to shade off, with a weak closing.

FLOUR—The market is steady with a good demand reported.

WHEAT—Choice grades of wheat are scarce and in good demand so as to bring cargoes up to a certain standard. The bulk of the wheat now offering is only fair. The engaged tonnage in port is quite large, notwithstanding the free loading that has been going on the past two months. On Call, futures have been more active with more fluctuations. They advanced up to Monday, then fell back 20 per cent, closing steadier to-day. To-day's sales on Call are as follows:

Morning Session: Buyer season—300 tons, \$1.40; 1500, \$1.40½ @ ctt. Afternoon Session: Buyer season—100 tons, \$1.39½; 1300, \$1.39½. Buyer 1888—200 tons, \$1.40½ @ ctt.

Foreign Review.

LONDON, Feb. 6.—The *Mark Lane Express*, in its weekly review of the British grain trade during the past week, says: During the past week the price of native wheats continue against sellers. The sales of English wheat during the week were 60,747 qrs., at 30s 8d, against 44,371 qrs. at 34s for the corresponding week last year. Flour dull, and country markets depressed by the immense quantity of foreign products. Foreign wheat keeps weakening and sellers have accepted 6d less. Liverpool quotations are 1d @ ctt lower. Corn, lower. Barley, oats and linseed, dull.

Eastern Wool Markets.

NEW YORK, Feb. 7.—The supplies of wool are not oppressive, especially of clothing grades. Buyers seem satisfied with prices and take samples in an earnest way. The sales include 20,000 lbs on private terms; 5000 ¼ blood clothing, 37¢; X Ohio, 30¢; 10,000 New York and Michigan, 29¢; 20,000 X and XX, 31¢ @ 32½¢; 10,000 unwashed ¾ blood combing, 28¢; 25,000 Oregon, 19¢; 50,000 Territory, 17¢ @ 24¢; 50,000 fall Texas, 17¢ @ 18¢; 84,000 do., 15¢ @ 17¢; 249,000 domestic, 33¢; Noils, 12,000 Mexican; 10,000 foreign clothing; 250,000 Mediterranean carpet; 184 bags foreign on private terms. Philadelphia reports a good market for a broken line of stock. The Boston market is very active, including sales of 350,000 lbs California on private terms. London cables report that the attendance at the wool sales is large, bidding active and prices very firm, especially for cross-bred merino and Cape of Good Hope and Natal. Continental buyers took the larger proportion, though home operators bought more freely. American buyers were reserved.

Eastern Grain Markets.

CHICAGO, Feb. 8.—Wheat, steady; cash, 75¢; March, 75½¢; May, 80½¢. Corn, easy; cash, 45½¢; March, 46¢; May, 50¢ @ 11-16¢. Oats, steady; May, 31¢.

NEW YORK, Feb. 8.—Wheat, 90¢; cash, 88½¢ for Feb., 89½¢ for March, 90½¢ @ 90¾¢ for April, 91¢ @ 91½¢ for May and 91¢ @ 91½¢ for June.

New York Raisin Market.

NEW YORK, Feb. 8.—A canvass of the raisin market at this port indicates still great opportunities for California raisins. A statement of the foreign crop shows that on Dec. 31 there were 42,000 boxes of Malaga raisins, crop of 1887, on hand here, and 500,000 boxes were received in January. There were 100,000 boxes Valencia raisins, crop of 1887, on hand Dec. 31, and 122,600 boxes were received in January and 74,000 boxes are on the way to this port. It is believed here that California could market this additional amount of raisins here, 350,000 boxes, under favorable circumstances.

California Products in Chicago.

CHICAGO, Feb. 4.—Prices in oranges from California show no special change to-day. Receipts as yet are very light. Prices range from \$3 @ 1.50 @ box, according to quality. Moderate business is being done in California dried fruits. There is a liberal stock

still in first hands. Holders are steady, and former prices are maintained. Peaches and raisins are in fair request, and small lots of other lines are also selling. Peaches, sun-dried, in sacks, ½ lb, 10½¢ @ 12½¢; do, evaporated, unpeeled, in sacks, ½ lb, 12½¢ @ 16¢; do, boxes, ½ lb, 16¢ @ 17¢; do, peeled, in sacks, ½ lb, 20¢ @ 22¢; do, in boxes, ½ lb, 22¢ @ 25¢; apricots, sun-dried, in sacks, ½ lb, 10¢ @ 12½¢; do, evaporated, in sacks, ½ lb, 13¢ @ 16¢; plums, pitted, in sacks, ½ lb, 12½¢ @ 14¢; prunes, small, ½ lb, 12½¢ @ 14¢; do, fancy large, ½ lb, 13¢ @ 14¢; nectarines, according to quality, in sacks, ½ lb, 13¢ @ 16¢; raisins, loose Muscatels, 2-crown, ½ box, \$1.60 @ 1.65; do, 3-crown, ½ box, \$1.90; do, London layers, ½ box, \$1.90 @ 2.40. Beans remain firm. There are none of consequence on the market, except such as are in second hands. Choice beans will sell readily. California, according to quality, \$2.30 to \$2.50.

Hops were ruling at previous prices. Good brewing hops are selling fairly, and they rule quite firm. Strictly choice hops are also firm, because there are few of them. Common quality do not improve. They remain slow. Choice Pacifics, 12 @ 15¢; common to prime, 8 @ 12¢.

Honey is selling slow and there is a large supply on the market. California strained honey, 7 @ 8¢.

Miscellaneous.

NEW YORK, Feb. 6.—Salmon is in good shape, with Lent close by to help sales. Store rates are: Columbia, \$1.90 @ 2; Oregon and other brands, \$1.65 @ 1.75.

A carload of strained honey here is held rather above the market rates, but its fine grade will invite buyers. Store is quoted at 8¢; for Pacific Coast, 9½¢ is asked.

Raisins are firm, and something better for selections. Crowns range from \$1.40 @ 1.90. Boston paid for 3-crown layers \$2.20 @ 2.30. Other dried and California fruit was quiet.

Hops are dull, locally, with some better export on Call at last week's prices. Old hops are getting bids of 3 @ 4¢ for quality.

Lima beans are firm at \$2.30. White California are quite attractive, with sales at \$2.40 @ 2.60, including Lady Washington and Pea. The latter have obtained real New England favor.

Mustard seed is dull. Yellow, 3½ @ 4½¢; brown, 4½ @ 5¢ from store.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to Feb. 5, '87.	July 1, '87 to Feb. 4, '88.
Flour, gr. sks.	2,903,506	2,256,051
Wheat, cts.	9,854,929	5,841,983
Barley, cts.	1,859,939	1,698,274
Oats, cts.	109,415	135,075
Potatoes, sks.	629,086	772,845
Corn, sks.	62,309	142,925
Rye, sks.	17,749	15,109
Buckwheat, sks.	5,282	2,582
Beans, sks.	376,151	342,758
Bran, sks.	307,463	314,117
Hay, tons.	66,677	77,615
Salt, tons.	14,693	10,680
Wool, bls.	45,107	39,422
Hides, No.	68,766	63,082
Raisins, 20-lb boxes.	130,955	100,942
Quicksilver, flasks.	10,417	10,472
Hops, bls.	12,502	14,529

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to Feb. 5, '87.	July 1 '87 to Feb. 4, '88.
Flour, sks.	78,411	164,876
Wheat, cts.	348,316	638,988
Barley, cts.	1,985	75
Oats, cts.	249,542	150,925
Corn, cts.	64,819	12,590
Wool, bales.	9,060	7,281
Bran, sks.	27,918	44,408
Hops, bales.	753	321
Hides, No.	20,502	20,596
Potatoes, sks.	57,014	9,400

Cereals.

H. Kains Jackson writing in the *Farmer and The Chamber of Agriculture Journal*, of London, on January 16, says: At the beginning of a new year we turn with interest to our principal sources of wheat supply, with a view of seeing from whence our home deficiencies may best be supplemented. In the first place stand the United States, a combination of commonwealths, growing wheat under widely differing methods of long passages by Cape Horn, or short, rapid, frequently steamer, transit across the Atlantic. The United States, of which the area exceeds that of Europe, have come to require, agriculturally speaking, at least a four-fold division—into Eastern, Southern, Western and Pacific commonwealths. The Eastern commonwealth is the earliest wheat-growing district in America, but population has overtaken production, as in England, and this district is now beginning to figure as an import power. The Southern region grows but little wheat, and eats but little. This small production is due neither to discouragement nor dislike, but simply to the fact that the crops which are only to be grown in a very warm climate pay better, generally speaking, than those cultivable over the whole temperate zone. Oranges, cotton, and so forth, the special productions of the South, crowd out the wheat, but, in case of any important rise in wheat prices, the South could largely increase its wheat area. For the time being, however, it may be put on one side as a wheat-producer. The third great group of States is that of the West, and here the wheat acreage is still increasing. Production per acre, however, is diminishing on all the older lands, and so the net out-turn year by year is about the same. The Pacific States show a small increase in wheat cultivation, but while the yield in a good year allows of handsome profits, there are heavy losses sustained in seasons of deficient rainfall. This tends to the extirpation of small farmers, and to the concentration of stocks in the hands of a small number of firm holders. The United States on the whole, therefore, do not threaten any increase in exports, but rather the contrary, and the large Californian surplus is likely to be kept back whenever there is a fair chance of higher prices in Europe following on such policy of reserve.

STOCKS OF WHEAT AND FLOUR IN EUROPE, NORTH AMERICA AND ON PASSAGE FOR EUROPE DEC. 31.

	1885.	1886.	1887.
United Kingdom.	27,500,000	16,000,000	20,500,000
Antwerp French ports.	3,200,000	2,400,000	2,800,000
Odesa.	6,500,000	4,400,000	5,200,000
Paris.	2,200,000	2,300,000	1,200,000
Marseilles.	1,100,000	1,226,326	1,150,275
Brelin.	1,001,340	969,511	765,576
United States' visible wheat, East.	69,787,657	85,280,174	69,779,631
United States' visible wheat, Pacific Coast.	2,000,000	14,908,000	23,200,267
United States' visible flour.	7,977,923	9,111,123	9,163,989
On passage to United Kingdom.	14,296,000	16,552,000	11,096,000
On passage to continent Europe.	1,296,000	5,936,000	1,680,000
Totals, bushels.	130,927,420	158,881,139	147,235,738

San Francisco only.

Compared with Dec. 31, 1886, the stocks at the close of 1887 were, in round numbers, 11,750,000 bu., but compared with the stocks on Dec. 31, 1885, they were, in round numbers, about 10,250,000 bu. more. This season the corn crop was below an average, which is an important factor in promoting the consumption of wheat.

Eastern mail advices report as follows: The receipts of wheat at Atlantic ports are very small. The price of wheat in the West, plus the transportation, is much more than the market price of wheat at the seaports, and wheat consequently does not move to seaboard markets except at the western shippers' loss. In the winter-wheat regions the millers find it difficult to obtain what wheat they want, and consequently have to draw to some extent on the Northwestern spring-wheat States.

Oregon advices again report an active movement in wheat on export account. Vessels on berth are receiving quick dispatch, while there is a steady chartering of others, the low charters ruling being in favor of shippers. California millers are buying freely of the more choice grades at from \$1.26½ @ \$1.30 at Portland.

In this city the market has ruled fairly steady, with good export inquiry. The offerings of the better grades of shipping are light, causing buyers to bid up so as to receive round parcels. A parcel of 350 tons fair to good, in the Grangers' warehouse at Port Costa, was taken at \$1.36½, equal to \$1.37½ to \$1.38½ afloat here. The quantity of wheat in the Port Costa and city warehouses by March 1st will be very greatly reduced, for free chartering of vessels continues in order. The rates of charter are slightly lower than last week. Millers have considerable trouble in finding choice grades of wheat suitable for their purposes. They bid \$1.40 for choice, with a gilt-edged article fetching a slightly higher price.

There has been free buying of choice brewing barley for shipping to the East and better grades of Chevalier to send abroad. Eastern advices report a strong market for choice barley, owing to the light obtainable supplies and also the malting season being near at hand. Brewers in this State are picking up choice parcels. They expect to consume fully 25 per cent more than they did in 1887. The consumption of feed barley continues large. Considerable is being bought in the interior by railroad contractors. It is claimed that several counties are importing quite freely. Bright choice feed is scarce and wanted. A vessel is loading barley at this port for Melbourne, Australia. She will take Chevalier.

Oats are in liberal supply, with freer receipts looked for from Oregon now that navigation is resumed. The demand with us is only fair.

Corn appears to be in a peculiar position. To force sales a shading in prices is necessary, but to buy, full rates with perhaps a slight advance for choice would have to be paid.

Rye is easier under more liberal offerings of eastern. Choice California is not being put on the market at present bids.

Buckwheat is without essential change.

Fruits.

Apples are in good supply. The more choice fetch good prices. There are considerable specked, which are sold at low prices. Receipts from Oregon have been very light, while the East is not sending so many, the extreme cold weather being against shippers.

Oranges are coming in freely, but as the demand is better, prices are steady. The quality is greatly improved. Free shipments to the East from the various orange districts are being made. The upper coast is drawing more freely.

Limes and lemons are in good supply, with prices favoring buyers.

The market is bare of choice London layers. The sole kind of layers are only fair to good, and even these are in light stock, not enough to meet the usual spring trade. Loose Muscatels are also in light stock. It is now conceded that a still higher range will not only obtain for raisins before the new crop season, but shipments will have to be made to this market from the East.

The past fortnight has witnessed an unusual free call for dried fruits, the call being chiefly from the East, although Idaho, Montana, Colorado and Utah are taking quite freely. Sales have aggregated larger than ever before at the like time. As high as 10½¢ was paid for a carload of bright, sun-dried peaches. Parcels that would not be looked at two months ago found purchasers. The demand was not confined to peaches, for all kinds of dried fruits shared in the call. The stock here is very light, not enough for the usual spring trade.

Feedstuff.

Bran is slightly higher. Middlings are stronger. Ground barley is steady, with a good call for the season. Feed meal is quiet, but firm. Oil cake meal continues to meet a fair call.

Hay is without essential change. Very little choice is to be had. That called choice is coarse and of such quality as is only called fair to good in the forepart of the season. The consumption is very large, and with continued unseasonable cold weather the crop this year will be late.

Live-Stock.

Choice bullocks continue in light supply, but poor to fair are in liberal offering at low prices. Stall-fed are taken at 9¢ to 9½¢, the latter price for medium-sized bullocks that cut up without much wastage. Mutton sheep are higher and firm. The

general quality is improving, but offerings are light. Veal is unchanged. Milch cows have been sold in a small way at from \$30 to \$50, the higher prices being choice for family use, although some dairy-men are said to have good prices. The high price of butter and better pasturage cause the better feeling. In horses, there is nothing new to report. There is some inquiry for single-footers, with good prices obtainable for gentle but good steppers. The inquiry for general utility horses is good, as it is also for matched teams. Work horses continue slow.

Hogs are scarce and wanted for the block, as the prices are too high for packers.

The market for dressed meat is quotable as follows by slaughtering to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed, and one-half from the price of grass-fed, that is, animals running at large).

BEEF—Stall-fed, 9 @ 9½¢ per lb.; grass-fed, extra, 8 @ 8½¢ per lb.; first quality, 7½ @ 7¾¢ per lb.; second quality, 6½ @ 7¢ per lb.; third quality, 5½ @ 6½¢ per lb.

VEAL—Choice, 10 @ 12½¢ per lb.; fair to good, 7½ @ 9¢ per lb.

MUTTON—Wethers, 9½ @ 10¢ per lb.; ewes, 9 @ 9½¢ per lb.; lamb-spring, 15 @ 17½¢ per lb.

HOGS—On foot, grain-fed, 6½ @ 6¾¢ per lb.; dressed 9 @ 10¢ per lb.; soft, 5½ @ 6¢ per lb.; dressed, 7½ @ 8½¢ per lb. Stock hogs, 4 @ 5¢ per lb.

Vegetables.

Frosty mornings the past few days have cut down the more tender plants that were set out, besides interfering otherwise with gardening. In the warm belt there is an absence of frost, but still cold nights are experienced which are against growing vegetation.

Some cucumbers came in the past week, and sold at from 12½¢ to 20¢ each. They were grown in a warm place.

The low, declining market for onions lessened receipts and caused a firmer market yesterday, with a slight advance to-day. The demand for choice is good. A shipment was made to the East the past week.

Potatoes are steady for the more choice. Some off qualities are selling at shaded prices. Choice good-keeping are in request for distant orders. Seed varieties are higher.

Cabbages are strong, with receipts only fair, while a good shipping inquiry is reported.

In root vegetables, the market is reported weaker.

Miscellaneous.

Poultry ruled fairly steady throughout the week. Dressed turkeys from Nebraska continue to come in and sell at low prices, as do dressed chickens.

Beans are strong at another advance. Whites are very scarce, and wanted even at the higher quotations. The demand is chiefly from the East. The stock here is hardly enough to meet the coast trade.

In hops, the call is fair, but the light supply of choice restricts trading. The bulk held are poor and undesirable. In wools, there is nothing new to report. Scourers continue to draw on the market. The stock is greatly reduced. Clean, well-conditioned, fine wools are wanted at good prices.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way.	268,189	211,377
In port, disengaged.	81,274	87,273
In port, engaged.	43,230	25,572

Totals. 392,693 324,222

To obtain the carrying capacity, add 60 per cent to the tonnage.

San Francisco, Feb. 8, 1888.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS.	WEDNESDAY, Feb. 8, 1888.
Bayo, cts.	2 50 @ 2 85
Butter,	— @ —
Peas,	3 75 @ 4 35
Red,	2 40 @ 2 75
Pink,	2 40 @ 2 75
Large White,	3 30 @ 4 25
Small White,	4 00 @ 4 35
Lima,	2 75 @ 3 10
Old Peas,	2 00 @ 2 10
do green,	2 00 @ —
do Niles,	2 10 @ —

POTATOES.	WEDNESDAY, Feb. 8, 1888.
Burbank,	1 25 @ 1 50
Early Rose,	1 00 @ 1 25
Curly Gower,	80 @ 1 25
Potatoes,	90 @ 1 25
Tomatoes,	1 00 @ 1 15
River reds,	70 @ 85
Jersey Blues,	1 00 @ 1 15
Humboldt,	— @ —
do Kidney,	— @ —
do Chiles,	1 30 @ 2 00

BROOM CORN.	WEDNESDAY, Feb. 8, 1888.
Southampton, 50 lb @ 75	00
Northampton, 50 lb @ 75	00

CHICKEN.	WEDNESDAY, Feb. 8, 1888.
California,	6 @ 7
German,	7 @ 8

DAIRY PRODUCE, ETC.	WEDNESDAY, Feb. 8, 1888.
Butter,	— @ —
Oal, fresh roll, B.	35 @ 37
do Fancy brands	40 @ 41
Pickle roll,	— @ —
Firkin,	— @ —
Eastern,	22 1/2 @ 32

CHEESE.	WEDNESDAY, Feb. 8, 1888.
Cheddar, Cal., B.	15 @ 16
Eastern style,	14 @ 16
do Swiss,	20 @ 22
Oal, ranch,	30 @ 32
do, store,	27 1/2 @ 30
Ducks,	— @ —
Oregon,	— @ —
Eastern,	30 @ 27 1/2

FEED.	WEDNESDAY, Feb. 8, 1888.
Bran, ton,	16 00 @ 17 50
Feed meal,	26 00 @ 27 00
Grd Barley ton, 18 1/2	50 @ 1 50
Hay,	11 00 @ 12 00
Middlings,	19 00 @ 20 00
Oil Cake Meal, 32 1/2	50 @ —
do new process, 32 1/2	50 @ —
Straw, bales,	50 @ 65

FLOUR.	WEDNESDAY, Feb. 8, 1888.
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HIDES			Orchard.....			17 @	18
Dry.....	12 1/2 @	13	Red Top.....	9 @	10		
Wet salted.....	5 1/2 @	6 1/2	Hungarian.....	8 @	9		
HONEY, ETC.			Lawn.....			30 @	40
Beeswax, lb.....	21 @	25	Mesquit.....	8 @	9		
Honey in comb.....	12 1/2 @	16	Timothy.....	7 @	8		
Honey in comb, fancy.....	16 @	19	TALLOW				
Extracted, light.....	8 1/2 @	7 1/2	Crude, lb.....	2 @	4 1/2		
do dark.....	5 1/2 @	6 1/2	Reined.....	6 @	7		
HOPS.			WOOL, ETC.				
Oregon.....	8 @	15	FALL-1887				
California.....	8 @	15	Humboldt and	15 @	18 1/2		
ONIONS.			Mendocino.....	12 @	15		
Pickling.....	— @	—	Sacramento valley.....	12 @	14 1/2		
Red.....	— @	—	N'hern Mountain.....	10 @	12		
Silverskins.....	1 50 @	1 80	N'hern defective.....	10 @	12		
Cut.....	75 @	1 25	S Joaquin valley.....	10 @	14		
NUTS—JOBBER.			do mountain.....	12 @	15		
Walnuts, Cal. b.....	8 @	10	Cava's & F'tu'l.....	12 @	17		
do Chile.....	8 @	—	Oregon Eastern.....	14 @	20		
Almonds, hshl.....	5 @	7	do valley.....	16 @	21		
Soft shell.....	12 @	14	Southern Coast.....	9 @	14		

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Feb. 8, 1888		Fig, loose.....	8 @	6
Apples, bx com.....	75 @	Nectarines.....	8 @	11
do choice.....	1 75 @	do evaporated.....	12 1/2 @	13
Apricots, lb.....	2 50 @	Peaches.....	— @	10 1/2
Bananas, bunch.....	2 50 @	do pared.....	— @	25
Blackberries, ch.....	— @	do evaporated.....	20 @	25
Cantaloupes, cr.....	— @	Pears, sliced.....	4 @	5
Cherries, wht bx.....	— @	do qrt.....	4 @	5
do black bx.....	— @	do evaporated.....	10 @	11
do Royal Ann.....	— @	Plums, evap'd.....	10 @	11
Cherry plums.....	— @	do unpitted.....	3 @	5
Crabapples.....	— @	Prunes.....	7 @	10
Cranberries.....	10 00 @	do French.....	8 @	11
Currants ch.....	— @	Zante Currants.....	8 @	—
Gooseberries lb.....	— @	RAISINS		
Figs, black bx.....	— @	Dehesa Plus, fcy 3 25 @	3 50	
do white bx.....	— @	Imperial Cabin.....	2 00 @	2 25
Grapes, white.....	— @	et, fancy.....	2 00 @	2 25
do black.....	— @	Crown London.....	1 80 @	2 00
do Rose Peru.....	— @	Layers, fcy.....	1 80 @	2 00
do Muscat.....	— @	do Loose Muscatels, fancy 1 80 @	2 00	
do Tokays.....	— @	do Loose Muscatels.....	1 60 @	1 75
Isabel.....	— @	Cal. Valencias.....	1 60 @	1 80
Wine, Zinfandel.....	— @	do Layers.....	1 50 @	1 60
do Mission.....	— @	do Sultanas.....	1 60 @	1 75
Limes, Mex.....	— @	Dried, sacks, lb.....	5 @	6
do Cal. box.....	— @	Fractions come 25, 50 and 75		
Lemons, Cal. bx 1 75 @	4 00	cents higher for halves, quarters and eighths.		
do Sicily, box 5 00 @	4 00	VEGETABLES		
do Australian.....	— @	Artichokes, doz.....	— @	—
Nectarines box.....	— @	Asparagus 3 bx.....	— @	—
Oranges, Com bx 1 25 @	2 00	do ex choice.....	— @	—
do Choice.....	2 10 @	Okra, dry, lb.....	15 @	20
do Navel.....	2 25 @	do green bx.....	— @	—
do Panama.....	— @	Parsnips, chl.....	1 25 @	1 75
Peaches, bx.....	— @	Peppers, dry lb.....	10 @	—
do basket.....	— @	do green, box.....	— @	—
Crawford's bx.....	— @	Pumpkins prtn.....	— @	—
do choice.....	— @	Squash, Marrow.....	10 00 @	13 00
Pears bx.....	— @	do Summer bx.....	— @	—
do choice.....	— @	String beans lb.....	— @	—
do Bartlett, bx.....	— @	Tomatoes box.....	— @	—
Persimmons.....	— @	do choice.....	— @	—
Jap, bx.....	— @	Turkeys chl.....	1 00 @	1 50
Pineapples, doz 2 00 @	4 50	Beets, sk.....	— @	—
Plums lb.....	— @	Cabbage, 100 lbs.....	1 00 @	1 25
Pomegranates, b.....	— @	Jaroke, sk.....	40 @	50
Prunes lb.....	— @	Eggplant, 3 bx.....	— @	—
Quinces bx.....	— @	Garlic, lb.....	— @	—
Raspberries ch.....	— @	Green Corn, cr.....	— @	—
Strawberries ch.....	— @	do sweet cr.....	— @	—
Watermelons, 100.....	— @	do large box.....	— @	—
DRIED FRUIT		Green Peas, lb.....	— @	—
Apples, sliced, lb 4 @	5	Sweet Peas, lb.....	— @	—
do evaporated.....	9 @	Lettuce, doz.....	— @	—
do quartered.....	12 @	Lima Beans lb.....	— @	—
Apricots.....	8 1/2 @	Mushrooms, lb.....	10 @	20
do evaporated.....	14 @	Rhubarb bx.....	— @	—
Blackberries.....	12 1/2 @			
Citron.....	18 @			
Dates.....	9 @			
Figs, pressed.....	5 @			

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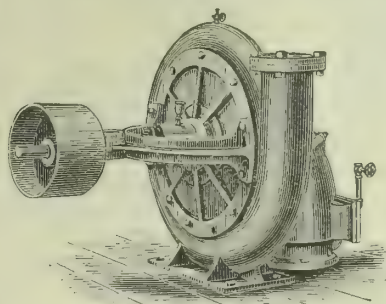
607 Sansome St., San Francisco, Cal.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
Feb. 2 8.																																				
Thursday.....	.74	44	Cm	Cy.	.00	50	NE	Cy.	.06	50	N	Fr.	.00	46	Nw	Cl.	.00	51	N	Cy.	.00	54	E	Fr.	.00	54	W	Cl.	.00	51	E	Cl.	.00	56	W	Cy.
Friday.....	.01	40	N	Cy.	—	—	—	—	.00	50	N	Fr.	.00	46	N	Fr.	.00	53	NE	Cl.	.00	54	S	Fr.	.00	53	S	Fr.	.00	55	W	Cl.	.00	54	W	Cl.
Saturday.....	.00	46	Nw	Cl.	.00	48	Nw	Fr.	.00	56	N	Cl.	.00	52	N	Cl.	.00	55	N	Cl.	.00	54	W	Cl.	.00	54	S	Fr.	.00	58	E	Fr.	.00	58	E	Cl.
Sunday.....	.00	38	Nw	Cy.	.00	44	Cm	Cy.	.00	60	N	Cl.	.00	52	N	Cl.	.00	54	SE	Cl.	.00	56	SE	Cl.	.00	63	W	Cl.	.00	62	SE	Cl.	.00	62	Nw	Cy.
Monday.....	.00	34	N	Fy.	.00	44	NE	Fr.	.00	56	E	Cl.	.00	52	N	Cl.	.00	55	SE	Cl.	.00	58	E	Cl.	.00	63	W	Cl.	.00	68	SW	Cl.	.00	66	W	Cl.
Tuesday.....	.00	36	SE	Fy.	.00	44	N	Cy.	.00	52	S	Cl.	.00	52	Nw	Cl.	.00	48	SW	Cy.	.00	58	S	Cl.	.00	60	W	Cl.	.00	66	W	Cl.	.00	62	W	Cl.
Wednesday.....	.00	38	S	Cy.	.00	46	NE	Cy.	.00	56	Cm	Cl.	.00	48	Nw	Cl.	.00	48	W	Cy.	.00	60	S	Cl.	.00	54	W	Cl.	.00	64	SE	Cl.	.00	58	Nw	Cl.
Total.....	.75								.06				.00				.00			.00			.00		.00				.00				.00			

EXPLANATION.—C. l. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature, wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.



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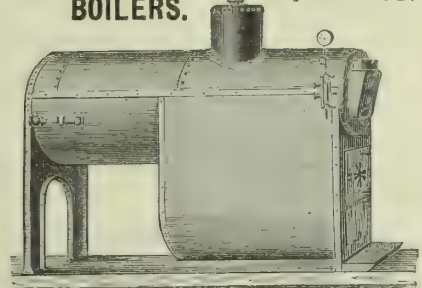
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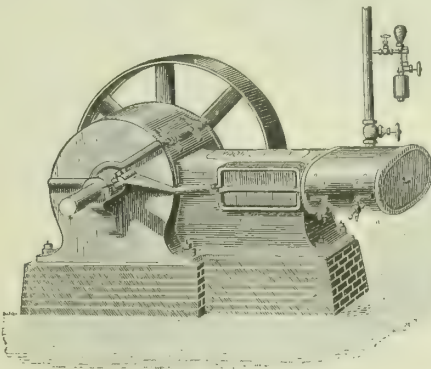
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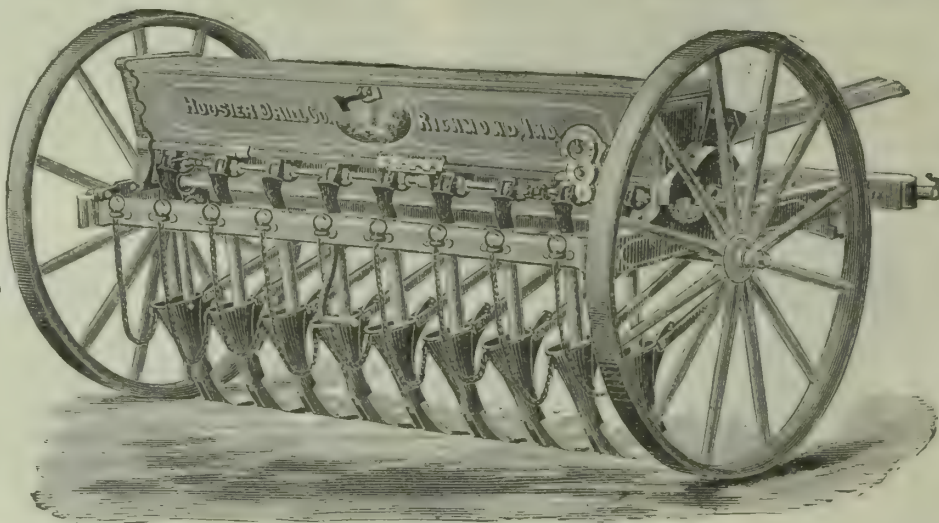
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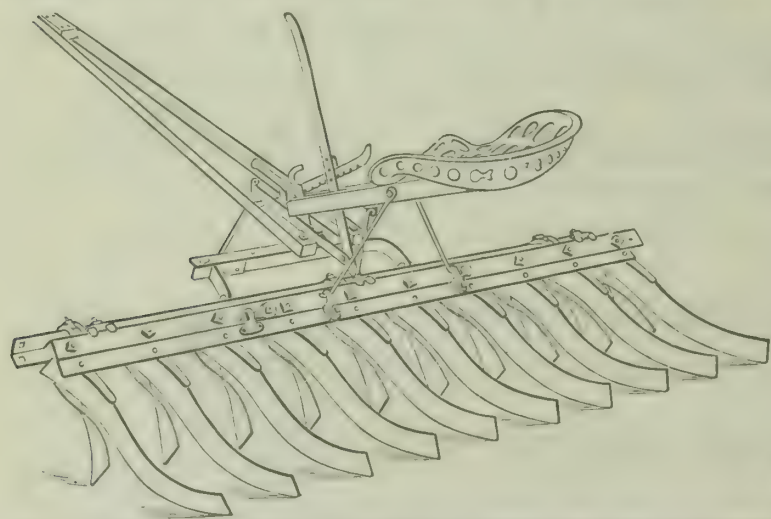
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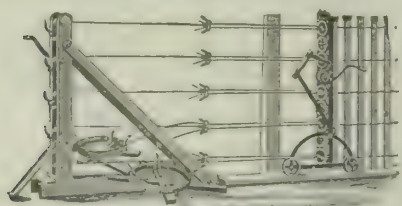
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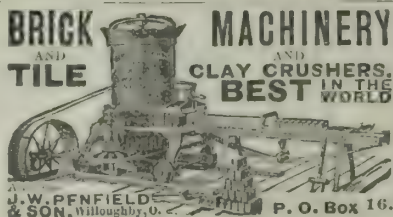
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PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 7.

SAN FRANCISCO, SATURDAY, FEBRUARY 18, 1888.

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SINGLE COPIES, 10 Cts.

The Botan Plum.

The success attained in the growth of the Kelsey Japan plum in this State ministers to the interest in other Japanese varieties. We have in earlier issues given the history of the introduction of the Kelsey and engravings showing its characteristic form and growth. Upon this page we give a handsome engraving, reproduced by courtesy of our excellent cotemporary, the *Florida Dispatch*, of a variety grown by P. J. Berckmans of Augusta, Georgia, President of the American Pomological Association, and one of the foremost horticulturists of the country. This variety Mr. Berckmans considers the Botan. There is some confusion in the names of these Japan plums in this country, but time will no doubt clear it up. Mr. Berckmans writes to the *Dispatch* as follows:

"Botan, Chabot, Musu and Longfruited are of the same general character as Kelsey's. Some are stouter growers and foliage broader. Several trees are bearing fruit, although imported in December, 1885, but we are so far unable to report upon their season of maturity, which will likely correspond with that of the Kelsey. Our California correspondents indorse the good qualities of these varieties."

In Florida on pine land the *Dispatch* says the Botan is a vigorous grower, resembling the Kelsey, but even stronger.

H. H. Berger & Co. of San Francisco, the well-known importers of Japanese fruits, etc., after study of the Japanese plums, write as follows: "The only varieties of the plum native of Japan, and worthy to be exported, are the Botankio, or best known as Kelsey's plum, and the Hattankio, both varieties similar in every respect except the bloom, which in the first named is of a rich red; the last named, a yellow. The Nagate, which again has two varieties—the large red round, called Botan, and the more egg-shaped yellow plum, called Ogon (by some nurserymen misnamed 'Ogden'). The Urvase, a rather large, [globular, greenish red plum, and the Shiro-Sinomo, meaning white plum (shiro white, sinomo plum), a medium-sized, sweet, whitish-yellow, round fruit. These are the only varieties which, under good cultivation, produce a fine fruit." In their catalogue, Messrs. Berger & Co. describe the Botan as "round, red," and the Ogon as "oblong, yellow." The *Dispatch* says: "We believe all authorities agree that this is correct so far as color is concerned, but it will be observed by our illustrations (the Ogon is to appear shortly) that the Botan is oblong and the Ogon round."

It is evident that we need a better acquaintance with these fruits, and descriptions should include growth of tree, form and color of fruit, and the characteristics of flesh and pit. As we have said, this better knowledge will, no doubt, come in time if the varieties are as valuable as they now seem likely to become.

TAKING UP GOVERNMENT LAND—The demand for cheap Government land is steadily increasing, and every day brings scores of letters of inquiry to the S. F. Land Office and dozens of applicants in person.

UNCONSTITUTIONAL.—The Supreme Court of California has decided that the Act of April 15, 1880, entitled: "An Act to provide for the protection of lands from overflow, other than lands recognized as swamp lands," is unconstitutional. This Act provides that such protec-

THE STANFORD UNIVERSITY.—It is announced that six of the stone class-buildings at the Leeland Stanford, Jr., University are to be up and roofed in by May 1st, and nine of the buildings are to be finished by July 1st. There are 125 workmen now employed, 60 being stone-cutters.

Beet Sugar at Alvarado.

In our last issue we gave an outline of a discussion on whether the beet-sugar interest would be best served by bounty or protection. The discussion excited considerable interest in the city. One of the most interesting features, and one which we have reserved for this special mention, consisted in the facts brought out concerning the continuation of operations at Alvarado. Though there are greater enterprises now on the ground and in the air, the experience at Alvarado will, it seems to us, always hold a most important place in our agricultural history. Mr. E. H. Dyer and his associates manifested their faith in beet sugar at a time when it was not fashionable and when great sugar capitalists were expending their energy and means on foreign-grown sugar. They labored against the most serious obstacles, they sought out inventions which enabled them to surmount difficulties. In fact they demonstrated the profit in beet sugar in California when few besides themselves even thought about it or believed in it. For this reason we claim they are entitled to honor and their deeds to remembrance.

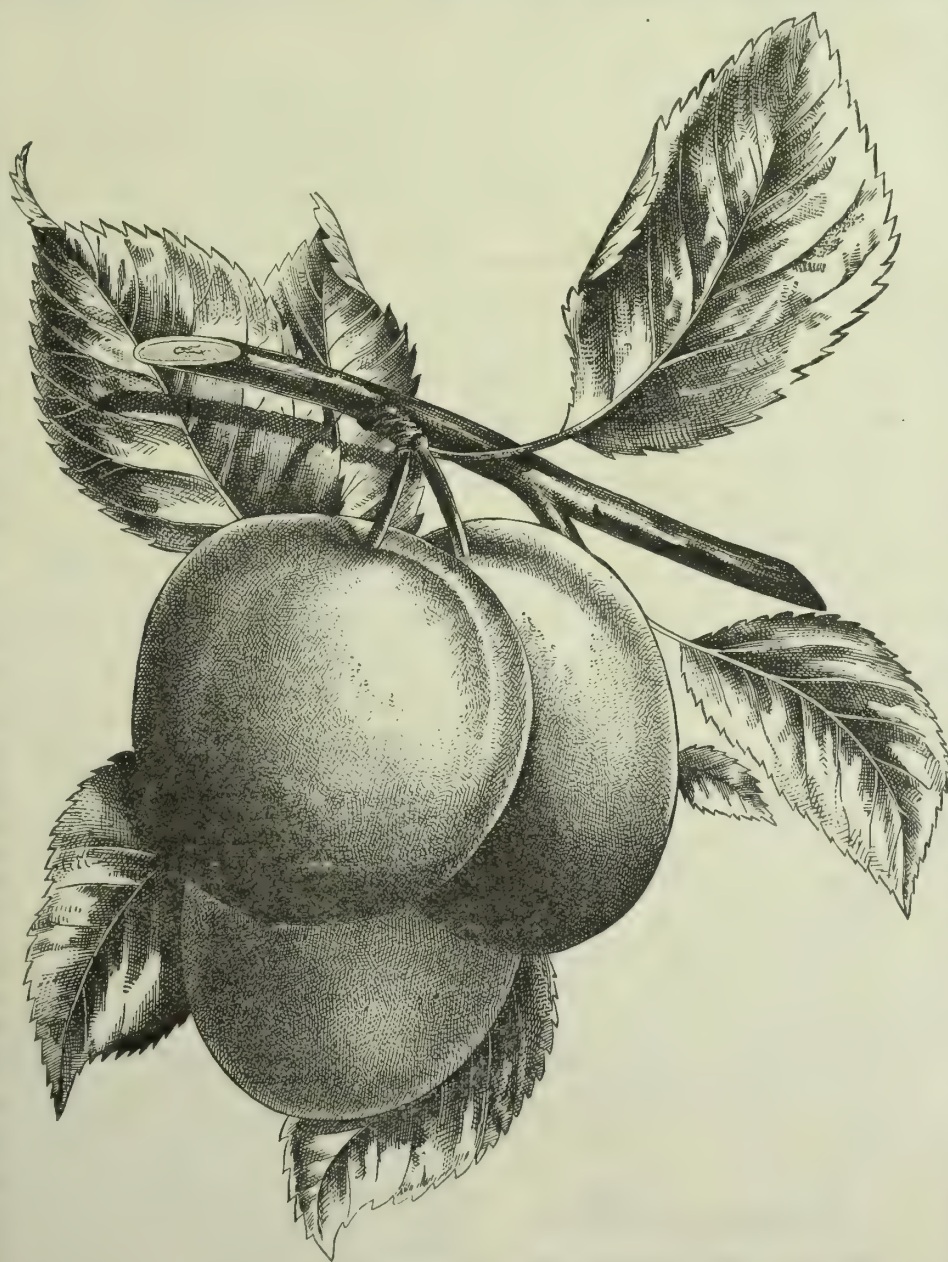
The special point of interest to which we refer is the assurance that the Alvarado enterprise is going on in spite of the destruction of the works by fire some months ago, and that next August the extraction of sugar will recommence, with far better facilities and appliances than ever before. Mr. Dyer in a recent letter states that the company was reorganized under the title of the Pacific Coast Sugar Company and is now engaged in enlarging the works to a daily capacity of 200 tons of beets. The main building, 60x130 feet, and five stories high, is completed, and a large portion of the machinery is now in place. The balance of the machinery, which is of the latest improved type, is all being made in this country, and will be all ready to run by the first of next August. Contracts are already made for a full supply of beets, and they have just received a large quantity of superior beet seed from Europe.

The new factory will be capable of producing 20 tons of white refined sugar a day, or about 5,000,000 pounds in a campaign of 160 days. This amount, with the output at Watsonville, will give us a good figure for 1888 to start with, and thereafter it may be that the California sugar product will advance in a rapidly ascending series.

A GOOD MOVE.—Representative Hatch of Missouri is making for himself a most excellent name for his legislative work in the agricultural interest. We notice that he is endeavoring to secure a law against the abominable gambling in agricultural products which so unsettles values and makes a football of legitimate trade. We hope he may succeed.

A BOAT constructed to receive the machinery for dredging the Carson river was launched at Dayton, Nev., Saturday, in the presence of 300 invited guests. The company will begin dredging on the 1st of April.

A HORSE worth \$500 was lately found dead impaled by a post in a Carson stable.



THE BOTAN—A JAPANESE PLUM.

tion was to be paid for by assessments upon lands within a certain district. It also provides that three trustees of the district are to be elected. It was argued that the owner of the land assessed has no opportunity under the Act to be heard in regard to the assessment, and that on non-payment his land will be sold without any opportunity to be heard as to this charge, which is declared to be a lien on his land, and that he will thus be deprived of his property without due process of law. The Supreme Court found that no provision is made anywhere in the statute for any hearing by the land-owner whose land is to be charged, and for this reason it decides that the assessment is arbitrary that its collection is summary, and that in consequence the Act is unconstitutional.

The south side of the quadrangle begins to assume a massive and imposing appearance. Several of the stone arches forming the line of the quadrangle are completed, being grand in conception and commanding the admiration of all visitors. The buildings now approaching completion are one story high, and being constructed of light-yellow stone, with red-tile roofing, will form a very noticeable feature of the landscape. The style of architecture is a modification of the Moorish, many features of which were also somewhat rudely reproduced in the buildings of the old California Missions.

THE PIUTE INDIANS, who revel in a diet of grasshoppers in summer, are just now feasting on rabbits and pine-nut soup. The Piutes declare it makes them "heap fat."

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

January in the Santa Ynez Valley.

EDITORS PRESS:—Midwinter in the Santa Ynez valley is a delightful experience. There are none of the valleys along the Pacific Coast which can furnish so much comfort and enjoyment through the entire year as this locality, and as a winter resort for invalids this is to be in the future one of the most valuable and noted. I have just returned from there, where I enjoyed most delightful winter days. While there I took thermometrical observations at the coldest and warmest hours of the day, and was not at all surprised to find that my most sanguine expectations of that climate were borne out by the registrations of the thermometer.

The air there in winter is very mild, and is soothing to throat and lung troubles, being dry and clear, and is at the same time invigorating to the system, so that new energy is infused and the body given strength while the mind naturally regains its cheerfulness. I was so delighted with my sojourn there that I could with difficulty make up my mind to leave that charming valley, which at this season of the year is most beautiful in its adornment of living green. Particularly beautiful is the immense olive orchard of Selby's, the trees in which have made a wonderful growth this past season. No snow has been seen upon the ground there this winter, nor has it ever been seen in the valley there. Those who have gone there to make their homes cannot be induced to depart from those pleasant surroundings. Some Eastern friends of mine who three months since arrived from Massachusetts and at once settled down at Santa Ynez are so infatuated with the climate and the beauty of the valley that they say they never will go back East to live, and as an earnest of their feelings have already purchased largely of the lands of the Santa Ynez Land Co. They are building already fine residences, one on each of two 40-acre tracts. The most magnificent live-oak trees are here to be found. At Lyman's, the home of Mrs. Lyman, I had the curiosity to measure the ground covered by one of these noble trees and found that the diameter of the spread of the foliage was 85 feet, and with a girth of trunk three feet from the ground of 18 feet.

This present year's grain crop there promises to be fabulous in yield, while much of this will speedily give way to tree and vine-growing.

On the evening of my arrival there, Jan. 27th, I noted the thermometer registered, at 10 P. M., 25° above zero. At Santa Ynez and at other points in the valley I made careful observation to ascertain the differences, if any, of various localities. And to illustrate this I started out on the morning of the 29th of January, before daylight, in a buggy, with fast horses and a fast driver, to make a circle of some 15 miles, visiting localities which would give a fair test of temperature on the mesas and in the valleys. I can best present this in the shape of a brief table, the object being to show the very favorable conditions of climate prevailing there in midwinter. These observations represented the coldest portion of the 24 hours and I will give it as morning temperature. Other observations were made at noon at different places on a day as unpleasant as any which occur in this valley just preceding a rainstorm:

1888.	7 A. M.	12 M.	7 P. M.
	D g.	Deg.	D g.
Jan. 28th, Santa Ynez (mesa), in shade on north side of house.....	46	69	54
Jan. 29th, Santa Ynez (at starting).....	43		
Grand Avenue (mesa hills).....	46		
Ballard's (valley).....	44		
Los Olivas (valley).....	43		
Ballard's Field (elevated valley).....	43		
Llano Grande (valley).....	42		
Point of Plain (valley).....	40		
Old Mission (mesa).....	42		
Janin's (valley).....	40½		
Near Oakmont (mesa).....	41		
Santa Ynez (on return).....	42		

Taken within two hours at noon at the different places named on day preceding a rainstorm.

Jan. 30th, Llano Grande.....	62
Old Mission.....	58
College.....	59
Grand Avenue.....	60
Los Olivas.....	63
Santa Ynez.....	62
Jan. 31st, a rainy day, Santa Ynez.....	52 53 52

I have here noted average winter weather a fair pleasant day, a cool day preceding a storm, and a rainy day in January. It will be seen that the temperature runs remarkably even. I should judge that the mean average winter temperature would run very similar to that of the City of Mexico, which has a mean in January of 52°. While the degree of temperature in itself is not a sure guide as to comfort and health, the remarkable mildness and balminess of the air here is very noticeable.

Sufferers from asthma gain great relief here very speedily, and almost at once begin to

reath without effort and wheezes, and those who suffer from irritable throats and irritable coughs experience a quieting and soothing effect upon the air passages, so that they imperceptibly lose their hacking coughs, and hardly know where and how the change occurs. I speak of this from my own personal experience. Also the air is so comfortable to well persons that to illustrate it I will mention that I saw on the Llano Grande Jan. 30th, when I took a temperature of 62°, men sitting quietly and riding gang-plows in their shirt sleeves.

With this delightful winter climate the resident here may look forward to an equally delightful summer season, when the warm air is tempered by the gentle and grateful sea breeze which possesses the qualities of mildness and invigorating effects. Louis Janin, Esq., kindly gave me the thermometer readings taken at his ranch-house in the year 1882, daily for the months of August and September, thus getting the hottest weather. The readings at 7 A. M., 12 M., and 7 P. M. gave an average for August of 63° morning, 85.6° noon, and 68.8° evening. For September the average of the day for all the days was 70°.

The journey from Santa Ynez by stage over the Santa Ynez range to Santa Barbara via the San Marcus pass, a distance of 45 miles, is one that no tourist should fail to take. I had that pleasure in returning, and would not have missed that trip, although generally not given to enjoying stage rides. We leave Santa Ynez at 9 A. M., Feb. 1st, and, driving over the best roads to be found in the State (which is a characteristic winter and summer) for many miles up the valley, cross the Santa Ynez river, and begin the gradual ascent of the range. All this is heavily timbered and covered with wild shrubbery and vines. After a nice dinner near the old San Marcus ranch-house, we enter more especially upon the grade up to the summit. All along may be seen patches of many acres of wild plums, the trees being of a most beautiful evergreen and producing, as I was told by Mr. Patterson, the genial stage proprietor, who almost invariably accompanies his patrons in their ride over his line, a very pleasant fruit about the size of a cherry plum.

Here at an altitude of 1300 feet I observed that the shrubs were already in full bloom. I gathered from here to the summit (altitude 2244 feet) and also on the Santa Barbara side the wild currant, wild lilac, manzanita, and other handsome floral specimens. Before reaching the summit at an elevation of some 1300 feet may be seen some of the grandest scenery, and crossing over Dead Horse rock—named from the fact that a stage-horse once fell dead on that rock—we see an immense elephant sculptured out of the sandstone rock by the wear of the elements, and making a most perfect likeness—body, limbs, head, ears, trunk and eyes; and on the south side of the road may be seen a similarly good sculpture of a huge turtle. Right on the summit of the mountain is a fine vineyard belonging to Mr. Marshall, where the choicest grapes are grown. The air was so mild and pleasant to a Minneapolis gentleman who was traveling with his wife that he gave us his views of comparative temperature. He said "they left Minneapolis just in time to escape the cold weather. On the morning they left home the thermometer was 36° below zero, but it soon began to grow cold and afterward it got down to 48° below zero." They were glad to get out here where it was 60° above zero.

The panorama bursting into view as you descend the mountain on the Santa Barbara side is one never to be forgotten. The whole seacoast, mountain-side and valley are spread out to view, with the Santa Rosa and Santa Cruz islands in the distance some 30 miles at sea. On this mountain-side the rocks are filled with petrified seashells of various kinds. Down on the mountain slope at three houses we passed, the children were running around barefooted with apparently no fears of croup and pneumonia. Soon we begin to pass fine orchards as we emerge into the valley. After an eight hours' ride we reach our hotel, wishing we could take that ride over again in the near future. S. F. CHAPIN, M. D.

Auburn, Feb. 4th.

SHEEP AND WOOL.

Changing From Goats to Sheep.

N. S. Coles, an Angora goat-breeder of Nevada, takes rather a blue view of the Angora outlook, and, according to the Examiner, has come to San Francisco with five carloads of goats for sale. He told this story:

"I am selling them out," said he. "There is no money in them now. The wool has dropped from 70 cents a pound, six years ago, to 28 cents now, and they are no longer profitable. Their wool is used in the manufacture of all sorts of mohair goods and for mixing with short wool. The climate of Nevada is well adapted to them, and there are about 10,000, I should judge, in the State. My ranch is in Spanish Springs valley, ten miles east of Reno.

"The greatest foes to the Angora goats there are the coyotes and the mountain wildcats. They are very plenty, and they kill a great many kids and old goats. They are fondest, however, of the former. There are a few mountain lions there, but they do not bother the goats there as they do in Idaho. That Ter-

ritory, like Nevada, is well adapted climatologically to them. Oregon, however, is too damp, and they die off quickly and seem unable to be bred up to a point where they will stand the chilly air.

"What do they do with these goats here, having bought them of me? Eat them. They make good mutton—better than sheep, really. It is free from disease. The goats never have any disease of any sort. However, there is a sort of prejudice against goat mutton. People don't like it as well as sheep mutton. I don't know why. But ever since Abraham, Isaac and Jacob and all the other patriarchs of Bible times lived in tents, and their servants cared for their flocks, there has been a prejudice against goats. They can't get over it.

"So, while the meat is really better than mutton, it is worth but from eight to nine cents a pound, while the former is worth two cents more. Last fall I sold three cars, and now I have sold 550 more, and I am going to sell out the whole 1500 and go into sheep.

"Growers in the Sagebrush State, generally, have come to my opinion, and most of them are going out of the business."

CURTAILING COYOTES.—The Lander, Wyo., Mountaineer gives an account of a pair of superb stag-hounds, which Richard Ashworth, a noted Big Horn stockman, selected during a recent visit to Scotland, from their native kennel at the foot of Ben Nevis, and has domiciled on his Gray Bull cattle-ranch. The female weighs 150 pounds and the male 176 pounds. Their docility, intelligence, fleetness, stanchness and strength are wonderful. Victorious foes of the marauding wolf, they have developed a peculiar and amusing method of dealing with the common coyote. "For this cowardly and despicable animal to show himself in sight is to invite certain capture; but the gallant hounds disdain their base quarry too much to take its worthless life. They merely bite its tail off close to the rump, or pull it out by the roots, as the case may be, and having thus set their mark on Mr. Coyote, let him go. The trophy of the chase so obtained, the hounds invariably carry home with them, and to such an extent has this contemptuous depredation on the coyote race been carried that Mr. Ashworth's ranch fairly bristles with caudal appendages, and bobtail coyotes are the rule on the ranges."

THE VINEYARD.

Grape-Growing East and West.

The following extracts are taken from the essay read at the meeting of the American Horticultural Society in San Jose by Prof. George Husmann of Napa:

When I left Missouri in 1881, I was conversant if not identified with the progress that had been made there with new varieties of native grapes as they appeared and were tried, and could speak more understandingly than I can to-day. Here, while still cultivating many American varieties, I found different climatic conditions which evidently have an unfavorable influence on the fruit of most of the American varieties, while their influence on European varieties is highly favorable. Such varieties as were our mainstay in Missouri and the East, as for instance Norton's Virginia among the Aestivalis, and Elvira and Missouri Riesling among the Riparia, are valuable here only as stocks for grafting the Vinifera and almost worthless for direct production. Yet it is from the native American stock that you, east of the Rocky mountains, must obtain the elements of your grape culture and base your hopes for success. You cannot grow the Vinifera species in open air, as they are too much subject to the changes of your summers, the cold of your winters, to plan with any reliance upon them. With such men as Munson and Ricketts, Campbell, Rommel, Jaeger, and a host of others directing their best energies to the production of new seedlings from Aestivalis, Riparia, Cinerea, and Rupertia with the encouraging progress already made, the day is certainly not far distant when you will have varieties that will be productive and good enough both for table and wine to fill your markets with desirable table grapes, and also furnish wines good enough and cheap enough for home consumption. I have faith in the future of the American grape and believe that it will not take as many decades to develop desirable varieties as it has taken centuries to develop the best Vinifera species. But the climatic conditions of the Eastern continent seem to be constantly changing; varieties considered entirely reliable only five years ago now seem to be failing, and many Eastern brethren are better competent to judge how far they can hope to compete with foreign productions, or the product of the Western coast which must place its main reliance on the Vinifera class. That each locality will have to experiment for itself until it finds the varieties entirely suited to it, seems to me self-evident. In any event, the present time would seem the most propitious. When France has dwindled, through the ravages of phylloxera and from other causes, from a production of over 2,000,000 gallons of wine to not enough to supply her home demand, and must rely on Italy, Spain, Hungary, and still more on the skill of the wine doctor to keep up her trade, while the ravages of the insect are felt in all the wine-

producing countries of Europe, it would seem a good time for the universal American nation to step in and assume its part of the world's wine market.

And every locality at least should grow its own table grapes. The grape is the healthiest of all fruits, and should be eaten and enjoyed by every one in this nation, which threatens seriously to become a nation of dyspeptics. We want grape cures established throughout the land just as they are on the Rhine and other streams in Germany, where the tired city merchant and his family can go from the heat and impure air of the cities to recruit up in pure air and on a daily diet of fresh grapes. While horticulturists, as a rule, are among the healthiest of men just because they have more or less of fresh fruit every day, the nation as a whole is perhaps the most dyspeptic on the globe, and were it not for the constant admixture with foreign elements who bring new life to it, it would become hopelessly so. It is therefore not a question of profit to the grower, merely, but of vast national importance and welfare, that we should have grape cures established in every grape-growing community, and these alone would use up a large amount of fresh grapes.

When we come to the consideration of the question here in California and on the Pacific Slope, I am more at home and can speak more understandingly. I know what I say when I claim that we can raise grapes profitably at \$15 to \$18 per ton and can make wines good enough to compete with the choicest European brands—nay, even surpass them. If our best brands have not been so generally produced or disseminated as to establish the name and fame of California wines as they deserve to be, it has been simply because the industry is very young yet; it was commenced with inferior varieties manipulated with little or no skill and our wines came upon the market in an immature condition. Our industry is too young yet to have come near perfection. We need better average wines than we have had so far; we want different methods than have been employed to bring them before the public; we want wine-storage houses, which will enable the vintner to put his product where it can be matured and a more uniform grade established. We must come to the conviction that our inferior wines had much better go to the still, or be manufactured into vinegar, than be imposed upon the public as California wine and ruin its reputation. But we have already enough of really good wine to stand upon its own merits, and we should despise the trickery of sending it under French and German labels which so far has mostly been done with our best products, for which France and Germany receive the credit while we receive the blame for the inferior article.

When we come to look at our raisin industry the case is still more simple. Here we may say we have a monopoly. From the small beginnings years ago we have worked up to the production of a million 20-pound boxes in 1887, and the brands of California pickers are now preferred to the foreign products, not because it is American product, but against all the prejudice engendered by long usage for the foreign article. Now our raisins are driving the finest of foreign manufacture from our market and are sold almost before they reach the Eastern market. If we once meet the day that all this immense country uses California raisins, because they are cheaper and better in preference to the imported, what an immense field is open to this industry! Here is an area which even all those may enter who have conscientious scruples against wine-making. They can thus dry their fruit and find a ready market for it in this country as well as on the continent.

You are aware that we are now supplying the Eastern States with table grapes to a large extent, and with our increased shipping facilities we can continue to do so. I need not say they are larger and sweeter, and many also prefer their flavor and their firmer and more pressed meat than the American varieties. This is a matter of taste, and we also can keep them longer, and many of our mountain districts are so free from frost that they can remain on the vine until January. Thus again occurs a large field for grape-culture. We have hardly begun to develop all of our resources, and can hardly tell yet how far this may become a profitable and pleasant industry. But there seems to be little doubt that the supply of fresh grapes can be kept up until March or even April.

I have tried to give you a brief outline and some of the reasons why I believe the outlook for American grape-culture a bright one; but to develop all these branches of our young industry they need the fostering care and protection of our Government. While we can be more sure of a crop and of a more uniform product than the European vintners, they have the advantage of us in cheaper labor, and although we have brought the ingenuity of the universal Yankee to assist us in labor-saving machinery, yet we can justly ask a remunerative price for better and purer goods than they can and will supply us with; and we can only obtain this if we are protected against foreign importations by a tariff, not exorbitant, but sufficient to put us at least not at a disadvantage with foreign importations.

SPEED FOR A GRINDSTONE. — A grindstone with 4-inch face, 40 inches in diameter, with 2½-inch shaft and 10-inch collar on each side may be safely run at 75 revolutions a minute.

SWINE YARD.

Bogus Lard.

We recently alluded to the vast amount of bogus lard which is being placed upon the market, and now the subject comes up in another form. A dispatch from Washington February 8th is as follows:

The inquiry with regard to lard and its compounds by the Senate Committee on Agriculture was continued to-day, and interested parties to the number of 25 or 30, comprising manufacturers, attorneys and experts, were present. Samples of various compounds in tin pails were produced, which had been purchased in the open market and chemically examined by Professor Sharpless of Boston, who testified that samples bearing the stamp of Armour & Co., "Pure refined family lard" were found to contain about 60 per cent hog's lard, with 20 per cent each of cotton-seed oil and beef fat.

A sample of Fairbanks & Co.'s Chicago "Prime refined family lard," was made of the same elements, but had a greater proportion of beef fat and cotton seed oil.

A sample bearing the stamp of Halstead & Co., "Pure family lard," and another from the same firm stamped in Spanish, "Pure lard, registered," contained, so far as the tests have been carried, not a particle of hog's lard, but were made entirely of beef fat and cotton-seed oil. "With regard to cotton seed oil," Professor Sharpless says, "its healthfulness as an article of diet is still a mooted question. It is not a matter for chemists but for medical men to decide."

Mrs. Fairbanks of Chicago described the history of the modern lard project. Twenty-five years ago lard oil was pressed from the hog product, leaving the stearine a hard, waxy substance, for which there was little demand. Then a firm in New York conceived the idea of mixing stearine with ordinary lard and formed a compound which gave better satisfaction, especially in warm countries, than pure lard. The packing-houses in making lard got dumping into cans everything—heads, feet, etc.—and made a product which was offensive, having, as the witness said, a "hoggy taste." Refiners cast about for something to neutralize this and found it in cotton-seed oil. Out of a hundred tierces of packers' lard the refiners got about one tierce of mud and filth "as black as your coat." To the refined product they now added 25 per cent of cotton-seed oil and 15 per cent of stearine, which compound comprises seven-eighths of the lard now on the market. Once or twice when the compound ran short pure lard had been supplied to customers and witness was overwhelmed at once with complaints that the consumers were dissatisfied. The trouble with Squire, witness said, arose from the fact that witness's firm had secured a large part of Squire's trade, especially in New England, and that gentleman had agitated the passage of the bill because small dealers would not take out a license to sell the compound as required by the bill, and as no license would be required to sell pure hog-fat lard they would resume the purchase of lard manufactured by Squire. The demand for legislation did not come from the people. The constantly increasing sales of lard made by witness's firm proved that the public wanted their lard. When asked why he did not label it as compound lard, he said the American people were not educated up to the use of oils yet. He objected to being compelled to change the brand "refined lard" because that label was part of his stock in trade.

Judge Wilson, attorney for Squire & Co., read a petition signed by a large number of manufacturers and dealers in pure lard, urging the passage of the bill; also letters from two cracker manufacturers of St. Louis and Omaha, stating that crackers in which was used lard compounded in part of cotton seed oil would become rancid in a few days; also a clipping from the New York Journal of Commerce in which it is stated that exports of lard from the port of New York have fallen off 56,000,000 pounds in the year 1887 as compared with the year 1886. Mr. Cromwell, attorney for "refined" lard manufacturers, said he had a petition from over 5000 persons, stating that "refined lard" was not an injurious article. He said it was not claimed that cotton-seed oil could be used for every purpose, and he would admit it was not fit for crackers.

Cromwell argued at length against the bill, and after further addresses the hearing was adjourned.

Artificial Lard in San Francisco.

A quarterly meeting of the California Pharmaceutical society was held Feb. 9th in the college building on Fulton street, F. C. K. I. W. presiding. A communication from Prof. I. W. Runyon, entitled "Lard for Pharmaceutical Uses," was read. He stated that there has been considerable discussion lately in relation to lard adulteration, and the question naturally arises, "What is the quality of the so-called refined lard as sold in the San Francisco markets, and do druggists use it for pharmaceutical purposes?" Recent experiments have shown that one of the brands of highest-priced lard in packages is not pure lard, but a compound, and is objectionable for the making of ointments and other preparations. The investigations now going on in Washington develop the fact that the commercial refined lard subjected

to analysis shows 40 per cent adulteration, consisting of cotton-seed oil stiffened with beef-fat stearine. An editorial in a prominent Eastern newspaper stated as a fact that one of the largest hog-fat dealers in the country asserted that he used in his factory one-fifth of the entire cotton-seed oil product of the United States, this being equal to 3,000,000 gallons. The professor suggested that the chair should appoint a committee of three to make an analysis of the several lards in the market and report at the next meeting.

POULTRY YARD.

Eggs in Great Britain.

The following statements are from a lecture recently delivered in England by Prof. Simmonds, and reported by the London Standard: In France alone the wine clarifiers use more than 80,000,000 eggs a year, and the Alsations consume fully 38,000,000 in calico printing and for dressing the leather used in making the finest of French kid gloves. Finally, not to mention various other employments for eggs in the arts, they may, of course, almost without trouble on the farmer's part, be converted into fowls, which, in any shape, are profitable to the seller and welcome to the buyer. Even eggshells are valuable, for allopath and homeopath alike agree in regarding them as the purest of carbonate of lime.

In the face of these facts, it seems almost incredible that an article of commerce, to produce which requires hardly any capital, and is salable in any quantity, is so little attended to that the supply is in England altogether unequal to the demand. How many eggs are laid within the British islands can only be calculated with an approximate degree of accuracy. According to the latest agricultural returns, there are at present in the United Kingdom something like 20,000,000 of barn-door fowls, though, as the poultry in possession of the cottagers were not, except in the case of Ireland, taken into account, the return may be regarded as much under rather than over the mark. Twenty-five millions would be nearer the real number. Now, if we deduct from this the "permanent non-layers," in the shape of male birds, and the 11,000,000 which reach the market in the form of poultry for the table, the remainder will represent setting hens and mere chickens.

Some fowls will lay as many as 220 eggs per annum, while others do not yield one-third of that number. But if, according to the calculation of a correspondent, whose figures we printed some months ago, each hen is credited with 100 eggs, there would be at least 600,000,000 of eggs of our home fowling. This supply, prodigious as it seems, is, however, a mere trifle compared with the quantity required. For if the egg-eaters of the kingdom are put at 25,000,000, the number mentioned would not admit of each of them consuming more than about 24 per annum. That, of course, is far below the mark.

Many middle-class families use for the breakfast-table and for cooking fully 100 per week, while confectioners, hotels, restaurants and others must consume every day four or five times as many, to say nothing of the cratefuls absorbed by various arts and manufactures. In one photographic establishment alone 2,000,000 are used every year, while the amount required for various processes in calico printing, leather dressing, and, we believe, in book-binding, must exceed the number employed in food. From what quarter, then, are the wants of Britain supplied? Our eggs are not manufactured in America, as an ingenious myth circulated some years ago affirmed to be the case. The simple truth is that the eggs are imported.

The extent to which they are brought across the sea is proved by the fact that last year we paid £3,000,000 to the foreign farmers for eggs, every pound of which might have easily remained at home for the enrichment of the British landholder. A payment of £3,000,000 per annum means that the eggs for which this sum was paid must have come into our ports at the rate of more than three million and a quarter on every working day. To this branch of the British commissariat France contributes most largely, Germany and Belgium coming next. Every year these importations are increasing, the number brought from the continent in 1865 being not much more than a third of the amount entering last year. And this enormous number does not include the eggs of ducks, geese and turkeys, or those of plovers and other wild birds, for which high prices are invariably given.

Altogether, calculating one penny as the average price given for one egg, the correspondent, whose statistics we quote, reckons the total cost of our egg supply at nearly £6,700,000. Now—leaving out the tons of fowls which are imported—it is perfectly certain that if our farmers choose to bestir themselves, not one farthing need go out of the kingdom for the purchase of eggs, and that they might profitably pocket the £3,000,000 which the peasants of France, Germany, Belgium and Holland draw from the British people.

WM. T. COLEMAN has positively refused to accept the appointment of Commissioner of the American exhibit at the Melbourne Exposition, for which position his name was prominently mentioned.

THE STOCK YARD.

The Beautiful Steer.

[Miss E'la Paxton, known as the "Cow-Girl of the Panhandle," recently favored an enlightened Western audience with the following original production, which, in her introductory remarks, she styled a "paradox" on "Beautiful Snow." She also stated that it was "paradoxed" while sitting on her horse on herd-day on her father's ranch in the Panhandle, situated about three miles from Mobotio, Tex.—Exchange.]

Oh, the steer, the beautiful steer,
Kicking the fleas from the point of his ear,
Flapping its tail in frolicsome glee,
Hopping about like a Snake river flea,
Bellowing!
Roaring!
Thundering along!
Filling the air with his steerial song,
Till the rumble from his lung-laden pits
Scares timid jack-rabbits and wolves into fits.
To me there is nothing on earth half so dear
As the long-horned, slim-bodied Texican steer.

How often I wish that I was a steer
With a long shiny horn at the butt of each ear.
With a clear, fearless eye, and tapering tail
That would snap like a whip in the maddening gale.
How I'd beller!
And roar!
And paw up the ground!
And lope over the hills with a thundering sound,
And snort like a terror, and hump up my back
When I saw the wild cowboy pursuing my track;
And I'd laugh at his oaths as he fell to the rear,
Oh! I'd be a Jo-dandy if I was a steer.

I once roped a beautiful steer—but I fell,
Fell from my pony with ear-piercing yell!
Fell with the lariat fast to my wrist!
Fell to be dragged through the grass wet with mist.
Bumping!
Rolling!
Grunting I went!
At full mile a minute, or I don't want a cent.
The gravel and grass yanked the skin from my nose
And ruined a pair of forty-cent hose;
Aye, even my bustle was thrown out of gear
By the frolicsome freaks of that beautiful steer.

Ayrshire Milk Record.

C. M. Winslow of Brandon, Vermont, secretary of the Ayrshire Breeders' Association, sends us the following milk record for 1887 of the Ayrshire herd on Adams' farm, Milton, Mass.:

Name.	Age.	Days Dry.	Lbs. Milk.	Largest Amt. for 365 consecutive days.
Queen of Ayr 2d.....	14	161	3955	9105
May Moon 3d.....	11	69	5884	6345
Miss Briar.....	9	96	6928	6928
Alice Douglas.....	9	143	4524	12617
Orion.....	9	57	7325	7769
Zilla Douglas 3d.....	6	97	777	9161
Mary Douglas.....	8	27	7369	7369
Ellen.....	6	—	10823	10823
Lady Milton.....	6	92	7165	7496
Mary Gibb.....	5	31	5658	6866
Lillian Clyd.....	4	81	6437	6437
Qriosity.....	4	20	5971	5971

Average weight of milk, 6646 lbs.

The cows have been well fed—good hay twice a day—three quarts ground oats and one quart corn-meal daily, besides a half bushel of brewers' grains. Summer pasture very poor.

GEORGE A. FLETCHER.

The above milk record has been sent to Mr. Winslow, and he adds to it the following taken from previous records:

1884.	Average for 10 cows.....	Lbs.
1885. <td>" " 6 ".....</td> <td>6534</td>	" " 6 ".....	6534
" " 17 ".....	" " 6 ".....	6319
" " 17 ".....	" " 17 ".....	5422

One of the above cows is Alice Douglas, 4398, officially tested by the association, and giving record as follows: 62½ lbs. in 1 day, 407¾ lbs. in 7 days, 1695 lbs. in 30 days, 4997 lbs. in 90 days, 12008 lbs. in 365 days.

The cow Alice Douglas has enjoyed the distinction of having her portrait in the RURAL PRESS, Feb. 12, 1887.

Pleuro-Pneumonia.

In response to a request from the Senate Committee on Agriculture and Forestry, Commissioner Colman has written a letter to Senator Palmer, chairman of the committee, setting forth his views with regard to the suppression of pleuro-pneumonia. He reviews at some length the history and method of the work of the Bureau of Animal Industry, and says that Congress should clearly understand that this method of work is absolutely essential to wipe out the disease, and that any law that falls short in any one particular will fail of its purpose and the money expended under it will be thrown away. The commissioner expresses the belief that a plan of State co-operation is preferable to one which relies solely upon national authority, and says that the work of extirpating pleuro-pneumonia, which is now being done by the Bureau of Animal Industry, is going on smoothly, harmoniously and effectively by means of State co-operation. He thinks that this work should be continued upon the same lines where it is now moving and that it will be unfortunate and ill-advised if any new and untried plan be adopted.

FORESTRY.

What Becomes of Our Timber Lands?

You are part owners of about 70,000,000 acres of land, more or less stocked with timber and not considered agriculturally valuable, held by the General Government and lying mostly on the western mountains.

There are five ways in which a citizen may acquire either the land or the timber on it:

1. In California and on the Pacific Slope generally, we allow him to get as much as 160 acres "for his own use," at \$2.50 per acre, a price from 10 to 30 times less than the true value. The use to which most owners put their purchase is to relinquish it to some large lumbering corporation, which, in fact, has paid men to perjure themselves in taking up such lands.
2. In the Southern States you can buy at \$1.25 per acre, in any quantity, as much Government timber land as you may still be able to find, the most having gone at that price to speculators and lumbermen.
3. Every land-grant railroad, in addition to its share of the land grant of 75,000,000 acres and the right of way, is permitted to cut timber "for first construction" "adjacent to the line of its road." But the railroads don't construe "construction" and "adjacent" exactly in the sense in which the lawgivers did, and they have cut wherever, whenever and for whatever purpose they chose.
4. Those who take up a homestead or pre-emption claim upon timber land are also given the right to clear as much timber as is necessary for the development of their claim and improvements before they have acquired title. We are told that most settlers on such lands do not exert themselves to procure the title after they have got the timber off.
5. Lastly, any resident citizen may cut all the timber he needs for mining and domestic purposes upon lands which are designated as "mineral lands." Oh for the power to know what "mineral lands" are!

Shall we pride ourselves on our liberality? Or shall we rather feel ashamed of our niggardliness? Not only have we allowed the most valuable part of this class of our property to be fooled away to a few speculators, largely upon fraudulent entries, but we have criminally permitted the depreciation of the remainder, and, besides, have compelled the population of two States and seven Territories to become trespassers and criminals on account of taking the timber they needed, because we would not sell it to them. In the years 1881 to 1887 there was reported timber stolen from the public domain to the value of \$36,719,852, probably a small fraction of the actual depredations; there were recovered, mostly by compromise, \$478,073, and expended for protection \$455,000. To this add an annual loss from fires, valued at \$8,000,000.

The charity which we have extended to the pioneer settlers, in allowing free use of our property under certain conditions, has worked more harm than good; the settled community would gladly exchange the privilege for a fair bargain in which the consumer pays for what he uses.

The present settlement and disposition laws are the cancers that destroy the public timber lands, leaving a sick—dying—dead mountain desert, and impairing the agricultural and industrial interests adjoining.

If you feel an interest in having this property administered in a more reasonable manner, for the benefit of the settler as well as for the rest of the nation, write to B. E. Fernow, Secretary of the American Forestry Congress, at Washington, D. C., for Memorial and Bill to be presented and urged in the 50th Congress.

What the Interior Department Proposes.

WASHINGTON, Feb. 9.—In answer to a House resolution, Assistant Secretary Muldrow sent to Congress to day a communication respecting legislation necessary to protect the forests surrounding the sources of streams that provide the water supply for agricultural territory. He recommends:

- First—That all timber lands at or near the sources of streams be withdrawn from sale, and that replanting of denuded tracts be at once proceeded with.
- Second—That a Forestry Division be established in the Interior Department with full control over all lands so withdrawn.
- Third—That all timber lands be accurately surveyed and registered.
- Fourth—That additional timber agents be appointed.
- Fifth—That on all such reservations no timber shall be disposed of except as may be determined by the Secretary of the Interior, and only on such proposals as will settle beyond all question that such land is more valuable for agricultural purposes. In all other cases the Secretary shall be authorized to order the disposal of the timber at public sale to the highest bidder. Bonafide settlers should pay a price in proportion to the appraisement, but only for their own use. Persons actually engaged in felling timber for sale should pay the market price on a stumpage basis.

In conclusion, the Assistant Secretary recommends that the law allowing citizens of Colorado, Nevada and the Territories to cut timber on public lands and the Act placing the timber lands in California on sale be repealed.

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Experiment Stations and the Grange.

[By MORTIMER WHITEHEAD, W. L. N. G.]

Without a single dissenting vote the legislation needed to secure the appropriation under the Hatch Experimental Station law was obtained in the National House of Representatives, last week. It is probable that ere this is read it will have passed the Senate also, and this advance step in the interest of agriculture will have become a fixed fact. The measure was hindered, and even endangered for a time while on its passage in the House by some attempted amendments, but over the wires went the alarm and back again from the Masters of State Granges, and other officers, in all parts of the country, speaking for the tens of thousands of organized farmers they represented came the words, asking the immediate appropriation, without additional condition, of the money required to make the law effective. And it was done. A glance at the printed pages of the *Congressional Record* will show how bravely and unitedly farmers in the Grange spoke through their leaders.

As is well known, this Experimental Station bill provides for establishing and maintaining in the interests of agriculture an experiment station in each State of the Union with an annual appropriation of \$15,000. The Grange can justly claim a good share of the credit for securing the law. It was a number of years ago that the National Grange first talked on the matter of having several national experiment stations located in the different sections of the country, and in the interest of their special soil, crops, climate, etc. It finally took definite form in a station for each State, and each year since the National, various State and Subordinate Granges, and individual Patrons have advocated and urged the measure.

Now that the experiment station matter is settled, there remains a plain duty not only for farmers in the Grange, but all farmers in every State of the Union, to see that the stations are established and that the money appropriated is spent in the interest of agriculture. We all know how the Agricultural College land-scrip of years ago was squandered in some States, and in others absorbed by colleges who even disowned the name agriculture; and it will be the fault of farmers themselves if this new appropriation in any State goes the same way. Several State Granges this winter have taken prompt and careful action in the matter. Others should do the same, and do it at once.

Let every Subordinate Grange in the United States, at its next meeting, take up the discussion of the experiment station, have the law read that all may learn its provisions and know exactly what it is intended to do. Interest farmers and Patrons in it. Create a public feeling and sentiment in the matter. If State legislation is needed, see that it is secured. Let it be known that the farmers of your State are awake in this matter. Don't put it off.

"Trust no future, however pleasant;
Act, act in the living present."

Land-Sharks Beaten.

A righteous decision was recently rendered by Judge Spencer of Santa Clara county, in a suit brought by Mrs. J. G. Lemmon of Oakland against J. E. Rucker & Son of San Jose. The *Oakland Enquirer* gives the history of the case as follows:

Some months ago Mrs. Lemmon, acting through a Mr. Field, put a piece of property in the hands of Rucker & Son to sell, giving the minimum price at \$2800, but they were to get as much more for it as they could. In a few days they reported they had sold the property for \$2800, and a settlement was made on that basis with Field. But subsequently it was learned that the property had really been sold for \$3225, and, furthermore, that Rucker & Son had a customer at the latter price when they took the land to sell. When they found that they were caught they blamed their clerk for the affair, saying that he had been speculating in their name, but they refused to make restitution. So Mrs. Lemmon, through Field, brought suit for \$425, and has now obtained judgment.

In rendering his decision, which gave Mrs. Lemmon \$425—allowing Rucker & Son no commission on that amount—Judge Spencer says: "The transaction cannot be upheld upon any standpoint, and the Court of Equity would almost be *particeps criminis* if it even for a moment hesitated denouncing a transaction of that kind. It is perfectly bald and bare, and when the firm undertook to father this transaction, or to shield their clerk, they made themselves a party to it. They have no earthly excuse to come into court and make a defense, and they will not, under the circumstances, be allowed a commission for the excess, because where they deal unfairly with their principal, they are to be allowed no compensation for that kind of dealing; their unfairness comes in not remedying and correcting the wrong and error of their servant when it was brought to their attention, and being responsible for upholding it as they do, they must bear the brunt of it and make the amend."

Farmers' Organizations.

A proposal having been made that the agriculturists of Kansas organize under the name of a State Farmers' Association, Wm. Sims, Master of the Kansas State Grange and Secretary of the State Board of Agriculture, replies as follows:

"I think your suggestion timely and worthy of the thoughtful consideration of agriculture, and well calculated to induce that consideration of the subject presented which its importance demands. But in view of the thorough and complete organization of the Order of the Patrons of Husbandry, now well established, growing stronger yearly, and to which, during its 21 years of continuous work, is due more of the important reforms secured in the interest of agriculture than can be attributed to all other influences combined, and which is now able to furnish conclusive evidence of its nearer approach to the requirements of the agricultural classes than any other association of like character yet presented to the American farmer, I beg leave, very respectfully, to question the propriety of diverting attention, by the formation of another organization of the same general character, with like aims and purposes, the effect of which, if consummated, must of necessity divide our forces, weaken our influence, and lessen our chances for final success.

"Our Order teaches, and history proves, that successful results of general welfare can be secured only by general effort; that unity of action cannot be acquired without discipline, and that discipline cannot be enforced without organization, and that every advance in the world's progress, pertaining to the general welfare, or affecting directly the interest of any considerable number or class, has been made by the combined effort of men and women exerted through organization. We therefore hold concert of action on the part of those engaged in any given industry to be necessary to success, without which general progress cannot be counted upon with reasonable certainty and individual effort, however well directed, must of necessity fail of its just reward, and that the farmers' calling, though much longer neglected than other interests, is no exception to the rule; in short, that organization and co-operation is the demand of the times, and that the future of agriculture will depend largely upon the ability of its votaries to comprehend and intelligently apply the true principles of co-operation as suggested in your article and taught in our Order, not only to the work of the farm, but also to questions of public policy, in which all have a common interest.

"It therefore seems that we agree fully as to the importance of systematic working together on the part of those engaged in agricultural pursuits, and differ only as to the methods best calculated to accomplish desired results; and for our Order, or the Grange, if you please, I only claim the advantage of being now well established—one of the fixed institutions of the country—upon whose foundation, so well laid, it would be easier to continue to build than to construct another of the same general character. The Grange brings farmers, their wives, sons and daughters together at stated periods; relieves the monotony of the isolated condition in which they generally live; enables them to extend acquaintance; to cultivate the social amenities of civilized life, and to consider in a friendly manner, and to the fullest extent, all questions relating not only to the farm, but of general public interest as well, in which every citizen should, to the extent of his ability, take an active part."

Grangers Petitioning Congress.

The Virginia State Grange is exerting itself, through its legislative committee, to have petitions circulated in all parts of the Union, signed and forwarded to U. S. Senators and Representatives, respectfully demanding (1) the creation of a Department of Agriculture, with its head in the Cabinet and ample funds to sustain its various bureaus; (2) the guarding of all moneys appropriated under the Hatch bill, so as to insure their strict devotion to purposes of practical agricultural experiment; (3) free course for the useful working of the Interstate Commerce and Oleomargarine Acts; (4) repeal of the Internal Revenue tax on tobacco; (5) due regard for the American Farmer in revising the tariff, and (6) such amendment of the Patent laws as shall make the seller, not the innocent buyer, liable for infringements.

Blank forms can be had of A. J. Wedderburn, box 318, Washington, D. C.

THE "TRUST" ABUSES.—Washington dispatches state that Representative Rayner addressed the House Committee on Manufactures the 10th inst., in support of his bill to prevent the creation of trusts. The greater part of his speech was devoted to an explanation of the different sections of the bill and the constitutionality of the legislation proposed. He said that the bill declared it unlawful for individuals, companies or corporations doing business in any State or Territory to make contracts or agreements or arrangements with individuals doing business in another State or Territory, by which the price of an article dealt in shall be fixed at any standard or figure by which its price to the public shall be established. Under that provision of the Constitution

which gives Congress the power to regulate commerce between the States, Congress had authority to enact such laws as would prevent the formation of these trusts and combinations doing interstate business. If it was conceded that this constitutional authority could be so exercised, it followed that Congress could prohibit the trust from making agreements to fix the prices of the articles they produce to preclude free competition. He contended that Congress had authority to prohibit the formation of these pools and to declare it unlawful for them to make contracts or agreements not to compete with or undersell each other, and to regulate prices to the detriment of the public welfare.

A Cruel Swindle.

One who appears to have had a long experience in boarding-houses narrates, in the *New York Mail and Express*, the following story, as told him by a very delightful old lady who has been in the boarding-house business for years, and has had under her roof everybody, from the relatives of the richest people in town down to the youthful clerks in the neighboring bric-a-brac establishment.

A very polite individual called on her the beginning of last summer in answer to an advertisement which she had printed in a morning newspaper, and told her that he was an English physician who, with an associate, wished to open an office in New York. He was perfectly willing to pay a handsome price for a suite of rooms with the use of the general reception-room for patients who were waiting to see him. He entered into a contract and a few days thereafter moved in with his daughter. As soon as he was established in the house he advertised through various mediums that a staff of English doctors and surgeons, 14 in number, had located themselves at this house, and as it was their first visit to N. Y., they were willing, in order properly to introduce themselves before the public, to give medical advice free. Having spread this announcement broadcast, the polite gentleman, who had as yet no associates whatever, went to the front door and nailed a large tin sign in a conspicuous position.

The magical promise of medical advice free had its natural effect. The door-bell of the old lady's boarding-house was pulled and jerked and tortured into a condition of unremitting activity. The girl whose duty it was to open the door became an involuntary professional pedestrian, and walked against time between the kitchen and front stoop, making innumerable laps to the hour. The handsome parlor was overrun with crowds of poor, sick and many times hopelessly diseased people. As many as 300 people a day rang the bell, and the staff of 14 hospital surgeons, consisting, however, of the polite gentleman and one associate who finally appeared upon the scene, talked with all of them.

There were all kinds of chronic invalids, but the invariable representation of the Gilbertian staff of 14 was that each case would be cured in six months if such medicine was taken as the English physicians would furnish. Of course, the various miserable specimens of suffering humanity declared that they would take the medicine, and when they were informed that the cost of it was so much they paid for it then and there, or, if they had no money, went around among their friends and borrowed it. In this way the alleged staff of 14 sold hundreds of bottles of their so-called medicine, collecting from the miserably poor patients who came to see them all the way from \$5 to \$50 each. Within a comparatively brief period the collections of the polite gentleman aggregated hundreds of dollars, all of which came out of tenement-houses and the poorest and most wretched hovels in the upper part of the city. As he always told his patients that nothing could be effected under six months' time, no awkward questions were asked by the miserable people who were scraping together a few dollars from week to week wherewith to pay him, and no complaints were made over the fact that no favorable changes in their condition had been accomplished.

At the end of a month, long before the time had elapsed for the medicine to work its beneficial results, the polite gentleman and his associate left, saying that they were imperatively called to Montreal.

They left hundreds of bottles of their medicines behind them and scores of wretched victims, who crawled, crept, limped and dragged themselves for weeks afterward to the house where the staff of hospital surgeons had held forth, asking piteous and plaintive questions as to the staff's present whereabouts. Nearly every visitor had some heartrending tale to tell, and at least half of them related how he or she had borrowed the money wherewith they satisfied the polite gentleman's demands or had used the hard savings of many long months, with the hope of re-establishment of health heartlessly held out to them.

SANTA ROSA GRANGE is reported by "Occasional" as meeting regularly and promptly, with good attendance, rain or shine. The new officers are evincing lively interest in their work, and but a single absence has been noted among them since the year commenced. The members have been divided into two sections, which take turns in furnishing entertainment at successive meetings, and strive to outdo each other in enlisting good recruits.

Temescal Grange.

This Grange at its last meeting discussed with considerable animation the resolution presented by Bro. Coulter and recently adopted by the Santa Rosa Grange, opposing a reduction of the National tax on whisky and tobacco. The resolution was adopted by a large majority.

At the meeting to be held to-day at 2 P. M. there will be work in the first and second degrees. It is hoped a large attendance will be present.

Grange Election.

SIERRA VALLEY.—N. N. Strang, M.; Geo. P. Haines, O.; Mrs. Geo. P. Haines, L.; Mrs. R. Weed, S.; A. Hubbard, A. S.; Mrs. M. Prichard, C.; Mrs. R. L. Olsen, T.; B. F. Lemmon, Sec.; J. Hubbard, G. K.; Mrs. Maxwell, Ceres; Mrs. B. F. Lemmon, P.; Mrs. A. S. Nichols, F.; Mrs. N. N. Strang, L. A. S.

NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

CONGRESS AND THE LIQUOR TRAFFIC.—On Friday of last week, after listening to an argument from A. M. Powell, president of the Washington Temperance Society, the Senate Committee on Education, by a unanimous vote, instructed Senator Wilson of Iowa to report favorably the bill providing for the appointment of a commission of five persons, all of whom shall not be advocates of total abstinence, to investigate the alcoholic liquor traffic, its relations to revenue and taxation, and its general economy and criminal and moral and scientific aspects, in connection with pauperism, crime and social vice, public health and the general welfare of the people; and also to inquire and take testimony as to the practical results of license and prohibitory legislation for the prevention of intemperance in the several States of the Union.

BACK TO CALIFORNIA.—The kindly countenance of Bro. Daniel Field of Maine, whose fraternal visits last year many Granges hereabout will recall with pleasure, beamed upon us in our *sacrum* one day this week. Our venerable friend, it may be remembered, went home to the Pine-tree State last spring, but, like so many others who have once enjoyed a winter on this coast, he felt the irresistible impulse and must needs return to the Golden State. He and Sister Field are staying with their son in this city, and it is hoped they will meet with neighboring Granges as often as possible.

BRO. J. V. WEBSTER is on a short visit to East Oakland, on account of the illness of Judge Howard, his father-in-law, but expects to return to Creston next week. This afternoon he will visit Temescal Grange, where he is always welcome.

THE Butte Mountain Pomona Grange meets in Yuba City to-day, 18th. All those desiring to become charter members must be present on this occasion to sign the roll.

From Vacaville.

Brush-Hauling—Gophers.

EDITORS PRESS:—After quite a rainstorm, the weather is bright and sunny. Grain and grass are growing very fast. Some young orange and blue-gum trees were killed by the cold, but I cannot find any fruit buds on the trees that are hurt.

People on the ranches are very busy now; when the weather is too stormy to work outside, they are fixing boxes, trays and other things necessary in taking care of the coming crop; when the ground is fit to work, they are setting out trees. A great many are digging out every fourth vine and planting trees. The grape-vines are dying very fast, and it will be but a short time before they are all gone, unless some remedy can be found for the phylloxera. Some have tried resistant vines and grafting, but have not met with much success. If vines are to be grafted, I think it will have to be done in a nursery.

China New Year commenced Saturday, and is over to-day for the working classes, judging by the strings of Celestials going home from town.

One of our orchardists has the boss way of getting the brush out of his orchard. He piles the brush in the middle between the rows of trees and then hauls it out with a "go-devil," the same as he would shock hay. The brush can be hauled off and dumped into a creek or on an open piece of ground much faster than it can be put on a sled or wagon.

Mr. Dobbins, near Vacaville, had a piece of sandy ground that was full of gophers. They killed his trees as fast as he set them out. Last year he set it out to pear trees and put several handfuls of bonemeal near the roots of the trees, and not one of the trees has been gnawed by the gophers.

Mr. Donahue of Vacaville is making some of the best implements for smoothing ground and cutting up the clods that have ever been tried in this part of the country. In addition to a clod-masher, he puts two or three rows of knives, which draw over the ground and cut it as fine as cube sugar.

Vacaville, Feb. 13, 1888.

OWING to a stringent paper famine the San Diego Union is published on buff wrapping-paper.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

ABOUT HAYWARDS.—*Cor. Chronicle*, Feb. 9: Almond and apricot trees are beginning to bloom, and the prospects were never better for a heavy crop of all kinds of fruit. The cold snap caused some of the oranges to drop from the trees in the Meek orange orchard. Grain is looking well, and nearly all our ranchers have put in their crops. Cattle and sheep in the hills are doing well, as the green grass is already good and abundant.

Amador.

NOTES FROM PLYMOUTH.—*Cor. Jackson Dispatch*, Feb. 9: Large bands of horses and cattle are being driven to the valleys below here, to feed on the alfalfa-fields until the grass is good in the mountains. The farmers are beginning to plow summer-fallow land. The prospect for a crop was never better than at this time. Grass is getting up so that stock can begin to nip it. Hay is selling at \$17 per ton. It is strange that our farmers don't make more hay, as there is always a ready market, and the hay crop is easier to take care of than grain, and more expensive to haul, when it has to be brought from below.

DISTRICT FAIR.—The Board of Directors of the Amador and Calaveras Agricultural Association met in Ione last Saturday and decided to hold the fair this year Aug. 7th to 10th. The old officers were re-elected as follows: U. S. Gregory, president; Geo. Woolsey, treasurer; Clovis T. LaGrave, secretary. The time selected for the fair is rather early for a good display of fruits, but the directors thought it better to select this early date than to come in conflict with the numerous other fairs that will be held in different parts of the State after that time.

Colusa.

FLOODS AND GOPHERS.—*Colusa Cor. Sutter Farmer*, Feb. 7: The high water in the Sacramento river has caused the levees to break in many places, flooding a number of acres and causing the grain to be drowned. The levee near R. Jones' place, on the east side of the river, broke last Tuesday. The Henry Klewe alfalfa field, on the same side of the river, was also flooded. During the high water J. B. De Jarnett, who resides a mile above town, by means of his irrigating ditch, turned the water into his alfalfa. In a few hours thousands of gophers appeared. About 10 or 12 men went to work killing these pests, and in a few hours had slaughtered between 1500 and 2000. One of the men killed nearly 200 and hung them to the barb-wire fence by their stumpy little tails.

Kern.

MORE RODENT RODEOS.—*Bakersfield*, Feb. 13: A rabbit-drive took place yesterday eight miles south of here. About 200 people were present. The ground was favorable for the purpose. The first roundup in the corral was about 4000. They were all dispatched with clubs, counted, and thrown in a large pile in the center of the corral. The crowd then adjourned to a barbecue, and many brought lunches and mild drinkables. After the feast another drive over the same ground took place and resulted in adding about 2000 more dead rabbits to the pile. They were very large and fat.

Los Angeles.

FIRST ORANGE TRAIN.—*L. A. Times*, Feb. 7: Yesterday W. R. Strong & Co. of Sacramento, who have established branch shipping-houses at various points in this section, for the purpose of packing and shipping oranges to the East during the season, started the first special full orange train of the season. The shipment consists of 14 cars, and goes via the C. P. and U. P. roads, and will be run on special fast time. At Council Bluffs the train will be distributed, and cars of the fruit sent to various cities. The oranges were picked in Los Angeles, Downey, Riverside, San Gabriel and other points, and all sent in so as to reach Los Angeles, the proper shipping point, together. When the train was fully made up it was photographed. These photographs will be sent by the firm to their Eastern friends and customers, and will prove a valuable and attractive method of advertising Southern California.

Marin.

A THING OF BEAUTY.—*Marin Co. Journal*, Feb. 9: Mr. Bogue of the Batavia, N. Y., nurseries, who visited San Rafael with his brother horticulturists, said that the handsomest thing he had seen on his journey was a *Cameilia Japonica* in Hall McAllister's grounds. The shrub is about seven feet high, symmetrical and robust, and literally covered with its wax-like flowers.

Mendocino.

FLOCK AND ORCHARD.—*Dispatch and Democrat*: J. B. Hoss has a double Hungarian prune on his place, one mile south of Ukiah, that made a growth of nine feet last year. . . . Some of our sheep men have lost a fourth of their flocks this winter, and most of their lambs. . . . A. G. Goddard, one of Mendocino's new citizens, who has located on a piece of land near Low Gap, has received a goodly number of orange, lemon and olive trees and set them out. Mr. Goddard displays the right spirit.

Monterey.

CHUALAR ITEMS.—*Cor. Democrat*, Feb. 8: Farmers in the vicinity are nearly through seeding. All available land that can be is cul-

tivated this year, and from present prospects a very large yield is anticipated, nearly three-fourths being in barley. Abernethy Bros. have rented the Bidache ranch, opposite here, and intend to use it for a dairy. Piazzoni Bros. have leased the Malarin tract rented by Mr. Alex. Ruine and have part of it under cultivation, while the rest is used for dairying purposes.

Nevada.

SHELLBARK HICKORY NUTS.—*Tidings*: Peter Johnston has on his residence-lot in Grass Valley a hickory tree that bore last year for the first time. There were about 50 nuts on the tree—the largest of that kind of nut. The tree grew from a nut brought some 20 years ago from Missouri by Billy Bailey, a former well-known resident of this town. There is another hickory tree in Grass Valley that bears, and that belongs to Mr. Thomas Othet, but it is not the shellbark variety. The hickory flourishes in these foothills and "hickory wood is the best of wood."

BEDROCK SOIL.—*Nevada City Transcript*, Feb. 4: It has generally been supposed that when our gravel hills were sluiced away to the bedrock, and the latter thoroughly scraped for the last traces of the precious metal, the ground was of no further service to man. But after all, this seeming desolation that comes from gravel mining is more apparent than real. With a little exertion the bedrock can be made fruitful as the best alluvial soil. It needs but slight fertilizing to make it productive. It retains moisture much better than the gravelly loam or the red surface soil of the hills, and to commence with is entirely free from noxious weeds to interfere with its cultivation. The value of the bedrock soil (for soil it is) is no longer a matter of speculation. Its productiveness has been fully tested, and may be seen on some of the best vineyards and orchards, including those of Samuel Allison, J. B. Ducary and the Rogers ranch for instance. If the bedrock exposed by the miners can thus be utilized and made subservient to the horticulturist or the husbandman, then the labors of the surface miners will not have been so destructive to the soil as has been imagined. All localities that have been disfigured by mining operations are destined to resume a more comely appearance and rejoice in fruitfulness.

San Benito.

HORSE MARKET.—*Free Lance*, Feb. 10: That the Board of Trade was wise in its suggestion that a regular monthly Horse Market be held in Hollister was proved by the success of its first meeting. Seven of the 31 horses registered were sold last Saturday. At the sale the buyers became acquainted with other horsemen, and on the next day eight more were sold, making a total of 15 horses sold. The prices obtained averaged \$135. This means that a total of \$2025 was brought into the county as a direct result of this first meeting. The Board of Trade, and particularly Mr. Leggett, its secretary, is to be congratulated on the success of its undertaking. Horses are already being registered for the next meeting. Those desiring to enter horses must register them one week before the next sale, which will be held on Saturday, March 3d. This will give opportunity for sending a list of horses registered to San Francisco and other points.

PUMPKINS.—Samuel Balch has raised 35 tons of pumpkins on three acres of ground on his ranch, situated four miles south of Hollister. No irrigation.

San Bernardino.

POTATOES AT CUCAMONGA.—*Ontario Record*, Feb. 8: Potato digging has been occupying the attention of quite a number in this vicinity the past week. The potatoes raised here are of excellent quality and find a ready sale in the surrounding towns. Mr. Cooke has been making sales in Riverside at \$1.75 per cwt.

ARTESIAN WATER IN RIVERSIDE.—*Press*, Feb. 11: On Wednesday Wm. Elliott, who owns the old Mercer & Backman place, put down a pipe to secure, if possible, a supply of flowing water. At a depth of 18 feet a flow was obtained, and at a depth of 25 feet the water spurted up three and a half feet above the top of the two-inch pipe, and continues to flow to this height up to date.

San Diego.

FRUIT TREES FOR THE BACK COUNTRY.—*San Diego Union*, Feb. 9: Said J. M. Brooks, nurseryman, to a reporter, yesterday: "Trees are being sent to places many miles distant from the city, where it is claimed by some there is no arable soil. Hundreds and thousands of acres are being set out in orchards in all directions. This year I bought 25,000 more trees than the regular orders, and they were all sold in a few days. It is impossible to get many kinds of trees, and for that reason tree-planting will necessarily be more limited than it would otherwise have been. The principal scarcity is in French prunes, plums, peaches and apricots. It is also impossible to get any olive trees, and there is a brisk demand for them. Walnut trees are likewise in great demand, but they cannot be supplied. I bought 1500 English walnut trees, but that was not half enough to fill orders. Those who plant trees in this county demand the very best varieties, so that fruit of the finest qualities will be the result. Assorted fruits are being set out, principally peaches, apples, plums, pears, olives, oranges, lemons and walnuts. Around Julian in the mountains thousands of apple trees of the finest varieties will be planted. Thousands of trees are every day being shipped to Murrieta, Poway,

Escondido, Julian, Otay, El Cajon, Elsinore, Oceanside, Fallbrook, Tia Juana, Temecula, Perris, National City, Mesa Grande, Encinitas, De Luz, Del Mar, Carlsbad, Campo, Barham, Banner and Ballena. A carload of trees was sent to Escondido last Saturday, and Colonel W. G. Dickenson is setting out 8000 trees at Chula Vista. Orange trees are in demand, but they are scarce and high in price. Prime native trees are worth \$2 to \$2.50 apiece. Florida trees are being planted, but it is very questionable whether they will do well or not. They are selling for \$1 apiece."

SOUTH CHOLLAS ITEMS.—*Cor. Record*, Feb. 8: We are having a spell of Indian summer—cold mornings and nights—regular growing weather. The grain is coming along finely about here, but much more should have been sown all around us. The Shaw brothers have cleaned the brush and stuff off of 60 acres or more, and sown all to barley which promises well.

San Joaquin.

STOCKTON FAIR.—*Independent*, Feb. 10: The Board of Directors of the San Joaquin Valley Agricultural Association have decided to open the Stockton Fair on Monday, Sept. 17th, two days after the close of the State Fair. The racing will continue for six days, ending on Saturday, Sept. 22. The pavilion will be open two weeks, until the 29th.

Santa Cruz.

A ROOSTER ON THE RAMPAGE.—*Santa Cruz Sentinel*: While Lawrence Lorenzen's little two-year-old boy was playing in the yard Saturday afternoon, he was attacked by a large rooster. He was struck by one of the spurs, in front of the right ear, with such force that the wound extended to the bone, severing a branch of the facial artery, which bled profusely, and required the attention of a physician.

Solano.

PROLIFIC PEAR TREE.—*Dixon Tribune*, Feb. 11: There is a farmer living near Dixon who has one pear tree from which he picks all the fruit he needs for canning and drying purposes, sufficient to supply a large family, and usually has a few boxes of green fruit for market; and yet he persists that it won't pay to plant any more.

RECLAMATION.—*San Rafael Journal*, Feb. 9: Warren Dutton of San Francisco has just completed a construction dam across one of the principal forks of Suisun bay, Solano county, which is 150 yards wide and 30 feet deep. It was at first considered by many a desperate undertaking, but Mr. Dutton felt sanguine of success, and after two unsuccessful attempts, it was last Friday pronounced waterproof. He has had 150 men employed on it for the past six weeks. The object of the dam is to do away with miles of difficult leveeing, which would have taken months of hard labor to complete. [The *Dixon Tribune* says that this dam crosses an arm of Montezuma slough, and adds that Mr. Dutton is a firm believer in the value of the tule lands.]—*Eds. Press.*

Sonoma.

SALE OF A STALLION.—*Santa Rosa Republic*: The fine black Clydesdale stallion "Triumphette," formerly the property of the Sonoma County Stock-Breeders' Association, but recently bought by Geo. Guerne, has been again sold to a horseman from Carson, Nevada, for \$1800.

MERCHANT'S CANNERY.—*Healdsburg Enterprise*, Feb. 10: T. S. Merchant arrived this week from his Eastern trip, and has already done much to further his cannery enterprise. He let a contract to E. G. Hall of this city, to build a brick addition at the west end of the main building, to be used as a store-house. It will have a frontage of 84 feet, a depth of 50 feet, and the walls will be 20 feet high. A frame addition, fronting on Fitch street, has also been contracted for, to be used as an assorting room. The large, main, concrete building will be used exclusively for the packing business. A new floor, with just enough incline for drainage, will be laid and skylights will be put in. Work on these improvements will go forward at once. The machinery for the plant will be all modern, and will arrive in good season to be placed. Mr. Merchant has let a contract for 10,000 boxes, and will contract for 20,000 or 30,000 more. He brought with him from S. F. a large stock of tomato seed, also string beans. He will himself plant a large field to these vegetables, and has already supplied many farmers with seed. John Daly is his agent for the sale of seeds, and those who want to plant vegetables for the cannery may be assured of a market there if they but raise the varieties desired.

Tulare.

ROVING SHEEP.—*Kernville Cor. Delta*: I may mention the surprise which the recent storm gave the sheepmen on the desert. Many French and Portuguese drove their herds through Walker's pass and out on to the desert, where they camped at some spring at the base of some isolated little hill. The recent storm covered that whole country with snow as well as nearly all of California. For eight days after the storm, sheep came pouring into the valley through the pass in one continuous stream, and finding no available feed here, i. e., no Government land except what was covered with snow, they kept on across the Caliente mountains, obstructing the stage-road for miles and for days. . . . The temperature has moderated, and vast herds of sheep are (Jan. 25th) returning to the desert again. Some 50,000 of them were un-

able to get further west than this place on account of the private pasture-lands in the canyon of Kern river; and for about a week their owners were compelled to resort to the use of alfalfa hay; one man sold over 1000 tons.

ABOUT VISALIA.—*Delta*, Feb. 9: Contractors and farmers are having some difficulty in securing help. This is a busy season and there is work for all who want it. . . . Orange trees between Visalia and Tulare, unprotected in any way from the recent cold weather, were uninjured. The same may be said of other trees in the valley, even in places where a few trees were grown solely for ornament. . . . The warm weather of the last two weeks has caused the snow to melt more rapidly than it has before this winter, and the several streams issuing from the mountains are carrying good bodies of water in consequence. . . . There will be a rabbit drive the last of the week in the country west of the railroad and north of Elk bayou. The wire fence for the corral and wings has been purchased for the purpose. Jacks are very numerous there and thousands should be slain.

Yolo.

CANAL EXTENSION POSTPONED.—*Woodland Mail*, Feb. 11: In pursuance to call of the committee appointed by the projectors of the Colusa canal, quite a large meeting was held at Blacks Tuesday, to discuss the proposition of forming an irrigation district in northern Yolo, to unite with Central district of Colusa county and extend the proposed canal on down through northern Yolo to Cache creek. The only representatives that came from Colusa county were W. S. Green and W. J. Clark. There were about 80 Yolo land-owners present. A vote taken upon the sense of the meeting in regard to uniting with the Colusa district resulted in three votes for and 38 against the proposition. While it was universally conceded that it would be of immense benefit to the general, and particularly the farming and fruit interests of Yolo county, the necessary tax of from \$5 to \$7 per acre to secure the canal was more than taxpayers felt inclined to stand. "But," remarked a prominent farmer, who had spoken against the proposition, "the time will come when there will be a navigable canal down through Colusa and Yolo to Suisun bay, and the day is not very far distant."

OREGON.

ADVERTISING BY MEANS OF PRUNES.—*Portland Oregonian*: Not long since a gentleman in this city sent his sister, living East, a small package of Italian prunes. In acknowledging them she said: "The prunes are delicious. It is the finest sauce I ever tasted. I would like to live in a State that produces such fruit." This was mentioned to a well-known real estate man, who hit upon the idea of advertising Oregon by means of these prunes. As a result the Portland Real Estate Co. has sent an advertisement to an Eastern weekly of large circulation, offering a little basket of prunes, sent postpaid for 25 cents. This sum will just cover the cost of the fruit, a neat Japanese basket, the postage and a pamphlet descriptive of Oregon. Incidentally the advertisement means that a man can make \$300 an acre raising prunes.

Live Poultry Overland.

Our poultry and egg producers are continually having their calculations interfered with by the receipts of eggs by the carload, products of the cheap labor of the hens of the great West. Were it not for this supply our producers might, however, become too wealthy and proud, so the shipments overland may be of value as a lesson in humility, though it is hard to consider them as of any other benefit to our local poultry interest. The bringing in of dressed poultry can be classed in the same way, and considerable amounts may be expected at certain seasons of the year. They have usually come by freight, but are now arriving in refrigerator cars, these cars, without ice, being admirably adapted to excluding cold.

Just now the tidings of special interest is concerning the arrival of Eastern turkeys alive. They come from several points, but chiefly from Kansas City, which serves as a collecting point for California shipment. The birds come in a sort of palace-freight car, properly warmed by stoves, and with arrangements for feeding and watering. They come through then on passenger time, and have the usual treatment of second-class tourists. The time from Kansas City is four or five days. Live chickens are also enjoying this mode of transit, and if freights are cheap enough it seems as though this traffic might have considerable influence on local poultry prices.

THE AGRICULTURAL EXPERIMENT STATION IN OREGON.—The telegraph announces that Gov. Penoyer has addressed a letter to the Secretary of the Treasury, giving his assent to the grant of money made in the "Hatch bill," to establish agricultural experiment stations in connection with the Agricultural College of Oregon as soon as the proper board to which the fund should be paid is organized. This board by law consists of the State Board of Education, the Master of the State Grange, and nine others who were appointed by the Governor on Monday. Owing to there having been no acceptance as yet of the college building at Corvallis, it is feared that only \$3000 will become available to Oregon for this year.



The Teacher's Visions.

And then she lifted up her face,
But started back agast;
The room, by strange and sudden change,
Assumed proportions vast.

It seemed a Senate hall, and one
Addressed a listening throng;
Each burning word all bosoms stirred,
Applause rose loud and long.

The 'wildered teacher thought she knew
The speaker's voice and look,
"And for his name," said she, "the same
Is in my record book."

The state's Senate hall dissolved,
A church rose in its place,
Wherein there stood a man of God,
Dispensing words of grace.

And though he spoke in solemn tones,
And though his hair was gray,
The teacher's thought was strangely wrought;
"I whipped that boy to-day."

The church, a phantasm, vanished soon;
What saw the teacher then?
In classic glooms and alcoved rooms
An author plied his pen.

"My idlest lad!" the teacher said,
Filled with a new surprise;
"Shall I behold his name enrolled
Among the great and wise?"

The vision of a cottage home
The teacher now described;
A mother's face illumined the place
Her influence sanctified.

"A miracle! a miracle!
This matron well I know
Was but a wild and careless child
Not half an hour ago.

"And now she to her children speaks
Of duty's golden rule,
Her lips repeat, in accents sweet,
My words to her at school."

—W. H. Venable, in Boston Budget.

Working and Waiting.

[Written for the RURAL PRESS by C. F. Y.]

Early in 1876 a family from the coal mines of Pennsylvania arrived in Nevada county—father and mother and five children, the eldest a girl of nine years. They brought a small sum of money and the baggage allowed to emigrant passengers.

They purchased a miner's claim of 40 acres, only to learn a year later that the title was worthless. Wild land could have been had for the taking; but this claim had a cabin ready to shelter them from the storm, and a spring of water, grapes yielding fruit, a peach and apple tree, also some small fruit; a bit of garden fenced. They thought it cheap at \$300.

With money to buy six months' food, a cow, a pig and poultry, a rake, spade and hoes and tools for grubbing out roots, seed wheat and potatoes, they were hopeful, happy and contented, even though their \$500 was all expended.

The next fall a neighboring miner, by a survey of his claim, included the best half of theirs. Without cash to defend or contest by suit at law, they were compelled to vacate the premises, with the acre of wheat and truck patch so laboriously cultivated by hand. They were allowed to remove the cabin, but denied the right to take a length of the wicker-woven fence.

The board part of the cabin, two small rooms, was taken apart and carried a board at a time to a sunny knoll on the rocky 20 acres left to them. But the home part, roses, grapevines and peach trees, was left behind. The 20 they had lost lay convenient to a water ditch, and those patient toilers, by spade and pick, had constructed the sub-ditches to irrigate garden and patch of wheat. Besides this, in the first year they had thoroughly cleared five acres, grubbing out the roots and utilizing the brush by weaving it into a pig-proof wicker fence around the whole. This five acres had its water ditches built and the plats between were to be sown with wheat raked in and cultivated by hand the second year. All this hard labor was lost, but energy and hope with which to commence again remained. At this point the average American would have left the place in disgust; but not so these slaves of old country, and new country, coal mines. They knew that poorer lands in colder climates could not be had in England at any price, and in Pennsylvania were far beyond their means.

To raise vegetables for daily food, water must be had on their rocky twenty, hence the hill must be leveled. To do this they carried the loose red dirt with which to fill up the old wash from the hill. First of all the piles of rock left by the miners when they cleaned up the bed-rock and abandoned their sluice-boxes had to be leveled and the whole triangular acre made as smooth as possible.

Next, a system of wickerbrush gates put in,

to prevent the rapid carrying off of loose soil by the storm-waters of snow and rain. Then commenced the systematic daily work in which the youngest child could help a little. A rude, home-made wheelbarrow for the father, baskets for the mother and children to carry dirt and cover the rocky foundation, to a depth equal to the nurture of a crop of turnips and potatoes, early and late, in fair and cloudy weather, the whole family toiled to level the hill and fill up the waste places.

The rains came and supplemented their work by washing down more dirt in a night than their united work could carry in a day, and the rain settled it. To the credit of the people be it said this poor family did not starve, though they did work barefoot the most of the time. They had a young cow and some poultry and pigs. Fruit could be had within two miles for the taking. Credit for flour and salt was given by grocers.

In the spring a half acre of potatoes and a half acre of wheat were planted, weeded and cultivated by hand. Turnips and lettuce grew rapidly where the soil was too thin for potatoes.

When the wheat was a foot high and the lilybells along the trails were the sweetest, we walked across the country three miles to see these struggling people, and from their lips learned these facts.

By the cabin door wild roses were blooming. Cuttings of Muscat grapes were growing. Peaches from pits, winter-planted, showed vigorous life. Everything they touched prospered. We walked with them to the daily work and saw a four-year-old baby carrying a little basket of dirt on her head to help papa and mamma cover the rocks where next year potatoes could grow.

"The young mother said, with tears on her face: "O madame! in this strange country men have been very cruel and have defrauded us out of money and hard work, but God blesses us with the sun and the rain. We do not freeze. We do not work in the dark, deep coal mine, but up in the blessed sunshine and pure air, where birds sing and flowers bloom. See how strong my babies are! Please God we will have a home for our old age, and land enough for our children. Twenty acres, cultivated as in the old country, will make us very comfortable."

Late in the autumn we saw them again. They had sold \$60 worth of potatoes, paid up their flour and salt bill, and had good seed left for next year's planting, and all the small ones for home use.

Their wheat was cut with a sickle and sharp knives, and carried on sacks to the threshing ground, where it was beat out and winnowed by hand; then exchanged for flour, with seed reserved for a whole acre the next year.

The work of cutting and filling continued until the whole wash was reclaimed and as much more had been leveled.

We came to Berkeley and lost sight of them for several years. In '85, returning to the neighborhood, we found the old trail over hill and ravine, past the debris of abandoned quartz-mills and placer mines, and followed it again. The once barren knoll was transformed into a bower of beauty and bird-song by full-grown peach, plum, pear and young apple trees.

The man of the household had a team and wagon; a plow and harrow had superseded the spade and rake.

The cabin had been raised and placed on a rock wall, making a cool cellar beneath. A lean-to addition added two rooms. A wide porch extended back and front the whole length of the house, over which hopvines, roses and grapes grew in wild luxuriance. Rich purple and amber clusters, finer than any grown in hothouses of England, tempted the birds and the visitors to pluck and eat.

The eldest daughter had married an orchardist near by. Two younger girls were "working their board and attending school in town and learning nicer methods of housekeeping at the same time," the mother said. The younger children were at the district school.

White curtains were at the windows. The beds were clean, garments were well patched, and the floors were bare. The china closet consisted of rude shelves only in the kitchen, but it was a HOME with plenty of food and brightening prospects for the children.

The little mother still rejoiced over her escape from the dismal coal mines—with their low wages, poverty and hardships—to a home and fertile acres in sunny, beautiful California. In our 700 miles of foothill country there is room for a million such homes. With equal perseverance they can be made with one-half the labor. People foreign-born appreciate these opportunities, and are coming by thousands to occupy the land. When too late, native-born Americans will wake up to lament over what they have lost.

ABOUT 2500 words are all that are used in ordinary talking and conversation, although there are some 20,000 words in the English language. Different authors vary in the number of the words they use, but the difference is but slight. Shakespeare found 4000 words sufficient for all his works.

SIGNALING BY CLOUDS.—Quite successful attempts have been made by British officers at Singapore in signaling by means of electric lights flashed on cloud. A message of four words read from an outgoing vessel at a distance of over 60 miles, but the reply escaped notice.

The Ballot for Women.

By One Who Does Not Want It.

EDITORS PRESS:—I inclose a clipping from *The Interior* of Chicago, "The Ballot for Women," which I would like to see in the RURAL PRESS, believing it will be a help to many who are, as yet, undecided on the woman suffrage question.—HENDER A. HARRISON, Vacaville.

(United States Senator Blair of New Hampshire made the report of a select committee of the Senate, in favor of woman suffrage. In doing so he quoted from a pamphlet entitled "Letters from a Chimney Corner," written by Mrs. Caroline F. Corbin of Chicago. Mrs. Corbin, in an open letter to Senator Blair, refers to her doctrine in the pamphlet quoted by him, and proceeds to differ with him in conclusions, as follows:)

The argument, briefly, is that neither the man nor the woman is individually the representative of the genus homo, but that, according to nature and revelation, the two united make one, and that to each constituent of that union certain distinct powers and properties belong, each dependent upon the other, in a minor way, for proper fulfillment. You say, "If upon this account woman is to be denied suffrage, then man equally should be denied the ballot, if his highest and final estate is to be something else than a mere individual."

Now, marriage is that partnership upon which the right order of society and the right perpetuation of the species depends. The question is whether each partner shall keep to that line of labor which nature has marked out, or whether of woman shall be demanded not only her own share of the labor but also a large part of that which belongs to man. For let us notice, that while it may be granted that woman has the physical capacity to bear and nourish children, Nature has made it forever impossible that he should perform that office. If therefore he demands of her that she shall participate in those external and general duties, such as labor for the support of the home and for the direction of the state, which his natural constitution, physical and intellectual, fits him for, while he cannot by any possibility relieve her of those most necessary offices and duties which nature demands of her, he commits a palpable and monstrous injustice.

Nor does it help the matter to say, as you do, that because woman's nature is purer and nobler than man's the State would be benefited by her participation in political affairs. If men are not capable of managing the affairs of the State according to the highest and best ideas of the race—that is, of both men and women—will you permit me respectfully to inquire what proper and adequate share of this world's work they can perform? What is their natural place in the order of society? Are they mere hewers of wood and drawers of water? They cannot bear citizens; they cannot care for them in infancy and rear them to manhood. If they cannot govern them with wisdom and justice when they are produced ready made to their hands, what is their reason for being? When a man stands up in the United States Senate and makes such a statement as that in regard to the men of this Republic, it appears to me that he compromises his own self-respect and the respect due to the dignified and honorable body to which he has been elevated.

You say that you have only proposed the measure because women have asked you to do it. The same plea was made by your great progenitor in the Garden of Eden; but it did not avail him. Moreover, in the case of Adam it was true. In the present instance the plea contains but the minimum of truth. There are 15,000,000 of women in this country (I quote your own statistics) of voting age. Will you kindly inform us what proportion of that 15,000,000 you have heard from? You say that these women are being governed without their consent. Is it possible that you can sincerely believe that 15,000,000 of American women could be governed without their consent? Do you not rather feel assured that if a bare majority of that number did not consent, for what appear to them to be good and sufficient reasons, to be governed by indirect rather than direct representation, there would be a revolution within 24 hours? With every right of agitation at their command which man possesses—free speech, free assembly, the right of petition, a press ever ready to disseminate their views, and many privileges of courtesy besides that men lay no claim to—what power could withstand the moral force of any demand which these 15,000,000 should unitedly make?

With what show of reason do you compare free-born American women to the degraded and ignorant slaves on Southern plantations, and speak of men as their masters? As a matter of fact the power of men over women is not greater than that of women over men. Nature lays the infant man a helpless creature in the lap of his mother. He is in her power for life or for death, and for the first 10 or 15 years of his existence, and that during the forming and determining period of his career—a period, too, in which he is answerable to no other law than that of his home—her power over him, physical, intellectual and moral, is so nearly supreme that no power which he can arrogate over her in later years can overbalance it. Under ordinary circumstances the faithful, intelligent mother may make of her son, in all the essentials of manners and morals, whatever she will. If American men were to-day the narrow-minded, tyrannical, vicious creatures they are charged with being by the woman suffragists, unfitted to be legislators for the whole nation,

it could only be because their mothers had misunderstood or neglected the opportunities which nature put into their hands. Such a charge is a tremendous indictment against the motherhood of the nation, and if it could be sustained, ought of itself to bar women from all legislative functions until they can better fulfill that which nature demands of them in child-bearing and rearing. Moreover, it is the function of slaves to labor; but it is this nation's pride and boast that in no other country that the sun shines on are there so many homes supported by the loyal and untiring industry of men, where women are kept in ease and comfort, in order that they may give their time to the higher duties of rearing children and planning and carrying on enterprises of charity, philanthropy and reform; and the influence of these homes upon public sentiment is the one irresistible power in American social and political life. Plainly, if any portion of the American people are slaves it is not the women.

But let us return to the physical adaptability of women to the duties of voters. If women vote, they must also hold office and assume the working duties incident to political campaigns. It appears from the published record of your life that you commenced your political career at about the age of 30. For the next 10 or 15 years you were actively in politics. Now, will you tell me if you think it would have been convenient or agreeable, during those years when you were laying the foundations of your political success, to have been also engaged in bearing and rearing a family? Could you have done what you found it necessary to do politically, and at the same time have attended properly to your duties as wife and mother? You will say that the very suggestion is indelicate, and I agree with you, but the fault is in the situation as proposed by you. The duties and offices of motherhood are all sweet and pure and holy, when kept within the sacred precincts of the home. Brought out into the garish light of publicity, what do they become?

Nor will it avail you to say that some part of these offices may be delegated to servants. There are too many mothers of that sort in the country now; no political measure can be a wise one which tends to increase their number.

You say in your report that there are many women who are not wives and mothers. Very true, and when women vote and hold office there will be more of them. A true regard for the best interests of society demands that their number shall be reduced by all natural and reasonable means; but when political rewards are offered as the price of services in public life, do you not believe that many, and those not of the weak and ignorant, but of the more gifted and intellectual, will be tempted to forego marriage and motherhood for the sake of winning them? Woe betide the land which thus offers its political trusts as premiums for childless women! The morals of society are corrupt enough now. What do you suppose they will become when not to be married not to be a mother, is the prerequisite for a woman's success in a chosen and tempting career? History gives abundant evidence that women are not naturally of purer instincts or more capable of self-control than men. It is only as they are subject to men, as in heathen countries, or yield themselves to the elevating and purifying influence of Christian teaching concerning marriage and the home, that they rise to a higher moral level. Emancipated from these restraints, the intensity of their nature often betrays them into surpassing depths of depravity. I speak advisedly, therefore, and in the light of 30 years' profound and prayerful study of social problems, when I say that the direct tendency of woman suffrage would be to form a class of women such as held high court in Greece in the days preceding its downfall—women brilliant and intellectual, but wholly wanting in that steadfast faith and abiding virtue which characterizes the Anglo-Saxon ideal of womanhood—I may say the Christian ideal as well, the wife and mother. Are American men prepared to relegate the wives and mothers of this Republic to a secondary and subservient place, and share the political leadership of this great and free country with an oligarchy of Aspasias?

You say that the passage of the proposed resolution would not commit any person to the support of woman suffrage in the end. But what does it do if passed by both houses? It sends the discussion of this question, backed by the authority of Congress, into every State of this Union. A score or two of the professional advocates of woman suffrage will beat up the entire territory, and by their noisy persistence will necessitate either that women shall take the field upon the other side or else let the question go by default. Home-loving women—the women who stay in their homes and fulfill the duties of their vocation—and these women are in the great majority in all the States and Territories—have little taste for public strife and few gifts with which to win battles in the public arena. Still, if needs must, they can and will defend their homes; but, believe me, they will not exonerate from blame those legislators who, by the advocacy of measures like this which you propose, have thrust the hard necessity upon them.

Do you ask me, then, what shall men do in regard to this cry, which is coming up all over the land, for purer politics, a worthier conduct of affairs? Men know very well what they ought to do about it. They ought to live daily and hourly in the fear of God and for the honor of good women. They ought steadfastly to practice those principles of purity, honor, up-

rightness and patriotism which it is the duty of every Christian home to inculcate. It is very true that the duty is now too often imperfectly performed in our homes; but, believe me, the remedy for this evil does not lie in the direction of woman suffrage. It is by inciting and helping woman to the more faithful discharge of her own duties that legislators will honor her far more than by dragging her out of the quiet of her own domain and setting her to perform their neglected and unfulfilled duties.

Instead of 15,000,000 of women voters vainly trying to do the work which God demands of men, there should be 15,000,000 of happy homes in this broad, fair land; homes supported by the father's labor, made to glow with heaven's own light by the mother's tender love and care; homes where children are reared who shall become just and upright men and faithful, conscientious women; where those virtues are being taught which are the only enduring bulwarks of a free republican government. It is to build up such homes, not to break down their walls and quench the light upon their hearthstones, that legislation ought to be directed.

There are other and weightier arguments against woman suffrage, but these are such as are suggested by the text of your report. I commend them to your earnest consideration before you again address the United States Senate as the champion of women. Very respectfully yours,

CAROLINE F. CORBIN.

Art and Its Counterfeit.

[Written for the RURAL PRESS by I. H.]

It was in a farmhouse not a hundred miles from San Francisco that three friends were discussing a certain exhibition of pictures which they all had seen. For be it known to you, oh gentle reader (as the writers of a past generation used to say), that in these rural homes of ours, conversation does not always confine itself to the price of eggs and chickens, the best way of rearing a calf and fattening a pig. "Taste, Shakespeare, and the musical glasses" claim a share of the thoughts and interests of many a woman who is not ashamed of the fact that she "does her own work," including cooking, washing and ironing, sweeping and scrubbing, making butter and raising fowls.

Of the three, one was an enthusiastic and conscientious art-student, whose work attests her thoroughness as well as her ability; another was evidently familiar with all that is to be seen of artists' efforts in San Francisco; the third, though using neither pencil nor brush, had looked upon many of the world's most famous paintings, and so had something to judge by.

The unanimous decision was that in the whole collection there were scarcely a dozen pictures to which one would willingly give house-room. And then came the explanation and excuse—the larger number were the work of amateurs. A somewhat lamentable conclusion in view of the great art revival of these latter days. Never was the magic word in such constant use before; it meets us at every turn, it is on all our lips. This one means to devote herself to the study of art; that one is to have an art-room added to her house; half the girls we know are taking painting lessons, and most of our neighbors have their walls covered with paintings executed by members of the family.

And yet it seems no matter of surprise that an exhibition consisting chiefly of the work of amateurs should also consist very largely of trash! What is the reason? It may be well worth while for any of our young art aspirants to pause and inquire.

The answer will surely lead one to question the methods of instruction very largely pursued outside of the schools of design in the large cities. With too many teachers, the first principles of art are entirely ignored. Drawing is considered unnecessary, tedious, tame; the beginner, ignorant of the first rules of perspective, seizes a brush and aspires to "paint a picture," paints it, too, under the teacher's guidance, and with the teacher's aid, and is perfectly content with the result. Alas, alas, for the conscientious soul not wholly ignorant of what a picture ought to be, when called on to admire this caricature of nature by the self-satisfied artist or her proud and delighted mother.

"What is worth doing at all is worth doing well." If this old-fashioned axiom has any application it must be in matters belonging to the higher arts, to music and painting, and all that ministers to our love of the beautiful. The work of the untrained painter is very apt to be like the musical performances of those who play by ear, highly gratifying to the perpetrator and to a small circle of admiring friends, but full of glaring errors and absurdities to any one "who knows."

None of us like to make ourselves ridiculous, and the best advice to any young person ambitious of becoming an artist would be to "hasten slowly." There are careful and competent teachers to be found who will lead the beginner in the right path if only he or she has modesty and patience enough to follow. But it will not be by neglecting the elementary training which alone can insure final success; it will not be by encouraging the idea that a dozen lessons will enable the pupil to paint a picture worthy of the name, or of any value beyond the cost of the canvas and the frame which protects it.

YOUNG FOLKS' COLUMN

Miss Edith's Beau.

I.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

The girls all loved Miss Edith, but it is a lamentable fact that the Madam did not. Whether this was because Miss Edith was young and pretty, with a bright smile and a kind word for all, while Madam was old, ugly and rather too fond of scolding, I cannot say, but it is certainly true that the elder woman's heaviest scowl and sharpest words were reserved for the younger. Perhaps the old lady envied the other her influence with the girls, for one grave, sweet look from Miss Edith's gentle eyes did more toward the subjugation of the most refractory pupil than all Madam's coldness and severity.

Nothing could have been more in contrast than the appearance of these two. Madam's small blue eyes were almost absorbed in her large, gold-mounted spectacles. Her whole face was "one big frown"—as little Pinkie Black used to say, it was fretted into a thousand wrinkles. Her nose was hooked like an eagle's beak, while her thin, shapeless lips betokened greed as well as cruelty.

Miss Edith's eyes were wide and brown; her nose slightly *retroverse*—"a love of a nose," the girls said; her skin was as smooth as a baby's, and her mouth like a half-open rosebud. Pinkie's father, who was a widower and who visited the school every fortnight to see after his little daughter, once asked Madam if she were not afraid of losing so pretty an assistant, upon which she had informed him with a glance of withering scorn that she had other things to consider than the pretty looks of ladies.

Madam was coarse and not very well educated, but she employed excellent teachers and was a good manager, so her school flourished.

Miss Edith's history was the repetition of an old story. Her parents were dead. She was alone in the world and obliged to teach for a livelihood. Madam gave her scant compensation for her services and she often ate the bread of bitterness under the old lady's harsh and exacting rule, but many of the girls had become endeared to her and she hesitated to change her condition lest it should not be for the better.

There were but ten of us "boarders." The day pupils numbered nearly forty, and there were several teachers besides Miss Edith. These all received larger salaries than she did, however, and they were not compelled to live beneath Madam's inhospitable roof.

One evening late in October, about sundown, we "boarders" were seated in the school-room laughing and talking nonsense, most of us, as girls will do. Eppie Holmes, the genius of the crowd, had a small, complete edition of Shakespeare, and was endeavoring to decipher the microscopical text in the fast-fading light. Mildred gazed abstractedly out of the window, dreaming perhaps of her country home, and Polly and Pinkie, our youngest, were munching two hard red apples which Pinkie, who was a favorite with the cook, had coaxed from that functionary. I have often wondered what there was in Madam's wretched little apples which made them seem superior to all other apples. Never since have I tasted fruit half so delicious!

Pinkie Black was the pet of the whole school; even Madam was almost kind in speaking to her, though Eppie, who was astute beyond her years, said this was only because Mr. Black was rich and paid for half a dozen extras. Pinkie was a pretty child and looked her name. Pink of cheek and black of eyes was she, somewhat mischievous and altogether warm-hearted.

"Mildred," I called across the room, "what do you see in the clouds and the house-tops to interest you? Why don't you turn your attention to the rest of us?"

"I was just thinking," said Mildred, "how hard those shabby-looking sparrows, going to roost in that dusty tree, are trying to imagine it is summer in the country."

"Something like you, eh, Milly?"

"Am I a shabby-looking sparrow?" she asked with a smile. "Thank you for the compliment."

"Now I didn't mean to say that, Milly. You know I didn't. I meant—"

"Hello!" interrupted Milly, "Here comes Miss Edith with a man. Such a thing was never heard of before!"

Of course there was a wild rush for the window at this, and there below, at the front gate, stood our sweet young teacher, leaning on the arm of—Mr. Black!

"Well!" exclaimed all the girls in a breath. We watched her disappear one way, him another, and heard the hall door closed, but we had no time to talk it over before Miss Edith herself walked into the schoolroom, looking very pale and faint. I thought she would fall. Eppie placed a chair for her and she sat down mechanically, but did not seem to realize her surroundings at all.

"I have seen a ghost—a ghost," she said, and swooned outright.

"No, don't call Madam," said thoughtful Eppie, as some one made a movement in that direction; "she would only be cross and ask questions. Open the window and fan her gently. There! She's all right now."

The color swept slowly back into Miss

Edith's pretty cheeks, and with a return of consciousness came her self-control, for with all her soft words she had plenty of character.

"Girls," she said, "don't be alarmed. It was a sudden dizziness, I think. It attacked me on the street, and just then Mr. Black came up and offered to see me home," which was all the explanation we had of it.

II.

On the left of Madam's house, off from the dining room, was a small conservatory—a glass inclosure quite destitute of plants, one end of which opened into the garden, where a few forlorn geraniums and scrubby-looking pinks were struggling to maintain an existence, though for the most part Madam's "garden" consisted of brick walks and empty flower-beds. Here the afternoon sun lingered longest, and Miss Edith liked, when her schoolroom duties were concluded for the day, to bring her chair out and sew or read for an hour. Sometimes one of the girls would be allowed to accompany her.

The day after the occurrence described above, she and I were together in the conservatory. It had been a tiresome day for her, and she looked worn and tired, but so pretty!—her brown eyes shining softly, as if there were tears hidden in them, and her little white hands, from which her work had fallen, lying idly in her lap. She seemed absorbed in thought, and I, not wishing to disturb her, was as quiet as a peeping mouse. Presently I heard the click of the gate latch, and glancing through the open door I saw a man approaching rapidly along the brick walk. He had evidently caught sight of us. "Miss Edith," I said, "who can that be?" Like a flash she arose and stood in the doorway.

"Jack! Jack!" she cried, as he drew near, "have you come back to me from the grave?" and she threw herself into his outstretched arms.

"No, my darling," he answered, "not from the grave, but from the ends of the earth."

"O Miss Edith!" I exclaimed in a terrified whisper, "here is Madam!"

But it was too late. Madam had seen it all.

"And so, miss," she said sardonically, "it seems you have a beau. I tolerate nothing of that sort in this establishment. You artful creature," she continued, raising her voice to a shriek, "hugging and kissing a man under the very shadow of this select seminary for young ladies. Pack up your trunk and march!"

"Madam," said Miss Edith, with the calm, sweet dignity that so well became her, "permit me to introduce—my brother. He was explaining when you spoke that he had come to take me to his home. O Jack!" she cried, turning to him, "I did see you yesterday, then. I thought you were an optical illusion, dear boy. I am not strong, and I have been overworked lately." And then he clasped her in his arms again, under the very spectacles of Madam, and told her tenderly that he, in future, should work for both of them.

Miss Edith's brother had been wrecked at sea, two years before. But three other men had survived to tell the story of the lost vessel, and one of these had seen, he said, Jack Atterbury sink. By some miracle, however, the young fellow was saved, and after wandering in strange parts for some time, he found means to return to his native land. He had met with friends, and was now in a condition to support his sister and himself.

And this was Miss Edith's beau? Not a bit of it. She is to-day Mrs. Leonard Black. I have not time to tell you all the particulars, but he says he fell in love with her at first sight, and she says she married him to please Pinkie.

GOOD HEALTH.

To Save Doctors' Bills.

Never go to bed with cold or damp feet. Never lean with the back upon anything that is cold.

Never begin a journey until the breakfast has been eaten.

Never take warm drinks and then immediately go out into the cold.

After exercise of any kind, never ride in an open carriage, or near the window of a car for a moment; it is dangerous to health or even life.

Never omit regular bathing, for, unless the skin is in regular condition, the cold will close the pores and favor congestion or other diseases.

When hoarse, speak as little as possible until the hoarseness is recovered from, else the voice may be permanently lost, or difficulties of the throat be produced.

Merely warm the back by the fire, and never continue keeping the back exposed to the heat after it has become comfortably warm. To do otherwise is debilitating.

Never stand still in cold weather, especially after having taken a slight degree of exercise, and always avoid standing on the ice or snow where the person is exposed to the cold wind.

When going from a warm atmosphere into a cooler one, keep the mouth almost closed so that the air may be warmed by its passage through the nose ere it reaches the lungs.

Keep the back, especially between the shoulder blades, well covered, also the chest well protected. In sleeping in a cold room establish the habit of breathing through the nose, and never with the open mouth.—*New York Mail and Express.*

CONDIMENTS AND INDIGESTION. —Cayenne pepper may be selected as a typical example of a condiment properly called. Mustard is a food and condiment combined; this is the case with some others. Curry powders are mixtures of very potent condiments with more or less farinaceous materials and sulphur compounds, which, like the oil of mustard, onions, garlic, etc., may have a certain amount of nutritive value. The mere condiment is a stimulating drug that does its work directly upon the inner lining of the stomach, by exciting it to increased and abnormal activity. A dyspeptic may obtain immediate relief by using cayenne pepper. Among the advertised patent medicines is a pill the active constituent of which is cayenne. Great relief and temporary comfort are commonly obtained by using it as a "dinner pill." If thus used only as a temporary remedy for an acute, and temporary, or exceptional attack of indigestion, all is well; but the cayenne whether taken in pills or dusted over the food, or stewed with it in curries or otherwise, is one of the most cruel of slow poisons when taken habitually. Thousands of poor wretches are crawling miserably toward their graves, the victims of the multitude of maladies of both mind and body that are connected with chronic incurable dyspepsia, all brought about by the habitual use of cayenne and condimental cousins. The usual history of these victims is that they began by overfeeding, took the condiment to force the stomach to do more than its healthful amount of work, using but a little at first. The stomach became tolerant of this little and demanded more; then more, and more, and more, until at last the inflammation, ulceration, and torpidity, and finally the death of the digestive powers, accompanied with all the long train of miseries to which I have referred.—*Knowledge.*

DOMESTIC ECONOMY.

Tested Recipes.

EDITORS PRESS:—I send a few good recipes: *Pudding.*—One egg; one-third cup of N. O. molasses and enough sugar to make out the cup; two-thirds of a cup of sour milk; tablespoon of butter; one-half cup of raisins; teaspoon of soda; spices to taste; flour enough to make a thick batter. Steam two or three hours.

Sauce.—One cup each of boiling water, sugar and vinegar; nutmeg to taste; one tablespoon flour.

Marble Cake, Good and Light.—Whites of four eggs; one-half cup butter; one cup sugar; 1½ flour; one-fourth cup milk; baking powder.

Dark Cake.—Yolks four eggs; one-half cup butter; one-half cup milk; one-half cup molasses; one cup brown sugar; all kinds of spice.

Vinegar Cookies.—Two cups of N. O. molasses; one of butter; two eggs; two tablespoons of vinegar; one of ginger; one of soda and enough flour to roll.

Will some lady give me a good recipe for orange cake and ginger snaps?

MRS. W. C. BUCKNALL.

Guberville, Cal.

BREAD PUDDING.—One quart of grated breadcrumbs, one quart milk, yolks of four eggs, well beaten, butter size of an egg, one cup of sugar, two teaspoons baking powder and two teaspoons extract of lemon, mix all together and bake; beat the whites of the eggs with a cup of powdered sugar, flavor with one teaspoonful extract of lemon or orange, cover the pudding with it and bake until browned a little.

EGGLANTINE PUDDING.—Cut thin slices of light white bread, and line a pudding-shape with them, putting in alternate layers of the bread and orange marmalade or any other preserve, till the mold is nearly full. Pour over all a pint of warm milk, in which four well-beaten eggs have been mixed. Cover the mold with a cloth, and boil for an hour and a half.

LEMON PIE.—To one teaspoonful of white sugar, add the juice and pulp of one lemon. Mix well, put evenly over bottom of crust; finish filling crust with water (do not fill too full or it will run over top and spoil pie). Now, with a fork, mix in 1½ teaspoonfuls flour. Put top crust on neatly and carefully and bake.

GRAHAM GEMS.—One egg, well beaten, one cup of cold water, one cup of sweet milk, a little salt. Stir into these enough graham flour to make a stiff batter. Put in gem pans and bake from 20 to 30 minutes in a very hot oven.

POTATO ROLLS.—Five large potatoes mashed while warm. Add one quart of flour, salt to season, one teacup of milk, stir until light, make into rolls, let stand two hours, then bake.

FRIED EGGS.—To fry eggs tender, put one spoonful of meat drippings in the pan, break and drop in the eggs, salt and cover close with a lid until they get white on top.

TARTLETS.—Line patty-pans with pie crust; bake until nearly done, take from the oven and fill with jelly or any kind of preserve, and finish baking.

CUP CAKE.—One cup of sugar, two eggs, one-half cup of butter, one-half cup of milk, two cups of flour, two teaspoonfuls of baking-powder.

SUGAR COOKIES.—One and one-half cups sugar, one cup butter, one cup sour cream, one egg, one teaspoon soda, one teaspoon baking-powder; mix soft.



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• SAN FRANCISCO:

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The Week.

Rains have continued—in fact the elements have become so melting that a downpour comes without apparent effort. The distribution of rain this year and last affords many opportunities for interesting contrasts. At some points the records for the two years are nearly alike, and in others this year's figures are about double last year's. In a general way it may be said that the doubling comes in the right places and just where most needed to insure production, while the points of equality are those which did not grievously lack last year. This year's distribution is about as good as could be asked, and indications still are that the year will be one of great things in the orchards and fields and of comfort in the homes.

The meetings of the American Horticultural Society have closed, and most of the excursion-

ists have taken up their homeward journeys. In this week's RURAL we give a sketch of the leading features of the great citrus fair at Riverside, and reserve for future publication such parts of the society's proceedings as seem to us of interest to California readers. The visit of the Horticulturists was, on the whole, a success throughout. The next sensation in the form of a welcome invasion will be the coming of hundreds of Eastern school-teachers to attend the meeting of the National Educational Association in San Francisco next July. Lonely swains who desire to capture the pretty school-maams for residents of California should send to State Superintendent Hoitt liberal contributions to the funds for ministering to the success of the meetings.

George Washington.

We go to press on the eve of the anniversary of Washington's birthday. Among all our national holidays, this one calls for special grateful and thoughtful remembrance. History groups itself around great central figures, whose words, noble deeds, and fragrant names become to the people what the pillar of cloud by day and fire by night were to the wandering Hebrew clans in the desert. Our national gallery is becoming rich in historical figures, illustrious names, that silently mingle with all that is great, grand and glorious in our free institutions. In the center of this group are the grave features of the man who was "first in war, first in peace, and first in the hearts of his countrymen."

An English writer says that Washington was not a genius; that he was only a good man of rare common sense, who has been hoisted upon the pedestal of history by a happy combination of circumstances. It is true that in military movements he was slow, cautious, and conservative, not much inclined to dramatic movements and dashing ventures, but he had the genius of success which is far better than pyrotechnical display. He inspired confidence in the darkest hour. He was the soul of the Revolution. His personal magnetism was felt from the center to the circumference of the land. When called to the command, he found a people who had resolved on independence, but possessed no coherence, no unity of action. The Colonial Congress was a noisy, debating society. It had no power to levy armies, raise money and prosecute a war with vigor. The army was a tumultuous crowd of volunteers, enlisted for a few months. It had no military chest, no organized commissariat. Washington looked over this chaos and said: "Let there be light," and light arose.

The name of Washington has become a synonym for patriotism. In his bosom there always glowed one paramount sentiment from the hour he took the first inaugural oath to the hour he wrote his farewell address, and that was the glory and perpetuity of the Union. He foresaw all its danger. He warned the people against the heat of party strife and sectional feeling. And now, after all the experience of these years, all we need to complete the glory and prosperity of our country is a revival of the patriotism, the honor, honesty, unselfishness and unpartisan spirit that characterized Washington.

Imports of Foreign Grapes.

We are indebted to Sgobel & Day of New York for the following statement of the importation of foreign grapes at the port of New York from September 18, 1887, to January 20, 1888:

Whence shipped.	Barrels	Half barrels	Qr. barrels	Bxs.
From Am'r. direct...	88,237	2,408	309	216
" " via Liverpool	88,415	60	...	...
" " via Glasgow	7,769	30	...	...
" " via London	7,141	...	...	...
" Malaga direct...	18,404	476	103	...
Totals.....	209,996	2,974	412	216

From the above the average daily arrival during the dates given was equal to a little over five carloads. This statement should give some idea of the Eastern capacity for grapes of the vinifera class in spite of Eastern grapes from cold storage, etc., of which we hear so much. The facts are suggestive.

HON. HORACE DAVIS, president-elect of the University of California, is to be inaugurated on University Charter day, March 23d.

Forestry Memorial.

The State Board of Forestry has done a timely act in the publication in neat pamphlet form of a Memorial to the Fiftieth Congress. It contains the resolutions adopted with much enthusiasm by the meeting of the American Horticultural Society at San Jose, and which we have not hitherto found space to publish, so we present them in this connection:

WHEREAS, It is now known that a due proportion of forest varying from one-fourth to one-fifth of the area of a given locality is estimated to secure the largest agricultural returns and the maintenance of the largest population in the whole district, and that deforesting exceeding this proportion diminishes the total output of crops, even though the cultivated area be increased, and consequently diminishes the capacity of the land to support population;

Whereas, Excessive tree destruction without regard to the maintenance of the reproductive power of the forest causes irregularity and uncertainty in the rainfall, diminished wood and timber supply for the future, diminished humidity in the air, diminished health of the people especially through the production of malarial diseases, diminished summer flow of streams used for navigation and irrigation, increased extremes of heat and cold, of drought and flood, and in mountainous countries like California causes the production of torrents that carry debris from the watersheds to cover and destroy fertile valley lands below;

Whereas, The present Government land laws furnish neither an adequate means of carrying on the timber industry nor any means for protecting the watersheds and consequently the irrigation and inland navigation, nor the climate nor crops of the country; and

Whereas, Timber lands are being taken up by questionable means frequently in the interest of foreign capital. Therefore be it

Resolved, That the American Horticultural Society in convention assembled call the attention of Congress to this subject of vital importance to the country, and request that all Government timber lands be at once withdrawn from sale or entry, and that the Mining Act granting timber to locators be repealed, until a definite survey shall have determined what portions of the public forests shall be permanently reserved for the best interest of the nation, and that when such forest areas shall be definitely ascertained, they shall be set apart and managed in accordance with such regulations as have been suggested and verified by European and other nations.

The questionable means necessary to obtain large bodies of timber land now so energetically practiced, together with the waste and destruction and fires, makes this or a similar measure one of urgency. Abbott Kinney, T. S. Hubbard, J. M. Smith, J. V. Munson, J. Clark Ridpath.

Following these resolutions, the pamphlet gives a "presentation of facts" by the State Board of Forestry, concerning the defects in existing land and mining laws of the United States, which states in forcible form the many facts concerning tree destruction by cutting and firing, which have already been given from time to time in our columns. This statement is enforced by a statement by E. L. Collins, special agent of the board, concerning his observations while securing evidence which it was hoped would lead to the conviction of trespassers on the timber lands of the State. There is also a statement by H. S. Davidson, engineer of the board, presenting facts of the same nature, more in detail. All these matters presented between one pair of covers, and in the direct form of a memorial to Congress, will tend to make our local forestry problems much better known and appreciated than they have been hitherto, and for this reason we characterize the publication as both important and timely.

Grain Bags May be Bought Direct.

It is an interesting announcement to grain-growers that they may purchase the State Prison bags without employing an intermediate. This is what was contemplated originally by Gov. Perkins, and it was hoped the prison manufacture, by not being subject to cornering, would stand as a check upon the evil work of bag rings, etc. This idea bids fair to be realized, for at the meeting of the Prison Directors on Tuesday of this week Director Luttrell proposed the following resolution, which was adopted:

WHEREAS, It is desired to give the farmers all the benefits resulting from operating the jute-mill at the State Prison; and whereas, it may not be generally known that the small farmer can order such grain sacks as he needs by writing to the Warden of the prison at San Quentin, without the intervention of a middleman as broker; therefore be it

Resolved, That the newspapers be requested to announce that orders from farmers for grain bags will be received at the prison by the Warden, and the orders will be filled in regular sequence by shipping direct to the farmers so ordering at the rates current at the time of receiving the order.

Warden McComb, who had suggested this course, said that during the coming harvest season the jute-mills can produce from 1,500,000 to 2,250,000 sacks. He has already received written requests asking him to fix a price for sacks next June, but thought it best not to do

so, as if a figure be fixed it will have to be the price for all that the purchaser may deposit the coin for. As it now is, the farmer can be sure to have his bags in June at the price prevailing now if he sends his order now. We are not informed whether the deposit for the amount ordered is required or what other security would be accepted. By addressing Hon. John McComb, Warden State Prison, San Quentin, Cal., full information can no doubt be had.

The Natural Man.

Man was made to work. In fact all things that live were made to work. They must work or die. Everything attacks the still, the lazy, the immovable—insects, disease, the elements. The very lice will kill those who will not move in self-defense.

Then we have wants. We must eat and drink. We must rest and have a secure place to do so. Betake yourself to any lonely place and see how much leisure you will have when you have supplied all these wants by your own exertion. You will find yourself a laborer indeed, for eight, ten, and twelve hours a day, and then often be poorly supplied. You will go many times supperless to bed, and the storm will make an uneasy couch.

But society, science, invention and discovery have lightened all these labors, and beautified all the results. They give regular food in good shape, safe houses and good beds. The lone savage knows no such things. But you must work for them. Unless born to them you must work till you earn them. You must do hard labor unless you have skill to acquire all you need with ease, shorter hours, or none at all.

If you have this ability you soon rise into a foreman, an employer, a capitalist and a man of leisure; you may become very rich and leave all your children wealthy and comfortable. If you have not the ability, you may have to work hard and fare ill all the days of your life. But so did your fathers. You have lost nothing. It is only that you have gained nothing. Society and science keep a railroad train, as it were, on which thousands ride through the journey of life in a palace car, and never soil their fingers. But they must first find the train and get their tickets. You plod through life and never find the train—never; you die a poor laborer and leave your children to do the same. But so did your fathers and their fathers from the beginning. They never found the train. It may have been just an accident. Your neighbor saw it and you did not, or you may have been drunk or asleep or too slow to catch it. But there it goes and he rides and you still walk—work.

Has he robbed you? Not at all! Have you lost anything? Certainly not! You are just where all men are and have been who have not found the train that science has sent for all who can get on board. It is just as though you and your brother purchase tickets for the lottery. He draws a prize and gets his carriage. You draw nothing and must still work at your trade.

You feel bad, truly. If you are of an envious disposition you may feel hateful. But it is all wrong. You are only where man has always been. He has met with a good fairy, and the train.

It is said that certain shepherds of old regarded themselves as the happiest people under the sun. They ate their mutton, made their wool coats, made love and sang pastorals all day long. Once upon a time a great king passed that way, and when the shepherds had seen his fine courtiers they became melancholy and deemed themselves the most miserable among men. It was the contrast that made their misery. They were as happy as before—as ever.

And so it is with many poor laborers at this day. They see others riding on the train, while they must walk. Their walking is easier and therefore is better than ever before; but they have seen others in carriages and they are discontent.

They should reflect that labor is the lot of man, and no one is entitled to avoid it till he shows a special ability to live without it. And the lottery tickets never can be all prizes.

ASPARAGUS.—The first box of asparagus in the S. F. market this season came from Wm. Boots' Alviso ranch last week and brought 40 cents a pound.

Death of Prof. Asa Gray.

[Written for the RURAL PRESS by J. G. LEMMON.]

Prof. Asa Gray, the most distinguished of American botanists, was stricken with paralysis soon after his 77th birthday, and expired January 30, 1888, at his home in Cambridge, Mass.

Prof. Gray was born in Paris, Oneida Co., N. Y., Nov. 18, 1810. Obtaining a good education at the Clinton grammar school, he then, without entering college, began medical studies in the College of Surgeons of Western New York, receiving his degree in 1831. Becoming early interested in the study of nature, particularly of botany, he left the practice of medicine to prosecute the study of botany with great assiduity under the immediate instruction of the great master Dr. John Torrey.

In 1842 he was elected professor of natural history in Harvard, but during the six years previous he had distinguished himself by the publication of several elementary works in botany that are still models of precision, simplicity and comprehensiveness.

As early as 1838 Dr. Gray with Dr. Torrey began the publication of a "Flora of North America," and ten years after "Genera of the Plants of North America," also "Manual of Botany of Northern United States." Since 1861 he has written many profound articles relating to the evolution theories of Darwin, which he accepted with great caution and with unshaken religious belief. As he himself said: "I am a Darwinian, scientifically and in my own fashion, philosophically a convinced theist, and religiously an acceptor of the Nicene creed;" in these respects resembling Prof. Agassiz and Joseph Henry.

So great has been the devotion of Dr. Gray to herbarium studies that he was able to make comparatively but few explorations. Twice, however, he escaped to Europe for the better study of certain difficult families, and he made three brief visits to the Pacific Slope. On the second occasion he was accompanied by the most renowned botanist of Europe, Sir Joseph Hooker, and it was the good fortune of the writer to receive an invitation to meet them at the State line and become their guide to several of the most interesting points for the study of trees in the high Sierra. Soon after Dr. Gray's return to Cambridge, a very valuable paper appeared on the "Vegetation of the Rocky Mountain Region," followed by several profound papers on "California Forestry."

These, with a few hurried flights into the Alleghanies, to Florida, and to Canada, were all the vacations he gave to the most wonderful mental activity, including 30 years of college lectures, the administration of a botanic garden, the forming of a great herbarium, added to frequent and often very considerable contributions to various publications, notably the proceedings of the American Academy of Sciences, over which he presided for many years, and the American Association for the Advancement of Science, of which he was also president. His able and voluminous contributions to other journals, magazines and newspapers are almost incredible in number and value.

But the great botanist was much more than an ardent, clear-sighted and profound scientist. He was a genial, social, witty, urbane, hospitable

gentleman. His great amiability of character was exhibited not only to his neighbors and other visitors to the herbarium, but appeared as well in his life-long personal attention to a large correspondence, which ever increased and became more and more exacting to the last. He employed no amanuensis, writing all letters with his own hand, never left one unanswered, and seldom sent one out without an appropriate statement or a pleasant allusion.

In the year 1885 a portrait in bronze of Dr. Gray was devised by his intimate friend, Prof. Sargent, and presented to Harvard College, accompanied by a carefully prepared epitome or resume of the most important labors of the great scholar. After 15 pages of such condensation, Prof. Sargent writes: "Prof. Gray in 1872 was relieved of college duties beyond the care of the immense herbarium and noble botanical library which he had formed and some time previously had presented to the University. He was now free to take up the 'Flora of North America' and continue the work which the force of circumstance interrupted 30 years before. A flora of North America, however, in these later days is a very different thing from the floras of Michaux and

pendent. And what other hand could take up this work if Prof. Gray's should lay it down? Who, in a lifetime of study, could grasp the details of the great edifice which, for 50 years, has been slowly growing under his hand?"

Alas! These grave apprehensions, uttered only three years ago, are realized, and the great work is now suspended by the removal of the directing hand.

Of the high attainments of Prof. Asa Gray, the records of foreign societies bear even ample testimony than our own. He was a member of the Royal Society of London, a member, one of the "immortal eight" of the celebrated Institute of France; and long ago he was welcomed into many of the less exclusive bodies of European savants.

Prof. Gray, from an early day, was most intimately connected with the botany of California and the Pacific Slope generally. Every exploring expedition, every railroad survey, every private explorer, acquired materials that were sent to Harvard for study and determination. Owing to the peculiar and varied soils and climate of the region west of the Rocky mountains, a much larger number of species and more peculiar

Pacific Coast join their expressions of esteem and grief with those of the great world of naturalists that are saddened by this sudden departure of their leader in science, and their loving, helpful friend, the good Dr. Gray.

[We have in preparation a portrait of the late Dr. Gray from an excellent photograph in the possession of Prof. Lemmon. It will soon appear in our columns.—EDITORS PRESS.]

Baron Valiant.

The engraving on this page gives a portrait of the celebrated Angus bull, Baron Valiant 1964 (4052), owned by A. B. Matthews, Kansas City, Mo., proprietor of the Bonnie Blue Angus herd, at the head of which this animal stands. The drawing is a fine specimen of the engraver's art, but, we are told, hardly does the animal justice, particularly about the hind quarters.

Baron Valiant was personally selected by Mr. Matthews, when in Scotland in 1882, to head his herd, and since his arrival in the United States has been famous both as a calf-getter and as a show animal. The breeding of Baron Valiant is very choice, and among his

ancestors are to be found some of the most noted animals known in the history of this breed of cattle, all of which were famous prize-winners. He traces back to that noted cow, Old Grannie (1), which lived till she was 36 years of age, and produced to her owner 29 living calves, being one of the most extraordinary cases of longevity and fecundity that has ever been instanced. Baron Valiant's show-yard career has been a marked one, dating from 1882, when at the Bismarck Fair, Kansas, he stood at the head of the Angus class in the West, and also won grand sweepstakes over bulls of all breeds, down to the present time, when at the Iowa State Fair held at Des Moines,



ANGUS BULL BARON VALIANT, IMPORTED BY A. B. MATTHEWS OF KANSAS CITY.

Pursh, or even of Torrey and Gray. The field had widened immeasurably with the strides of discovery and the development of the science, and it demanded closer and more careful research.

"As an example of the knowledge of American plants reached during the present century, it will only be necessary to point to the family of *Compositae*, which is believed to comprise from one-eighth to one-tenth of our whole flora. Michaux knew but 193 species, while Gray, 75 years later, published with elaborate descriptions 1610 species, divided among 237 genera.

"Two parts of Gray's 'Synoptical Flora of North America' have now been published; the middle part of the entire flora, to wit, the *Gamopetalae*. These volumes comprise 850 closely printed pages, upon which fully ten years of excessive and seldom interrupted labor was required.

"They are masterpieces of clear and concise arrangement and of compactness and beauty of method. There will hardly be found in any work of descriptive botany a greater display of learning, clearness of vision, and analytical powers, and few works of systematic botany have ever treated of a broader field." "Their very excellence," Prof. Sargent continues apprehensively, "increases the loss which botanical science would suffer if any other hand were called upon to complete a work now only half finished, and upon which, at least, ten years more of constant and severe labor must be ex-

pendent. And what other hand could take up this work if Prof. Gray's should lay it down? Who, in a lifetime of study, could grasp the details of the great edifice which, for 50 years, has been slowly growing under his hand?"

Though receiving at the Harvard Herbarium from time to time the collections of botanists from all parts of the world where exploration is going forward, yet Dr. Gray often declared that nothing caused him such a glow of pleased expectation as the reception of a package of nicely prepared specimens from California or the Southwest; and it is pleasant to recall that the enthusiastic closet-botanist was kept at this welcome occupation much of the time during the past two decades.

Being thus intimately connected with our flora, aiding on its discovery, studying and naming our plants, writing to and encouraging each of our collectors, it is with especial and poignant sympathy that the botanists of the

flora is found here than in all of the rest of the continent combined. And, until within a few years, much of it was unknown. With the rapid settlement of the region, and the advance of detailed exploration, there was a mutual relation of absorbing interest maintained between the Pacific Coast botanists, who hastened into the forbidding, unknown regions of mountain and desert to seize the strange plants, prepare them carefully and then forward to Dr. Gray, who as eagerly and assiduously studied and described them for publication, always mentioning with pleasant comment the collector, and also giving in his correspondence warmer commendation and encouragement, thus maintaining a close bond of sympathy and co-labor between collector and author.

The Bonnie Blue herd is well and favorably known in the Eastern States, and the demand for animals from it has been greater than the supply. The second bull in service is the famous Pride bull, Valerius 7656 (2382), which has for his dam the noted cow Vine 2d of Skene 3947 (3329), one of the best cows of the breed ever brought to this side of the Atlantic and which is still owned by the Hon. M. H. Cochrane, Hillhurst, Canada.

Our stock-growers and others interested in the improvement of the beef supply of the country would do well to inspect the animals from this herd, which are on exhibition in this city, as has already been stated in the RURAL. The animals were brought down Market street to the RURAL PRESS office one day last week and paraded as a compliment to the leading live-stock journal of the Pacific Coast. They attracted much attention and were generally admired.

Owing to the destruction of timber in the Northwest, the South has become the chief source of supply for pine, poplar and oak. Virginia, West Virginia, Tennessee, Arkansas, and Kentucky are now resounding with the ax of the lumberman.

HORTICULTURE.

The Citrus Fair at Riverside.

Riverside is in her glory. Under the stimulus given her ambition by the expected visit of the American Horticultural Society, and with the experience gained in making such displays during the past decade, she went to work this year to get up a citrus fair which should outdo her former successes, and it appears from all accounts that she has done it.

The committee sent out betimes a stirring summons to fruit-growers throughout the southern country, that the different districts might be worthily represented by their products, and the interior of the pavilion, erewhile unsightly, was fitted up in attractive style to receive the coming exhibits. The side-walls were covered—windows and all—with white cloth, and large booths were built out from them, four on a side. Each of these structures consisted of a table surmounted by a canopy, all neatly draped in white and paneled in gold-leaf. In the middle of the hall were four rows of tables, with an octagonal "pergola" on a plan similar to the booths. "Above this central figure," says the *Valley Echo*, "spreads out the largest star it has ever been our privilege to inspect at close quarters. It shines down with a breadth of 26 feet, and is covered with the most lavish coating of cobwebby gold-leaf we ever saw. From the center of this star streamers of the national colors radiate to all quarters of the room. The rafters of the roof are hidden to a large extent by festoons of cypress and drapery of heavily trimmed netting, with patches of the aforesaid gold 'butterfly-wing' material liberally laid on. The effect is very pleasing and does our artist credit."

There were also three booths in the gallery. Every booth had a shield and flags over its front; the vacant spaces on the walls were covered with palm fronds; and evergreen foliage, twined and interwoven everywhere by lavish hands, transformed the old pavilion into a bower of Pomona. And after the wealth of citrus fruits had been stacked upon the tables, or skillfully disposed in many and unique designs, the electric lights were turned upon a scene whose brilliant and transcendent beauties filled reporters with mingled rapture and despair.

From voluminous and glowing tales in the local and Los Angeles journals, we condense a description of what was to be seen at this Tenth Annual Citrus Fair. The visitor was met at the entrance by the hospitable greeting of an arch with "Welcome" in great letters inscribed upon it. From the corners of the arch streamers of red, white and blue stretched up to the overhanging eaves of the pavilion, and in front upon the top stood a huge gold eagle with wings outstretched. On either side of the entrance hall, committee-rooms had been handsomely fitted up for the comfort and convenience of the visitors. Passing between these into the main hall of the building, you found yourself in the midst of bewildering richness, where the splendid fruit made the decorations, showy as they were, look insignificant. The masses of bright oranges flashed all over the room in a blaze of golden glory. The various pyramids, temples, banks and trays of the citrus beauties gleamed out from behind silver-spangled posts and dark-green foliage, till the perspective left an impression of unlimited piles of rotund yellow fruit, dotted with occasional heaps of pale lemons, and flecked with blood-red Tangerines and Malts.

The first booth to the left as you enter was that of S. C. Evans' ranches, arranged by W. T. Simms. Here were three large pyramids of oranges, one consisting of Konah and seedling, the other two of Washington Navels, all festooned with cypress and pepper leaves. Between the pyramids were rows of Paper-rind St. Michaels, Australian Navels, Mediterranean Sweets, Seedlings and Lisbon lemons, all very large and handsome.

A. D. Haight's booth, which stood next, held one of the daintiest groupings of fruits in the pavilion. In the center was a sort of summer-house or grotto, its roof composed of small St. Michaels oranges, bordered and corniced with Tangerines and Mandarins, and intertwined with ivy and orange leaves in most artistic fashion. On either side of the grotto were pyramids of assorted oranges, and in front of it some enormous China lemons.

The third stall—that of Thacker Bros. & Mann—contained a huge bank of oranges, six feet high, surmounted by a gray eagle from whose beak and talons streamers stretched to every corner of the booth. Evergreen trimmings and festoons of Tangerines gave a very pretty effect.

Fourth and last on this side came J. D. McNab and W. E. West. On two inclines in this booth were excellent displays of Riverside Washington Navels. Between the two pieces was an olive branch loaded with ripe and partially ripe fruit—an unusual thing to see at this season, even in Southern California.

The space in front of the stage for a length of 20 feet was occupied by a design gotten up by the ladies of the W. C. T. U. It represented two schoolhouses, each on a hill, with a grassy vale between. The motto, "A Schoolhouse on Every Hill, but No Saloon in the Valley," explained the meaning, and tells exactly the state of things in Riverside.

One of the most pleasing displays was made

upon a large easel by the Misses Gilliland and Robert Bettner. The easel was decorated with Pampas plumes, dwarf Mandarins, lemons nestling in foliage, and date-palm fronds. The picture on the easel comprised oranges of varied hues.

The Inter-Ocean Cold Storage Co. had a fine showing of grapes, which were picked and placed in storage Aug. 16, 1887, but looked as if they had just been taken from the vines. Oranges and lemons also kept by their process two months came out sound and bright.

Turning from the cold-storage exhibit, the eye was caught by a large pyramid of Navels. Half the fruit in this piece was raised in A. P. Combs' orchard and the other half by L. C. Pattee. Upon their table there were also displayed Seedlings, the Japanese Unshiu, the Japanese potato orange, Japanese grape fruit, Malta Blood, Mediterranean Sweets and Pomolos. Here, too, were raisins packed by Mr. Combs in 1882, which took the first premium at the Citrus Fair held in that year, and are still in a state of excellent preservation.

In E. G. Brown's pyramid of Navels, there was gracefully interlined an anchor of Lisbon lemons, in allusion to the name of Judge Brown's home—"The Anchorage."

E. W. Holmes' exhibit of Lisbon lemons was perhaps the finest in the pavilion. The fruit was uniform in size and color, evincing great care in their selection. He also had plates of choice Malta Blood, Tangerine, Paper-Rind St. Michael, Navel and Sweet Seville oranges.

The output of W. H. Backus, on the same table, embraced a large, oblong pyramid of solid oranges, like Mr. Holmes' lemons uniform in size and color, plates of selected Navels, Paper Rind St. Michaels, lemons and limes, choice clusters of grape fruit and large and elegant Pomolos.

The arrangement of Hon. A. P. Johnson's oranges was highly artistic, and several stars composed of Navels and Paper Rind St. Michaels, the foundations of which rested on layers of orange leaves, were thought remarkably pretty.

On the same table was R. A. Saunders' display. One plate of his lemons was unsurpassed by any on exhibition.

The fourth table from the stage in this row (opposite to the Evans booth) bore the exhibit of B. B. Barney—a pyramid of Navels, very smooth, topped with kid-glove oranges, and flanked with other varieties on plates. Overhead hung from the ceiling a monster crown, gilded and stuck round with oranges, and above it the motto, "The Riverside Washington Navel Wears the—(crown)." Mr. Barney's orchard is the first budded Riverside Washington Navel orange in America.

On this table there was also a fine show of Seedling oranges by J. H. Roe.

On the right side of the hall a booth and a table were given to the East San Bernardino valley exhibit, representing the four settlements, Lugonia, Redlands, Old San Bernardino and Crafton.

Lugonia's groves furnished choice Seedlings, Konah, Mediterranean Sweet, Navel, Malta Blood oranges and Lisbon lemons. Redlands sent fine Washington Navels, Eureka lemons and Mediterranean Sweets in great abundance. Crafton came to the front with Navels, Paper Rind St. Michaels, Eureka lemons, limes, and orange marmalade, while Old San Bernardino sent in choice Seedlings, Navels, Malta Bloods, and Mediterranean Sweets. We may not name all the many orchardists who contributed to this combined exhibit.

Shugart & Condon's display was remarkable for the many varieties of citrus fruits which it embraced.

W. S. Wilson made the exhibit of Malta Blood oranges.

Boyd & Devine, the fruit-packing firm, had a table, near the entrance, piled with handsome specimens of their packing.

The central stand, termed the "pergola," was octagonal in shape. It was floored with a mosaic of lemons and oranges, out of which rose a great citrus cone, capped with a dish of Black Morocco grapes picked Feb. 6th in B. B. Handy's vineyard.

Beyond the "pergola" J. G. North showed five pyramids of nice, marketable oranges, selected with singular good taste as to uniformity of size and appearance. Twogood & Cutter, Puls & Moore and others had some magnificent fruit. J. E. Cutter called his grand design in Navels "Las Sierras de la Riverside"—the mountains of Riverside.

Mrs. L. C. Tibbetts made a very interesting little exhibit—a bamboo basket of fruit from the original Riverside Washington Navel tree!

F. R. Hall's display of raisins was much admired. It was elaborate in design and comprised fancy pack Dehesas, London Layers, Seedless Sultanas, Muscatels, three and two crown loose.

While thus briefly noticing the more prominent Riverside exhibits, we have been obliged to forego the pleasure of even naming others, and must defer to our next issue all mention of what came from the outlying districts, San Diego, Los Angeles and Ventura counties.

The pavilion has been crowded, and the managers of the exhibition were wise in deciding to keep the fair open during the present week. Our report will be continued later.

At the Empire ranch, near Tucson, 150 cattle have died, having been poisoned, it is thought, by drinking water impregnated with mineral from the tailings of the Total Wreck mill.

THE IRRIGATOR.

A Great Enterprise in Nevada.

T. D. Parkinson of the Nevada Land & Cattle Company of Elko county, Nevada, is one of the most stirring men in his State, and is doing much to demonstrate its capability for agricultural development. He recently gave the *Bulletin* an account of a great enterprise which he is now carrying forward, from which we condense the following statements:

Mr. Parkinson was a civil engineer, connected with the Land Department, in the State of Nevada. In the course of his duties he saw all those large bodies of land which were apparently so rich, and yet perfectly valueless without irrigation. He saw, too, that in many places in the mountains dams could be constructed at small expense, capable of storing immense bodies of water. He associated with himself Robert N. Graves, a mining man, and they built a dam on Willow creek. That dam was washed away, on account of a fault in its construction, and they found themselves without sufficient capital to rebuild it. They endeavored to interest capitalists on this coast in the matter, and failed. They met with no better success in the East, and then went to London, where they found all the assistance desired and went on with the work.

The following is given as a personal statement by Mr. Parkinson:

"We purchased from the State Government a block of about 10,000 acres of land lying below our reservoir, carried the water on and planted alfalfa. We have raised large crops, and by this means are able to feed our poor cows and young calves and thus make a safe and profitable business out of one which was growing more and more hazardous every year. It was two or three years before we were sure that our enterprise would be a success. We had to encounter various obstacles, but having overcome them we are now perfectly satisfied not only that ours is a success, but that there are various other points where similar dams could be constructed and equally good results obtained."

The Dam.

"The dam that we have built lies upon Willow creek, in Elko county, about 30 miles from the railway. At the point where the dam is built the bluffs join each other within 175 feet and are 75 and 100 feet high, the channel of the creek passing between. The first thing was to secure a permanent foundation, the dam that we put in some years before having been washed out by undermining. We secured a permanent foundation by sinking some 20 feet below the bed of the channel, and from that we commenced building up with timber and rock. The embankment itself is built of rock, about 250 feet wide at the base, 75 feet high to the parapet and 25 feet wide on top. The upper or water side is sheathed with 3-inch plank, tightly calked with oakum and painted. About 100,000 feet of lumber was used in that portion of the dam."

"Now to guard against overflow, which is always the most disastrous thing in connection with dams, we tunneled one of the bluffs and have a water passage through sufficiently large to carry any freshet that will ever occur. The water is conducted 100 feet away from the foundation of the dam, consequently there is no danger of any undermining ever taking place. At the head of the tunnel two large gates are placed, for the purpose of lowering at the time when the storage of water commences. These are so well arranged that in case of cloud-bursts or freshets the raising of the gates will lower this enormous volume of water in sufficient time to prevent an overflow."

"Immediately above the canyon is a large valley, embracing some ten or fifteen hundred acres. The present dam is only 50 feet high and the water-storage area is 500 acres, with an average depth of 25 feet. This, however, is not the capacity of the reservoir. With comparatively little expense it can be doubled, or even tripled. We find that as we fill up the land with water very much less is required, and we expect to see the time when we can irrigate ten to fifteen thousand acres of alfalfa lands with not much more water than is being used now."

The Irrigable Capacity of the Dam.

"The present capacity is considered equal to about 5000 acres, but still, as each year passes and these dry plains are irrigated, the valley is filled up with water, and every year less is required. For instance, at one of my camps I had to sink 50 feet for water, and within a week after irrigating a tract of land that was half or three-quarters of a mile away the water rose in that well to within eight feet of the surface, and there it has remained up to this day. This I consider one of the most valuable points in the irrigation system. The first water you pour upon your land is to all appearances wasted. That is to say, it requires a great deal more water to irrigate an acre of land than nature ever intended. For instance, the first year of my experience I put four feet of water on the land. Not knowing what was going on, this was very discouraging to me, and I thought I should need a storage capacity of 20 to 50 times as much as I had; but when I came to examine the sloughs, and this well, I saw it was filling up the whole country, and

this very water that I thought was going to waste was finally to be a great point in irrigation, especially for alfalfa."

"The water from this reservoir is conducted in a canal down to our main valley, which is 20 miles long by about five miles wide, and there it is distributed over the plains. As our business is entirely the raising of live-stock, particularly cattle, we do very little in grain, though we raise a very fine quality of grain, sufficient for our own use. Our principal aim is to secure hay enough for the feeding of beeves and poor stock during the winter season. Alfalfa is the principal hay we raise. The lands that the Government, a few years ago, would not allow to be surveyed, as they were not considered valuable enough to pay for the expenses of surveying, which can be proven by reference to the Government maps of the early days of the surveys of Nevada, are returning our company four tons of alfalfa to the acre. The value of this alfalfa to us can hardly be estimated, especially in such a season as this. I was offered \$15 a ton for all the hay I could spare, in the stack, for the purpose of feeding starving cattle. Hay has been shipped from Reno to the ranges at an expense to the stock-owners of at least \$20 per ton. Its value can be readily understood when it is known that perhaps one ton of hay will pull through a season like this three or four animals."

The New Plan With Cattle.

"There was a time, under the old system of carrying on cattle business on the ranges, that they could afford to lose one-half of the stock and still make money, but that day is over. The range is no longer what it used to be. The expense of handling cattle on the ranges is far greater than it was a few years ago, and if no care is taken of these cattle on the elevated lands of Nevada during these hard winter months, it will be but a short time before there will be no range cattle. A year ago, at the Cattle Convention at Chicago, I had interviews with many of the ranchmen of the plains, and they had all come to the conclusion that we must adopt a very different system from that of the past. The losses have been beyond estimation. As the population increases the ranges are being built up and the business cannot be conducted as it has been."

The Future of the Beef Business.

"What do you think of the future of the beef business?"

"I may say that I consider the beef industry of America as important as the bread question. If the great losses of the past are to continue, what is the result? Has America got to come down to be less of a beef-eating country? Beef must certainly become scarce. There will not be this surplus of beef in the country, as there has been during the past ten years, for the reason that these ranges are all giving out, immigration increasing and the range decreasing. No person in the industry need be discouraged, however. The demand for beef is increasing, and with the enhanced value of beef greater care will be taken of the cattle and a higher grade raised. Such enterprises as ours will be engaged in and they will be remunerative."

Senator Stewart's Proposition.

"Senator Stewart has taken quite an interest in this enterprise and it has been often talked about and watched by him with a great deal of interest. He has introduced a bill for the purpose of making Government surveys and explorations in the mountain districts, topographical and hydrographical, to find out where such natural advantages lie. The old system of Government surveys is practically useless in our mountain lands. The rectangular system adopted by the Government is all right for the plain lands, but it is not at all adapted to mountain lands. If I understand Senator Stewart's bill, it is to make these surveys like the system adopted by the Mexicans, or the old Mexican league system of metes and bounds, showing the topographic and hydrographic characteristics of the country. It is proposed to make the water-storage question, for the purpose of reclaiming arid lands, a great feature. Few persons are aware how many such advantageous localities can be found. In the little district where our enterprise is located I can point out three or four admirable locations for water storage. Large as ours may be, it is very small compared with many others that can be found."

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

100,000 Fruit Trees for Sale

At reduced prices, consisting of Apple, Pear, Peach, Apricot, French Prune, Walnut and other trees. Palms, Greivillas, Monterey Cypress, etc. Trees are guaranteed to be absolutely free from scale or other insects. MILTON THOMAS, P. O. Box 304, Los Angeles, Cal.

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3000 ACRES FARMING LAND
At \$1.50 per Acre.
10,000 ACRES GRAZING LAND
At 35 cents per Acre.

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General John Bidwell's tract, Chico, Cal. Maps of this property are now ready, and applications received for the 5-acre tracts and town lots, 90x200 feet.

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GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

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Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES
At \$75 per Acre,

Including **FREE WATER** for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the **Orange, Lemon, Fig, Grape, Olive, Peach and Apricot.** Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. One hundred and seventy-five acres at Palermo are now being set out in the choicest varieties of Florida Orange Trees. Maps and further particulars of

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SANTA YNEZ,

Santa Barbara County, California.

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Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil. TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for colonies or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

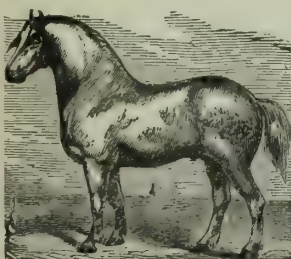
E. de la CUESTA, Agent, Santa Ynez.

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I will sell at public auction, on above date, ten head of choice Imported French Draft Stallions. These horses are of the same quality as I have shipped to this State for the past ten years, and the satisfaction which my previous sales have given is sufficient guarantee to the public for the future.

JAMES A. PERRY,
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At above time and place I will offer twenty-five head of choice Thoroughbred Registered Polled Angus Cattle, consisting of Bulls and Cows, being a selection from my herd, which has been awarded more Premiums at the Fairs and Shows in the East than any other herd in the United States. Parties desiring the best beef breed will do well to inspect this offering, which has recently been shown on the streets of San Francisco, and attracted so much attention.

A. B. MATTHEWS,
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SITUATE ONE MILE FROM THE FLOURISHING

City of Sacramento,

With a Population of 30,000, and

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SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. **5 ACRES IN FRUIT,** well attended to, will make a handsome income. **One Acre in Strawberries** will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$80, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

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Improved and unimproved lands to any extent from 5 to 5000 acres with good, comfortable homes and all necessary conveniences, for sale on desirable terms. These lands require no irrigation, Railways convenient, ample supply of water, and the climate cannot be surpassed. Apply as above.

WEST COAST LAND COMPANY.

CONTINUED EXTRAORDINARY SUCCESS. 26,000 Acres sold in 17 months in subdivisions averaging about 80 acres, to over 300 families, and amounting to \$700,000.

38,000 acres to be closed out this year without any general advance in prices.

Location—San Luis Obispo County, at present terminus of the Southern Pacific Railway. A **GRAND NATURAL PARK,** and in climate, location, quality and price, far surpassing any other section of the State. Specially adapted to the production of wheat, oats, barley, olives, raisins, wine and all deciduous fruits.

RICH SOIL, NO WASTE, SUFFICIENT RAINFALL, NO IRRIGATION.

Average price \$25 an acre; terms five years, 6 per cent. These lands are selling rapidly, and parties interested in having a home in one of the finest sections of the State and on the through overland railway, should examine and select at once. Take S. P. Railway at San Francisco, to Templeton in 8 hours. Apply to or address

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Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

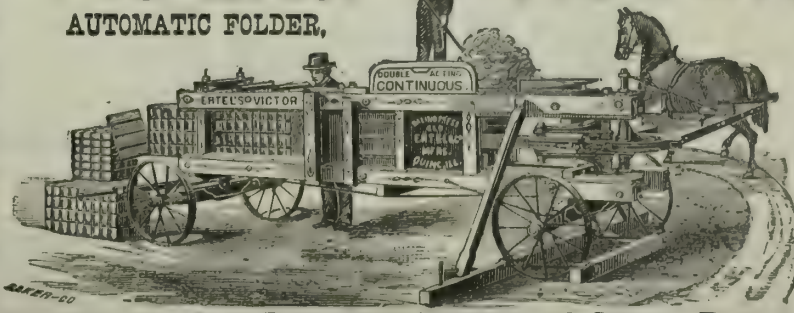
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A Machine imitated but not equalled, Baling Hay or Straw faster, more compact, easier, more economically (to load 10 to 15 tons to the Car) than is done with any other so warranted or no sale. Circulars mailed free address, Geo. Ertel & Co., Quincy, Ill.

THE LEADING BALER IN THE MARKET.

PROTECTED BY 44 PATENTED CLAIMS.

ENTOMOLOGICAL.

Ants, Woolly Aphis and Scale Washes

EDITORS PRESS:—I would like to ask your correspondent, E. H. Schaeffle, who wrote about the ants exterminating the woolly aphis in the orchard of T. T. Rodda of Grass Valley, if he intended to convey the impression that ants really "exterminated" this pest on the roots as well as branches of the trees? If Mr. Rodda's ants will burrow after the aphis on the roots of apple trees, where they do the most harm, he can find a ready market for all of them that he can raise. It would hardly pay to import ants to fight the pest on the branches of the trees, as a simple wash, in fact any of the washes used to kill the red scale, will clear the trees of the aphis.

Writing of fruit pests reminds me that I have a letter on file which I have not found time to answer, from C. M. C. of Vacaville, who asks a number of questions about the "scale bug." He wishes to know the best wash for white cherry trees. I have found the whale-oil and soda wash quite effectual on all my trees and shall continue its use. It is made by dissolving 25 pounds of sal-soda in 25 gallons of hot water and adding one gallon of whale oil. Mix thoroughly and spray while warm.

Mr. C. also asks about the Edgar process of introducing poison into the tree to kill scale, and the length of time before the scale will kill peach or cherry trees if not washed.

I know nothing about the poison process. I have known trees to be killed in three years when not washed, but much depends on circumstances. Pruning and cultivating are progressing rapidly this fine weather. Many new orchards are also being planted. I have noticed that many of the apricot scale are dead, evidently killed by the cold snap.

San Jose, Feb. 6th. H. G. KEESLING.

[The sal-soda and whale-oil remedy for scale was fully described in the RURAL of Dec. 10th, from the Bulletin of the State Board of Horticulture.—EDS. PRESS.]

Ticks in a Horse's Ear.

EDITORS PRESS:—In your issue of Feb. 4, 1888, I noticed a statement regarding disease of horses' ear—described as "granulations." It is evidently ticks. Use bacon grease in a fluid condition, but not warm enough to burn. Hold the ear with the hand for a few moments after the grease is poured in. Use about half a pint to each ear, and after being applied several times the "granulations" will drop off and disappear. At Fort Craig and vicinity, in Colorado, the Government lost a great many horses and mules from ticks.—J. DOWNING, Denver.

We imagined that the granulations were ticks. A bad case was reported from Tulare county a few years ago in which the animals were supposed to be "locoed" until the ticks were found in the ear. The remedy described by Major Downing is an excellent one.

Water for Cabbage Lice.

EDITORS PRESS: Mr. Berwick wishes to know what will cure cabbage lice. Mr. B. once stated that when we became acquainted with agricultural chemistry we would become wiser, &c. So if he will consult Johnson's "How Crops Grow," he will find out that cabbage is composed of 90 to 93 per cent water. Now for the cure: Water, water, apply it large by bucketful if you have no hose, and when dry hoe up, etc. Don't be afraid of water; use $1\frac{1}{2}$ to 2 gallons to each head if large. I have tried everything I could think of, soot, salt, lime, ashes, etc., till I inquired of a young man who was here on a visit. His father had gardened all his life in England, Baltimore and Iowa, and he told me just as Johnson does—use water and don't be afraid of it.—M. S. H., Soledad.

Drenching with cold water is a discourager of aphis. Rose bushes can be swept nearly clean with a forceful drenching with garden pump or hose with pressure. Such vast numbers are dislodged that the foes of the aphis often complete the work.

A NEW WORK ON THE OLIVE.—We understand that a new work on the olive is now in course of preparation by a gentleman who

A NEW WORM.—We receive with thanks from Dr. Gustav Eisen a copy of Vol. II No. 1 of the Memoirs of the California Academy of

Butte County.

Other Glimpses of the Oroville Fair.

(By M. C. B.)

Sketch of Recent Progress in the District.

We give herewith two more views from photographs taken during the famous citrus fair in Oroville. The first engraving shows the accurate miniature model of the Oroville Congregational Church, clad in oranges and evergreen, the structure being large enough to contain an organ and choir whose music was heard from time to time. The exhibitor was D. K. Perkins, one of the leading actors in the present progressive era in the life of the Oroville region.

The other view on this page gives a general glimpse of one of the main avenues of the pavilion. The fair, it will be remembered, was held in a tent 150 feet long by 50 feet wide, and all around this great room, from the floor to the eaves—16 feet vertically—were sloping piles of fruits, vegetables and other products, while the middle of the hall, saving an aisle on either side, was occupied with numerous and beautiful citrus designs. Space had been assigned to every town in the county, and in some instances to individuals who desired to make separate showings. The engraving shows something of the taste employed in the decoration and the wealth of material on exhibition.

The New Era in Butte County.

Our representative, who has recently visited the Oroville region, furnishes the following general notes:

To fully realize the beauties of Butte county, they must be seen and the starting-point commenced at Oroville, the county-seat. Until the recent Citrus Fair, many Californians, particularly in the southern part, knew little more of this county beyond its location in the Golden State. For all this they cannot be blamed more than the people of Butte, who, for some strange reason yet unexplained, expressed no desire of advertising either directly or indirectly the advantages peculiar to their section of the State. This prevailing sentiment, happily, has been unhinged, and prudent men have at length been heard and sustained in their opinion, the first sign of reform having been the opening of the recent Citrus Fair in Oroville. For all this many thanks are due to Messrs. E. W. Fogg (the banker), D. K. Perkins, A. F. Jones, with the Executive Committee of citizens who, regardless of time and expense, decided to let the world know and see the products of Butte county. This first step was only a very small beginning toward a great end which must soon be realized. The natural advantages peculiar to Oroville are many. The location is convenient to the San Francisco market and within easy reach of the Northern and Eastern States, where there is full demand for all the products which can be raised. Oroville is immediately connected with Sacramento

in latitude "37°" north. The Northern California railroad allows a very fair service, and if the present intentions are carried out the county will be soon crossed and recrossed by three separate railroads.

Viewing the surroundings of the county-seat, one is struck with Nature's grandeur. Peak after peak divided by tablelands arrest the attention of the observer and afford ample scope for the pencil and paintbrush. The Feather river furnishes water facilities for extensive manufacturing purposes and separates Oroville from the newly arranged colony of Thermalito, which has recently occupied marked attention as one of the best adapted locations for citrus fruit.

The climate has been considered all that could be desired for years, particularly since the shutting down of the mines, and there is not the

least trace of the visionary malaria so often hinted at. The people live long and happy, the children are ruddy, fat and fair, and, having carefully consulted the death rate from the most authentic sources, find it as low as 7 per 1000. In this are included those who came from Kansas, Chicago and Missouri to die among their friends.



ORANGE ARCHITECTURE AT THE OROVILLE FAIR.

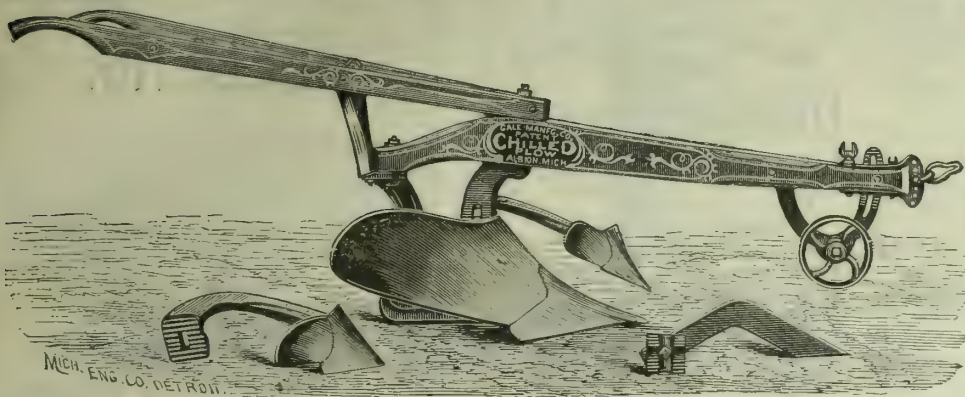


INTERIOR VIEW OF CITRUS FAIR AT OROVILLE.

is familiar with the subject by research, observation and practical experience. The design is to prepare a work more comprehensive than others in the English language. We have no doubt such a work will be greeted with an appreciative welcome, now that the interest in the olive is running so high and its outlook is so promising.

Sciences, containing a paper by Dr. Eisen naming, describing and picturing a new annelid of the family lumbriculina, which he names *Sutroa rostrata*, in honor of our liberal patron of science and literature Adolph Sutro. Dr. Eisen's work is a valuable contribution to the knowledge of the interesting class of annelids, and it is a field in which he is a master.

BAKER & HAMILTON. SAN FRANCISCO AND SACRAMENTO. SPECIAL OFFER!



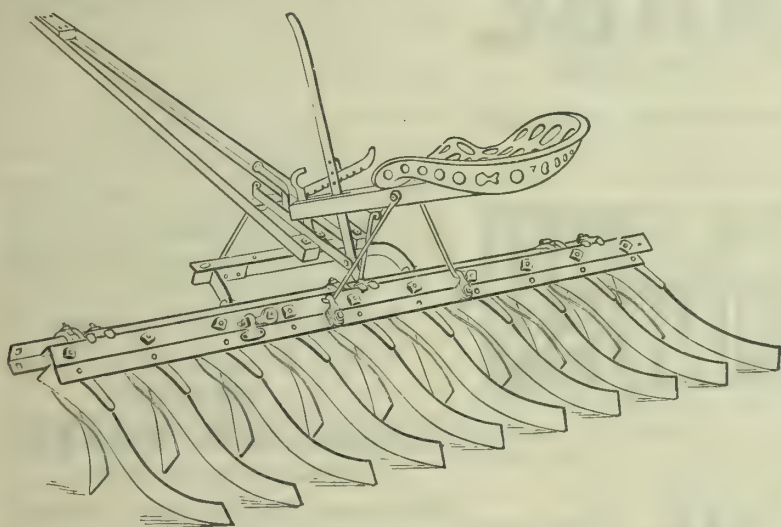
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No. 15—Three-horse Heavy Plow, cuts furrow 8x16 inches, Weight 140 pounds.....	\$14 50	\$5 00
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A4—Rod Beam, Light Plow, cuts furrow 4½x9 inches, Weight 51 pounds.....	7 00	4 00

Above prices do not include Wheel or Jointer.

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DON'T BE DECEIVED BY WORTHLESS IMITATIONS.

All genuine bear Trade-Mark, have Steel Clod Crushers, Double FLEXIBLE Gang Bars and the Improved Style, also has

ADJUSTABLE REVERSIBLE COULTERS,

Which when worn may be turned end for end, thus giving double the amount of wear. Works the entire surface of the ground. No other Harrow combines these points.

Sizes: 3 to 12 Feet. With or without Sulky.

ILLUSTRATED PAMPHLET FREE.

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BILLS of EXCHANGE of the Atlantic States bought and sold. ALBERT MONTELLIER, Cashier and Manager.
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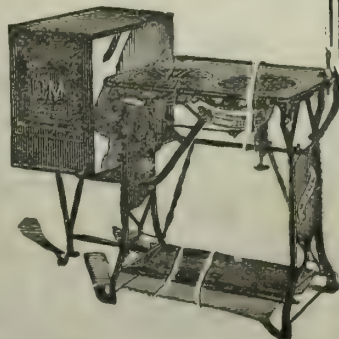
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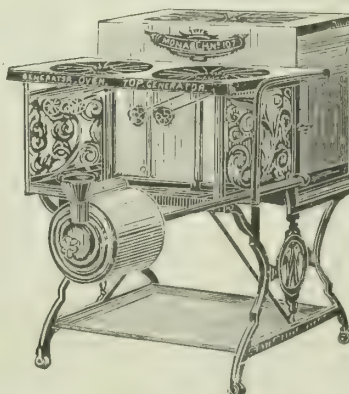


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FLORICULTURE.

The Limitations of Suburban Gardens.

(Written for the RURAL PRESS by I. G. W.)

Amateur gardening should possess a certain largeness of domain, unfettered by narrowness, to make it at once a pleasure or a success. There should be no question of front feet to hamper it, neither of a measured depth—as well limit the song-bird to the atmospheric accommodation of a bell-glass in which to trill its roundelay, as to circumscribe the true flower-lover to a 40 foot frontage by a hundred in depth, premising at the same time that room be reserved for a spacious residence. A tempest in a teapot is not more unavailing than to bring this fragment of territory under the domain of "Goodyear's patent." It is a Procrustean bed, and its occupants must be trimmed accordingly. To solve this problem is the purport of this article.

At the first outlook, any attempt at lawn culture seems impracticable, and yet as well might one attempt hanging unframed pictures on the wall as to dispense with an emerald setting for our floral treasures. A most helpful arrangement is the popular habit of laying the space on either side of the walk in front to grass. This, added to what may be spared in the garden for this purpose, most effectively gives a background for color in bud and blossom. One must prune most severely—the best of beautiful things that suggest themselves to fill the limited spaces remaining. Curving walks, cemented, if possible, in front and on one side of the house, will give double borders extending to the rear. On the other, laid to grass, a single border next the house will add convenient space for perennials, alternating with shrubs and low-growing plants.

A choice must be made as to the leading plants to be grown and closely adhered to in the future arrangements. Perhaps nothing will be found to give more satisfaction than roses, tea-roses mostly, though a few hybrids, those nearest allied to the tea family, as La France and kindred varieties, will give most satisfactory return, taking the entire season into consideration. These will not command the room that should be given in our limited space unless the soil is kept very highly enriched. It can hardly have too much for roses, if of well-decayed compost. The last of November should find a warm bed of six inches of compost spread evenly over the rose-beds, and if these are set in spaces in the lawn, should have no grass within 15 inches each way.

A liberal coating of the compost should be spread on the lawn two inches in depth and occasionally raked over to avoid smothering the grass, and left there until the warm February showers start the blades upward in their springtime freshness and vigor. At this point transplanting may be commenced, or before the swelling buds announce that nature has business on hand and rosebuds to introduce by the thousand. The time for this ceremony varies with the year, and eternal vigilance is as valuable here as elsewhere.

From 40 to 50 varieties of roses may be safely grown in such a garden if lawn spaces are utilized. A preference is given to standards, budded two feet from the ground for small gardens and for most varieties. La France, Perle des Jardins, Catherine Mermet and many others take kindly to this habit of growth and give better results than upon their own root. Most climbing varieties are more satisfactory budded also, though La Marque is used largely by English florists as a favorite stock for budding climbers, especially for the Marechal Niel, the most fastidious of all our pillar roses, as well as thus far the most magnificent. A most useful climber among the newer ones is the William Allen Richardson, a most industrious producer of delicate orange buds, very popular as *boutonnieres*.

The high fences in the rear of our suburban gardens afford vantage-ground for pillar roses. An effective combination would be those already mentioned interspersed with Marie Henriette, Claire Carnot, Climbing Devonensis, Reve d'or, Ophir, Solfaterre and many others. Among the newer standards, the Puritan, Bride, Princess Beatrice and Hon. Edith Gifford are promised as satisfactory out-of-door bloomers. Many of the new ones are only fine under glass, notably American Beauty, Her Majesty, W. F. Bennett and others. It is safe to allow our leading florists to try experiments.

Valuable varieties doing well near the coast, either budded or on their own roots, are Niphetos, Comtesse Riza du Parc, Madame de Watteville, Bon Silene, Mlle. Cecile Bruner, Camoens, Comtesse de Nadaillac, Madame Kuster, Madame Lambard and Marie Van Houtte. Many of the noisettes are very desirable as pillar roses.

Another valuable class of plants for limited gardens are carnations, coming as they do in so wide a range of color and always in bloom. After the first year they should be cut down in January, within six inches of the ground. Apparently this is severe pruning, but nothing less will make long-lived valuable plants. A border of these at intervals of 12 inches will show finely against a background of standard roses.

For some years the more venturesome of florists have invaded the domain of semi-tropical and even tropical plants, and with marked success.

Just now these optimists are under a cloud, but they see a silver lining and will not be deterred from ventures in this direction, having abounding faith that more kindly temperatures await us in coming cycles. We shall see stove-plants surreptitiously making their appearance again as the springtime opens, and the debris of the battlefield strewn with the dead gives place to flowering bulb and many another bud and blossom.

To avoid the unsightly decay of the numerous bulb family, plant them in pots, singly or in groups, and if this is done late in the autumn and kept in a dark cellar or shaded corner of the garden until early springtime, they will fill the pots with roots, and when sunk in the border will soon give a fine display. This is also true of annuals; a succession of these may be kept at a fine point of brilliancy all the season through, removing them when past their best, thus avoiding unsightly borders.

A shaded locality should always be reserved for native ferns. Woodwardias and smaller varieties are always in demand for home decoration, and they may wisely be intermingled with bigonias—a fine pansy bed is always in order. Bouvardias fill up a vacant corner, a grouping of which is very ornamental. Nothing has stood the wintry test better than camellias, blooming as brightly as if thermometers were unknown.

Each florist will have his own list of favorites, and by high culture, fertilizing every three months at least, will find room for the several treasures. Such a garden is very like an omnibus, always finding room for one more.

Fruitful Areas.

Then there remains a possible space in the rear, hopefully not of the typical back-yard order—a receptacle for everything not in Noah's ark. "Scattered o'er with wrecks of time," what would one give for the privilege of freeing one's mind to the owner of the typical back-yard unfettered by legal possibilities or one's own self-respect. A scrap of earth possibly 15 by 35 feet in dimension contains 200 plants of Longworth's Prolific strawberry and 100 of Cuthbert raspberry, which have supplied a family table abundantly for five months this season. The ground is kept very rich, as the plants are much closer than ordinary, but they are doing admirably. A border in the rear of the house has a dozen Black Cap raspberry, and another of like space the same number of Lawton blackberry. Space is also found for a half-dozen Berkeley gooseberries, all of which is considered a decided improvement on the usual adornments of kindred localities. Such are the limitations of one suburban garden.

Oakland

The Woolly Aphis.

WALNUT GROVE, CAL., Jan. 6, 1888.

Mr. Charles J. Woodbury, 123 California St., S. F., Cal.—DEAR SIR: Yours of the 3d inst. to hand last evening. In regard to the Woolly Aphis, I can only give you my experience. When I came here, my apple trees were badly infested with Aphis, so I washed them thoroughly to exterminate and have not seen any signs of the Aphis since, which has been over two years. Yours respectfully,

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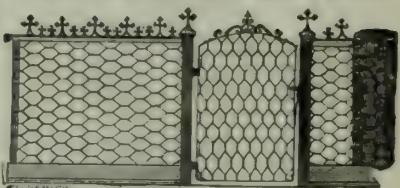
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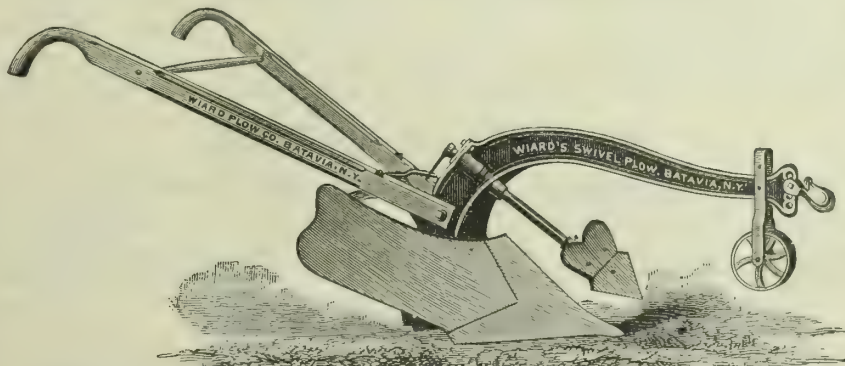


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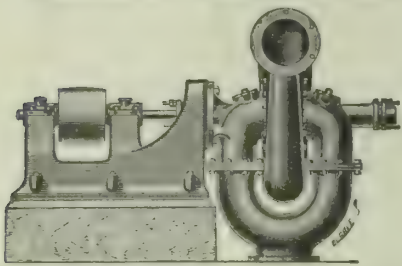
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CLARK'S CUTAWAY ENTIRELY NEW. HARROW



Supersedes the plow: beats the world: grows 4
made into a perfect seed bed; has a seeding attach-
ment for sowing all kinds of grain. Send for new
circular with full description. FREE. Address
HIGGANUM MFG. CO., Higganum, Conn.
or 189 and 191 Water Street, New York.

AMERICAN EXCHANGE HOTEL,

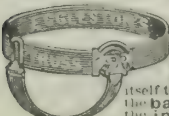
319 & 321 Sansome St., San Francisco.
One door from Bank of California.

The above well-known hotel offers superior ac-
commodations to parties visiting the city.
The table is kept at top grade and
the prices are within the
reach of all.

RATES—\$1.00, \$1.25 and \$1.50 per day.
Free Coach to and from the Hotel.

CHAS. & WM. MONTGOMERY, Props

ON 30 DAYS' TRIAL.



THIS NEW
ELASTIC TRUSS
is a far different from
others, is cup shape, with Self-
adjusting pad in center, adapts
itself to all positions of the body, when
the ball in the cup presses back
the intestines just as a per-
son does with the finger. With tight pressure
the Hernia is held securely day and night, and a radical
cure certain. It is easy, durable and cheap. Sent by mail
Circulars free. ED LESTON TRUSS CO., Chicago, Ill.

FUN CARDS. set of scrap pictures, one checker
board, and large sample book of hidden name
cards and agents outfit. All only 2c. CAPITAL
CARD Co., Columbus, Ohio.

H. M. NEWHALL & CO.,

SHIPPING AND COMMISSION MERCHANTS,
309 and 311 Sansome Street, San Francisco, Cal.
Agents for Growers and Manufacturers. Charterers of Vessels for all Trades. Agents
for the Mexican Phosphate and Sulphur Company's Products.
General Insurance Agents.

Have correspondents in all the chief cities of the United States, Europe, Australia, India, China and the principal
islands of the Pacific. Purchase goods and sell California products in those countries.
General Agents for the Pacific Coast of NATIONAL ASSURANCE CO., of Ireland;
ATLAS ASSURANCE CO., of London; BOYLSTON INSURANCE CO., of Boston, Mass.

NO SECOND APPLICATION!

The parties who have used our New Cleanser write us that they
are surprised at its staying qualities. The scale, the aphids, etc., do
not like to go back again where it has been used. It makes a
RESISTANT STOCK of the tree.

After two years' experience, we have to announce that there has
not a single case come to our knowledge where the Woodbury Tree
Cleanser has not fully and satisfactorily accomplished everything
that has been promised.

By reference to a late report from Prof. Klee, we observe he
states that he has found very good results from it in almost every
case, and that he has encountered no occurrence of any injury from its
use. We are informed that it has his recommendation as a thorough-
going, successful and cheap Winter Wash; and it is certainly in-
dorsed by the leading orchardists in the State. [Please send for
their published letters.]

It has had an unexampled success in exterminating Scale on
all kinds of Fruit Trees. It is sent all ready for use, and instruc-
tions, which are very simple, are furnished with every package.

Price 3½ cents per pound in cases, 80 pounds in a case; in
8-pound cans, same price, 15 cents extra for can; 3½ cents per
pound (10 per cent off) in barrels; about 400 pounds in a barrel.

We also make a fine

ROSIN WASH,

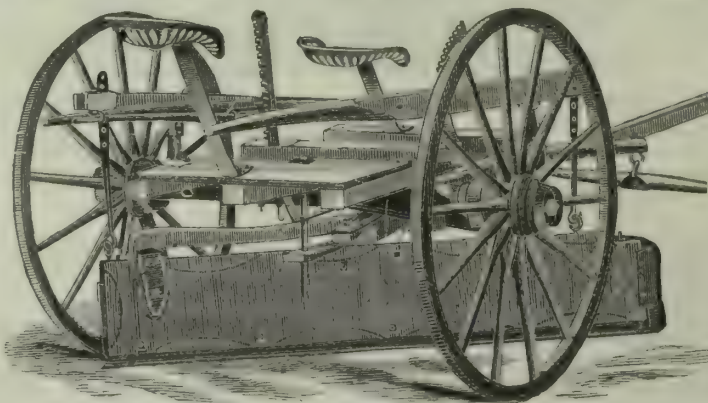
Containing no Kerosene, perfectly harmless and thoroughly suc-
cessful. This is the valuable remedy strongly recommended by
Prof. Klee for the Cottony Cushion Scale or "Icerya." Price ½
cent per pound higher than the Woodbury Tree Cleanser. We also
manufacture the fine Anti-gumming Farm Machine Oils and gen-
eral Lubricating Oils. We respectfully solicit correspondence.

WOODBURY OIL COMPANY,

123 CALIFORNIA STREET,

SAN FRANCISCO, CAL.

THE "BOSS" ROAD MACHINE.



FOR BUILDING ROADS, MAKING DITCHES, LEVEES, Etc.

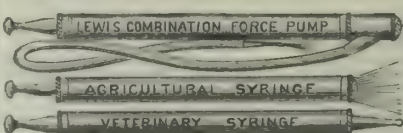
Is strong and durable, of light draft and of great strength. Just the thing for farmers in
opening ditches through their grain fields. Sold by

THOMAS D. POOLE, State Agent,
1906 San Antonio Avenue, Alameda, Cal.

Reliable Agents Started in Business Without Capital!

We are shipping large numbers to the Pacific Coast for destroying Worms on Fruit
Trees. One party has had 20 dozen within a few weeks.

Write for Particulars. Our Agents are making \$5, \$10, \$15, \$20, \$25, \$30 per Day



Selling LEWIS' COMBINATION HAND FORCE PUMPS. It makes 3
complete machines. We have agents all over the United
States who are making \$10 to \$30 per day selling these
pumps. We give their names and addresses in catalogue. To
introduce it we will send a Sample Pump, express paid, to
any express station in the U. S. for \$5.50. Made of brass;
will throw water from 50 to 60 feet, and retails for only \$6.
Indispensable for spraying fruit trees. The Potato Bug
Attachment is a wonderful invention. They sell rapidly.

AGENTS WANTED EVERYWHERE. Send at once for illustrated catalogue, price list and terms. Goods Guar-
anteed as Represented or Money Refunded. Address LEWIS & COWLES, Catskill, N. Y.

Seeds, Plants, Etc.

FOR SALE.

MISSION OLIVE CUTTINGS

From old and matured wood.

Fourteen inches long, one fourth to one inch in diam-
eter. Price, \$10 to \$15 per thousand, according to size;
delivered at Express office in R. R. depot in Sonoma.
Apply to

GEORGE F. HOOPER,
Sonoma, Cal.

OLIVES! OLIVES! OLIVES!

PICHOLINE OLIVE TREES

FOR SALE.

All well rooted; 4 to 10 inches high; \$100 per 1000.
Also a few Missions 2 to 4 feet; \$40 per 100.

Address

BELL CONSERVATORY CO.,
Sacramento, Cal.

FOR SALE.

Grapevines and Cuttings, OLIVE TREES and CUTTINGS.

RIPARIA SEED.

Apply to OLARENCE J. WETMORE,
204 Montgomery St., S. F.

Fine Small Fruits a Specialty.

CUTHBERT RASPBERRY.



BEST MARKET BERRY KNOWN! Large,
firm and luscious, stands travel finely, bears im-
munity, and has two or three years' life; 75 cents per dozen;
\$3 per 100. Also strawberries, Blackberries, Gooseber-
ries, Currants, etc., of finest in order varieties. Prices
on application. L. O. McCANN,
Santa Cruz, Cal.



1838 Pomona Nurseries 1888

Perry, Edward Bonita strawberries, Mar-
tins & Golden Queen raspberries, Wilson's
Pineapple, Muscadine Blackberries, Niagara,
Pineapple State and New's Early Grapes,
Lawson, Kieffer and LeClair Peaches, Won-
derful and Globe Peaches, Spotted and Japan
Pears, Delaware Winter and Red Under
Apples. All the variety old and young.
Ising new varieties. Catalogue Free.

WM. PARRY, PARRY, N. J.

Bartlett Pear Stock for Sale.

5000 Bartlett Pear Trees, one and two years old, for
sale at bed-rock prices; special rates to dealers.

H. B. MUSCOTT, San Bernardino, Cal.

FRUIT TREES FOR SALE.

2000 Tragedy Prunes and other choice varieties.
5000 Celebrated Early Apricots. For price address

G. W. WATSON,
Turner Hall, Sacramento Co., Cal.

KY BLUE AND Orchard Grass SEEDS

P. CARROLL, LEXINGTON, KY.

Seeds, Etc., Continued on Page 152.

HAND BOOK OF TULARE COUNTY

The Tulare Register has just issued a bound volume
of 221 pages, chock full of historical, descriptive and
statistical information regarding that great and growing
county. It answers every question a home-seeker will
want answered about the county, and answers correctly.
Sent post-paid on receipt of \$1. Address

THE REGISTER,
Tulare, Cal.

SANTA ROSA NATIONAL BANK,

Cor. 4th & B Sts., Santa Rosa, Cal.

Paid-up Capital, \$100,000.

OFFICERS:

E. W. DAVIS, President. J. H. BRUSH, Vice-President.
LEWIS M. ALEXANDER, Cashier.

DIRECTORS—B. M. Spencer, J. H. Brush, D. C. Bane
Lewis M. Alexander, D. N. Carithers, S. R. Cooper, E. W.
Davis.

CORRESPONDENTS—National Park Bank, New York; First
National Bank, Chicago; First National Bank, S. F.
Collections promptly made. Exchange bought and sold.

CHAS. E. WILSON, Attorney-at-Law,

420 CALIFORNIA ST., SAN FRANCISCO.

Special attention to practice before the U. S. Land
Office and Interior Department.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING FEBRUARY 7, 1888.

- 377,553.—ELECTRIC GAS LIGHTER—Julius Finck, S. F.
 377,384.—STATION INDICATOR—E. S. Irvin, Berkeley, Cal.
 377,503.—BRIDLE WINKER ATTACHMENT—E. B. Knapp, San Jacinto, Cal.
 377,525.—SEWING MACHINE—M. Lachman, S. F.
 377,527.—CABLE RAILWAY GRIP—D. S. Mackey, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

A Miner's Inch.

We have heretofore explained what is meant by a "miner's inch" of water; but for the benefit of new-comers and others who do not understand the phrase, we reprint the following facts and figures, which F. P. McCray, Engineer for the San Luis Rey Flume Co., lately furnished the *Oceanside Star*:

One miner's inch per second equals .02 cubic feet, or .1496 gallons.

Same per minute equals 1.20 cubic feet, or 8.976 gallons.

Same per hour equals 72 cubic feet, or 538.56 gallons.

Same per day equals 1728 cubic feet, or 12,925.44 gallons.

Same per month equals 52,596 cubic feet, or 393,418 gallons.

A miner's inch will flood 10 acres per year, 1.45 feet deep; or 14.49 acres one foot deep; or 18.11 acres 9 inches deep.

ONE MIDDLEMAN LEFT OUT.—A contributor to the N. Y. *Tribune* tells how a Wisconsin farmer suspected that he did not get full value for butter sold to the village grocer. When he went to Milwaukee, where his butter was re-tailed, he asked the commission merchant to whom he knew his grocer shipped to let him see some butter. He was shown some, but after examining it said it was not good enough. He was then shown a somewhat more desirable sample. Even this did not suit the farmer, who said if they had no better butter he would not buy. "Well," was the reply, "we have some choice butter in here, but this comes ten cents a pound higher, and you may not be willing to pay that difference." The farmer at once recognized his own package, told the commission merchant the object of his visit, and contracted to sell him all his butter at a price which would induce him to turn his whole land into a dairy farm.

TO CHEAPEN CANS.—The following petition, signed by nearly all the leading canners of the coast, was telegraphed to the Pacific Coast Congressmen on the 13th:

We most respectfully petition you to use your best endeavors to have the duty on tin plate removed. No tin plate being manufactured in this country, it ought to be placed on the free list.

The consumer of canned goods is one of the direct losers through such unnecessary tariff, also the fruit-growers and canners suffer materially, as a removal of the unnecessary duty would undoubtedly result in larger consumption of canned goods throughout this country, and consequent larger demand by the canners for the products of our orchards.

CHOLERA FOR RABBITS.—It is reported that Pasteur's plan for exterminating rabbits has been tried in a field near Rheims, France, with marked success. The field was walled in and full of burrows. The gun and the ferret had been vainly tried. M. Loir, nephew of M. Pasteur, went down and poured on a truss of hay some broth full of the microbes of chicken cholera. The next day 19 dead rabbits were found, and two days later 12 more. In some of the burrows were discovered families of dead rabbits, and not one living rabbit has since been seen.

SUNFLOWER FUEL.—The Maxwell *Argus* wants somebody to make a practical proof of what has been asserted as to the stalks and seeds of sunflowers making good cheap fuel. Bro. Mathews says: "If some enterprising farmer will plant an acre or two this year we will be obliged, and will buy our firewood from him. The method is to sow broadcast, and when the plant is fully grown cut before it gets hard, in proper lengths. One acre will yield an equivalent of 10 cords of wood, which means \$60 in this country. Try it somebody."

HOPES OTHERS TOO WILL TAKE IT.—A Butte county reader of the *RURAL* writes: "I received an extra copy this week, which I will hand to some good neighbor, hoping he may subscribe for the best farmer's and best horticultural paper extant."

BUTTE GRAIN.—All summer-fallow grain was looking finely in this county when W. A. Shippee of Nelson wrote us on the 10th inst.

SAN DIEGO AND NATIONAL CITY complain of a scarcity of lime and a superabundance of foot-pads.

Rural Seed Offering—1888.

Great Inducements for New Subscriptions.

To encourage gardening and further extend the circulation of the *PACIFIC RURAL PRESS*, we will offer, while this notice remains in our columns, to furnish to all old or new subscribers the following seeds on the favorable terms named below:

VEGETABLE SEEDS.

83 Varieties.

In Papers, postpaid. Cts

BETTER.

1 Early Blood Turnip... 10

2 Early Extra Bassano... 10

3 White Sugar... 10

4 Yellow Sugar... 10

5 Early Long Dark Blo'd... 10

6 Early York... 10

7 Early Dutch... 10

8 Early Wakefield... 10

9 Early French Oxheart... 10

10 Large Late Drumhead... 10

11 Red Dutch (pickling)... 10

12 Red Dutch (pickling)... 10

13 White Solid... 10

14 Early Paris... 10

15 Extra Early Forcing... 10

16 Long Orange... 10

17 Early Horn... 10

18 White Belg... 10

19 Half Long Danvers... 10

20 Cucumbers... 10

21 White Spine... 10

22 Early Cluster... 10

23 Early Frame... 10

24 Long Green... 10

25 Eng. Gherkin, Pickles... 10

26 Early Curled Silesia... 10

27 Ice Drumhead... 10

28 Simpson's Early Cur'd... 10

29 Prize Head... 10

30 White Paris Cas... 10

31 Hanson... 10

32 Boston Market... 10

33 Melons... 10

34 Large Yel. Canteloupe... 10

35 Extra Fine Nutmeg... 10

36 Casaba (new)... 10

37 Montreal Nutmeg... 10

38 Cuban Queen W'melon... 10

39 Mt. Sweet Watermelon... 10

40 Iron Clad Watermelon... 10

41 Scaly Bark do... 10

42 Black Spanish do... 10

43 White Imp. or Lodi do... 10

44 Georgia Rattlesnake do... 10

45 Early Red... 10

46 Red Wetherfield... 10

47 Yellow Danvers... 10

48 W. Forcal or Sil. Skin... 10

49 Parsnips... 10

50 White Dutch... 10

51 Mammoth California... 10

52 Olive Shaped Radish... 10

53 Early Scarlet Turnip... 10

54 Blk. Swedish or Wint'r... 10

55 Long Scarlet... 10

56 Squash... 10

57 Early Scalloped Bush... 10

58 Early Sun. Crk Neck... 10

59 California Field... 10

60 Marblehead... 10

61 Boston Marrow Wint'r... 10

62 New Hubbard Wint'r... 10

63 Tomato... 10

64 The Conqueror... 10

65 Early Red Smooth... 10

66 Trophy... 10

67 Canada Victor (earliest)... 10

68 Acme... 10

69 Favorite... 10

70 Corn... 10

71 Yel. Rutab' or Sw'd'h... 10

72 Early White Flat Dutch... 10

73 Long White French... 10

74 Imp. Late Rutabaga... 10

75 Red Top Strap Leaf... 10

76 Spinach... 10

77 Round Leaf... 10

78 Large Flat... 10

79 Peas... 10

80 Extra Early... 10

81 Champion of England... 10

82 Yorkshire Hero... 10

83 Rural New Yorker... 10

84 Beans... 10

85 Black German Wax... 10

86 Refugee... 10

87 Red Valentine... 10

88 China Red Eye... 10

89 Miscellaneous... 10

90 Kohlrabi... 10

91 Scotch Kale... 10

92 Curled Parsley... 10

93 Sage... 10

93 Antirrhinum Majus...

94 Calceola Coccinea (Fast...)

95 Campanula Speciosa...

96 Venus L'king Glass...

97 Candytuft, white frag't...

98 Centaurea Cynus (Bach...)

99 Clarks, fine mixed...

100 Convolvulus (Morning...)

101 Glory mixed...

102 Foxglove, mixed...

103 Gilia, mixed...

104 Globe Amaranthus...

105 Gypsophila Elegans...

106 Ice Plant...

107 Larkspur, finest mixed...

108 Linum Grandifolium (Flax...)

109 Love-in-a-mist...

110 Marigold, db'l French...

111 Marigold, African, dbl...

112 Mignonette, Sweet...

113 Nasturtium...

114 Portulaca, mixed...

115 Poppy, Double, mixed...

116 Rocket, Sweet...

117 Scabiosa, Dwarf, mixed...

118 Sensitive Plant...

119 Sweet Pea, White...

120 Sweet Pea, Crimson...

121 Sweet Pea, mixed...

122 Sweet William, mixed...

123 Sunflower, Cal. Db'l...

124 Adonia Cirrhosa...

125 Mountain Fringe...

126 Al hea (Hollyhock) fine...

127 mixed...

128 Aster, China, mixed...

129 Australian Vine...

130 Balsam (Lady Slipper)...

131 fine mixed...

132 Balsam, Fine Paris, dbl...

133 Balsam, Splendid, dbl...

134 Balsam, Dwarf, double...

135 Balloon Vine...

136 Browallia Grandiflora...

137 Canna (Indian Shot)...

138 Canna, fine mixed var...

139 Celosia Cristata Varie...

140 Celosia Cristata Pur...

141 Clematis Flammula...

142 Dahlia Superba, mxd...

143 Dianthus Chinensis...

144 Dianthus Chinensis...

145 Doble White...

146 Celosia Cristata, fine...

147 mix'd (Coxcomb)...

148 Chrysanthum Album...

149 Dahura, fine mixed...

150 Evening Primrose...

151 Four O'Clock, mixed...

152 Forget-me-not...

153 Geranium Zonale...

154 Geranium, fancy color...

155 Lobelia, Blue...

156 Lobelia, Blue...

157 Musk Plant...

158 Nierembergia Gracilis...

159 Pansy, fine mixed...

160 Petalox, Drummondii...

161 Pyrethrum Aureum...

162 Salpiglossis mixed...

163 Stock (Ten Week)...

164 Wallflower, fine mixed...

165 Wallflower, purple...

166 Zinnia, mixed fine...

167 Zinnia, Scarlet, dbl...

168 B-lles Perennis (Daisy)...

169 Campanula Medium...

170 Canterbury Belle...

171 Canary Bird Flower...

172 Thunbergia, mixed...

173 Aquilegia Alpina (Col...)

174 Heliotropium, fine mxd...

175 Heliotropium, dark, mxd...

176 Verbena, choice, mxd...

177 Pansy, fine mixed...

178 Balsam Camellia, fnd...

179 Carnation, fine mixed...

180 Digitalis...

181 Doichos (Hyacinth Bean)...

182 Gaillardia Grandiflora...

183 Nemophila, fine mixed...

184 Petalix, Nankinensis...

185 Saponaria Multiflora...

186 Scabiosa Atropurpurea...

187 Scarlet Runners (Climb...)

188 Schizanthus, finest...

189 mixed colors...

190 Myrsiphyllum Aspara...

The Sour Orange Tree and Its Products.

EDITORS PRESS:—The Sacramento Improvement Association commends very highly the sour oranges as avenue trees, and rightly it does, because there is no other tree as ornamental as the sour orange. But it is not only ornamental, it is very useful also.

The traveler in the so-called Paradise of Europe, the coast of the Mediterranean between Genoa and Cannes, will be surprised in coming in the district of Grasse, to see there in fall innumerable clotheslines hung up on which the skins of oranges are dried, while the pulp of these fruits is lying in out-of-the-way places, where large piles of tens of thousands of oranges will rot for manure. He hears then that these are sour oranges. Their skins are used by the more than 50 perfume factories of Grasse, as well as the blossoms, of which an Italian proverb says: "The orange blossom is the king of all blossoms."

A sour orange tree usually bears three times as many blossoms as it is able to bear fruits, and therefore two-thirds of them are picked and sold to gardeners, druggists and the perfume factories, which use the blossoms and then the skins for powders, oils, pomades, extracts, molasses, liquors, confections, candies, etc., some of which products are very valuable. One gallon of an oil for instance (Neroli bigarrade) is sold for \$300. The factories of Grasse consume during the period of distillation in the month of May, 30,000 pounds of orange blossoms a day.

As soon as there will be in California a supply of sour orange blossoms and skins it will not be long before factories will be erected, because in America as much and more perfumes and confections are used than in any other country.

Auburn, Cal.

F. CLOSE.

Shippers' Association.

At a meeting of the California Fruit and Produce Shippers' Association, held in Los Angeles last Wednesday week, officers were elected for the term ending Jan. 1, 1889, as follows: E. Germain, Pres.; E. R. Skelley, 1st V. P.; E. T. Earl, 2d V. P.; C. J. Shepherd, Treas.; Gregory Perkins, Jr., Sec.

The weight of a box of Navel oranges was fixed at 65 pounds instead of 70 pounds as heretofore.

The following article of the by-laws was unanimously adopted, and a printed copy ordered sent to all the wholesale fruit and commission dealers in the United States:

Article VII, Section 1. All sales must be made f. o. b. California, and at not to exceed 30 days' time.

Sec. 2. The packer's responsibility to cease after fruit is loaded on cars in good merchantable order, and purchaser must assume all risks of weather, delays and accidents in transit.

Sec. 3. Any dealer who refuses to receive and pay for fruit or produce, after same has been loaded in California in good merchantable order by any member of this association, shall be blacklisted, and all members of this association shall refuse to supply said dealer on any terms until he has made satisfactory settlement.

Sec. 4. Should suit be brought by any member of this association to enforce payment for fruits, or other California products, sold on terms above named, this association pledges itself to stand the expense of said suit, provided that all disputes between members of this association and dealers are submitted to a committee on arbitration provided in the by-laws, before any dealer can be blacklisted or suit can be brought at the expense of the association.

HANDSOME INDEED is Burpee's "Farm Annual" for 1888. Its 128 pages seem to be jammed full of information about seeds for the farm, kitchen and flower gardens, while the scenes depicted on the covers, and the full-page colored plates of defiance pansies and novelties in the vegetable line, are pretty enough to be framed for home adornment. To see this catalogue, send your address to W. Atlee Burpee & Co., Philadelphia, Pa.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

No Second Application.

This does not refer to small boys, but to the Woodbury Tree Cleanser. This fact makes it the cheapest wash for trees in the world. See advertisement.

HORSE AND CATTLE SALE.—We wish to direct the attention of stock-breeders and horse-men to the great sale of Aberdeen Angus cattle and French draft stallions, advertised by Messrs. Perry and Matthews, to take place March 7th at the Bay District park.

ROSES AND ORNAMENTAL PLANTS.—That old, experienced nurseryman and prize-taker, John Saul of Washington, D. C., has sent us his descriptive catalogues of roses, and of new, rare and beautiful plants for the spring of '88. They are free to applicants.

WELLS, RICHARDSON & Co's

IMPROVED

Butter Color.

EXCELS

IN STRENGTH PURITY BRIGHTNESS

NEVER TURNS RANCID.

Always gives a bright natural color, and will not color the Buttermilk.

Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color.

Three sizes, 25c. 50c. \$1.00. For sale everywhere.

WELLS, RICHARDSON & CO.
BURLINGTON, VT.

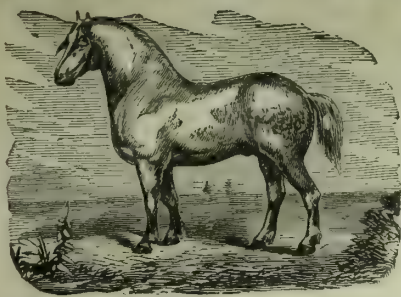


R. Hall's Pulmonary Balsam

A superior remedy for Coughs, Colds, Incipient Consumption

H. P. MOHR, Mt. Eden, Alameda Co., Cal.

NEW IMPORTATION



OUR IMPORTATION OF 1887 HAS JUST ARRIVED from Europe, where H. Wilsey, assisted by one of the firm who resides there, selected the stallions from the choicest strains of Europe, comprising

English Shire,
Suffolk Punch,
Normans and
Percherons,

All of dark colors, from one to four years old, and each pedigreed in their own country.
We will sell our stallions cheaper than the same class can be bought anywhere else in the U. S. We import to sell. Call and examine our stock.
Send for Catalogue.

H. WILSEY & CO.,
PETALUMA, CAL.

POULTRY, ETC.

JOHN McFARLING,
Importer and Breeder of
Langshans, Plymouth Rocks,
Brown and White Leghorns,
Faulx Bantams, Light Brahmas, Partridge Cochins, Buff Cochins, Black Minorcas, Registered Berkshire Pigs. Also one pen of Langshans direct from China.
708 TWELFTH ST., - OAKLAND, CAL.
Large lot of young birds ready for sale; send for circulars.

HATCH CHICKENS

PETALUMA INCUBATOR,
The Most Successful Machine Made.
3 Gold Medals, 1 Silver Medal, and 16 first Premiums.
Hatches all kinds of Eggs. Made in all sizes.
Write us for Large Illustrated Circular Free, describing Incubators, Brooders, Huses, How to Raise Chickens, etc. Address PETALUMA INCUBATOR CO., Petaluma, Cal.

OAKLAND POULTRY YARDS,

Cor. 17th & Castro Sts., Oakland, Cal.
Manufacture of the PACIFIC INCUBATOR and BROODER. Agency of the celebrated silver finish galvanized wire netting for Rabbit and Poultry-proof fences, the Wilson Bone and Shell Mill, the Pacific Egg Food, and Poultry appliances in great variety. Also every variety of land and water Fowl, which have won first prizes wherever exhibited Eggs for hatching. The Pacific Coast Poultryers' Hand-Book and Guide, price, 40c. Send 2c. stamp for 60 page illustrated circular to the PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

J. M. HALSTED'S INCUBATOR.
THE MODEL.
SELF-REGULATING,
RELIABLE,
AND SIMPLE.

INCUBATORS.
Greatly improved. Self-Regulating. Perfectly Reliable. Well made and finely finished. Hundreds in successful operation. Guaranteed to hatch a larger percentage of fertile eggs, at a less cost, than any other hatchery. Send 25 cents for 24 page illustrated Descriptive Catalogue and Price List and 20 page book on Poultry Raising and Artificial Incubation. Mention this paper and Address,
Champion Mfg. Co., Quincy, Ills.

BOOMING!

The Celebrated Dr. Fisherman's Carbolic Acid Alkaline Lotion,

A Specialty for Stable and Farm, is Booming. Why? Because it has greater merits than any other remedy and ten times cheaper. Order one quart or one gallon. Price, \$1 per quart, \$3 per gallon, making half a gallon and two gallons of Lotion. Money refunded in all cases of dissatisfaction. Ask your Druggist to get it for you. Send for reliable testimonials.

LYNDE & HOUGH,
116 California St., S. F.

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Best and Strongest Explosives in the World.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

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The Only Reliable and Efficient Powder For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

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To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

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FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

DR. J. KORBIG—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Pota-h.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

DR. J. KORBIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

Booth's Sure Death Squirrel Poison

For Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and Farmers wherever used.

The Cheapest and Best.

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This Poison has been on the market less than two years, yet in this short time it has gained a reputation of "Sure Death," equaled by none. By its merits alone, with very little advertising, it is now used extensively all over the Pacific Coast, as well as in Australia and New Zealand.

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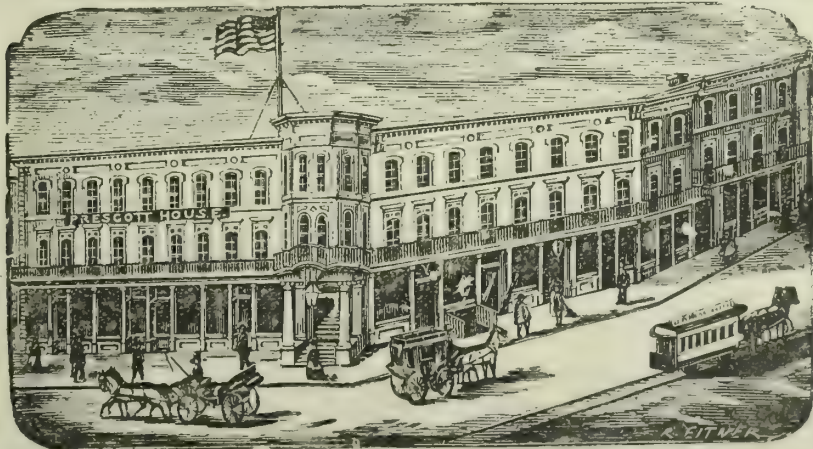
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Free Coach to and from the House.

J. W. BECKER, Proprietor.

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Manufacturers' Agents,

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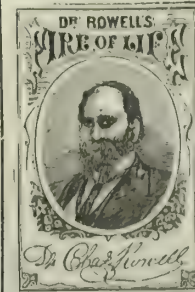
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Rheumatism, Neuralgia, Pneumonia, Paralysis, Asthma, Sciatica, Gout, Lumbago and Deafness.

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and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made \$18 on day, \$76.50 one week. So can you. Proofs and catalogue free. J. E. SHEPARD & Co., Cincinnati, O.

S. H. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 15, 1888.
The rains the past week were very opportune, as is the clearing weather at this writing. The rainfall to date, in the agricultural districts, does not average as heavy as last year to like time, so that it is more needful that well-distributed rains are had in next month and April. Trading the past week in farm products was light. The English wheat market ruled steady up to Monday, when a stronger tone was reported. The following is to-day's cable:

WHEAT—Buyers hold off. California spot lots, 6s 6d to 6s 9d; off coast, 33s 6d; just shipped, 33s 9d; nearly due, 33s 6d; cargoes off coast quiet but firm; on passage, quiet but steady. Wheat on passage to Continent, 165,000 qrs; wheat and flour on passage to U. K., 1,432,000 qrs; weather in England, cold.

Eastern Wool Markets.

BOSTON, Feb. 12.—Wool is steady, Ohio and Pennsylvania extra fleeces, 30¢; 31¢; XX, 31¢; 32¢; XX and above, 32¢; 33¢; No. 1, 35¢; 36¢; Michigan extra, 28¢; 29¢; No. 1 combing, 37¢; Ohio fine delaine, 34¢; 35¢; Michigan do, 32¢; 33¢; unwashed combing, 25¢; 26¢; Territory wools, scoured, medium, 48¢; 50¢; fine medium, 52¢; 53¢; fine, 54¢; 55¢; Texas wools, 14¢; 20¢; other grades unchanged.

PHILADELPHIA, Feb. 12.—Wool is steady; Ohio, Pennsylvania and West Virginia XX and above, 31¢; 32¢; X, 30¢; medium, 36¢; 37¢; coarse, 36¢; New York, Michigan, Indiana and Western fine, or X and XX, 28¢; medium, 36¢; fine washed delaine, X and XX, 34¢; 37¢; medium washed combing and delaine, 38¢; 39¢; coarse do, 36¢; 37¢; Canada washed combing, 34¢; 36¢; tub washed, 37¢; 43¢; medium unwashed combing and delaine, 27¢; 29¢; coarse, 27¢; 28¢; Eastern Oregon, 15¢; 20¢; Valley Oregon, 21¢; 27¢; New Mexican and Colorado fine, 13¢; 18¢.

NEW YORK, Feb. 12.—Wool steady, quiet; domestic fleeces, 22¢; 37¢; pulled, 15¢; 33¢; Texas, 13¢; 22¢.

Eastern Grain Markets.

CHICAGO, Feb. 15.—Wheat easier; cash and March, 75¢; 16¢; May, 80¢; 16¢. Corn, steady; cash and March, 45¢; 6¢; May, 51¢; 50¢.

NEW YORK, Feb. 15.—Wheat has been sold freely at the Produce Exchange to-day on the reported failure of A. Lefarges & Co., a big Bordeaux banking house, which, with another house, did all the banking business for grain in that city; 89¢; 89¢; for March 90¢; 89¢; for April, 91¢; 89¢; for May and 91¢; 89¢; for June.

The Demand for Apricots.

NEW YORK, Feb. 12.—An active demand has suddenly developed for California evaporated apricots, and much higher prices soon are probable. For some time past the best goods have been a drug in the market at 14¢. A few days ago a lot of 500 boxes was placed at 14¢, and from this buyers' interest began to increase, and the fact by this means was brought to the surface that in all the principal cities the supplies had been seriously cut into. Holders then became firmer in their views and buyers were anxious, which have now resulted in an advance to 16¢, with bids at 15¢ quite eagerly made without business upon the basis. Reports from Philadelphia advise little stock obtainable. Chicago is said to be about out, and in Boston there is a very small available quantity, while on the Pacific Coast the supply is reported exhausted.

California Products in Chicago.

CHICAGO, Feb. 11.—The receipts of California oranges are still small and prices are unchanged, ranging from 53¢; 30¢ per box.

In the California dried fruit market there was reported a good demand for peaches, pitted plums and apricots. Trade in raisins, which has been quite active of late, is still good. A very steady feeling pervades the market, and stocks are still ample for the demand. We quote: Peaches, sun-dried, in sacks, 10¢; 12¢; do, evaporated, in sacks, 10¢; 12¢; do, peeled, in sacks, 10¢; 12¢; do, in boxes, 10¢; 12¢; apricots, sun-dried, in sacks, 10¢; 12¢; do, evaporated, in sacks, 10¢; 12¢; plums, pitted, in sacks, 10¢; 12¢; prunes, small, 10¢; 12¢; do, large, 10¢; 12¢; nectarines, according to quality, in sacks, 10¢; 12¢; raisins, loose Muscatels, two-crown, 10¢; 12¢; do, three-crown, 10¢; 12¢; do, London layers, 10¢; 12¢; do, 2¢; 25¢; 24¢.

California strained honey, 7¢; 8¢.

A moderate demand exists for good grades of hops, but choice or the high-priced hops sell only moderately, and common qualities are dull. There was no change in prices. Choice Pacifics, 12¢; 15¢; common to prime, 8¢; 12¢.

Beans are scarce and firm. The late advance in prices is maintained. In a jobbing way the following quotations can be obtained, and in a small way a shade more is paid: California, according to quality, 2¢; 75¢; 2¢; 85¢.

Local Markets.

BAGS—The pool continues to advance prices with each heavy rain. The call from farmers is fair; many are buying one-half or more of their requirements at the present prices, and deferring the balance until later on. The pool say they will advance prices still more. June-July delivery for Calcuttas is quoted at 7¢; 40¢.

BARLEY—The supply of choice grades of Chevalier, brewing and feed are scarce. Poor grades of Chevalier and feed are in liberal supply. On Call the rains caused the bears to sell freely, but the most of the business was cross orders so as to buy actual barley at less money. To-day's sales on Call are reported as follows:

Morning Session: Buyer season—600 tons, 83¢; 100, 83¢; 300, 83¢; 400, 83¢; 500, 83¢; 600, 83¢; 700, 83¢; 800, 83¢; 900, 83¢; 1000, 83¢. Afternoon Session: Buyer season—200 tons, 83¢; 400, 83¢. Buyer 1888—300 tons, 90¢; 400, 83¢.

BUTTER—The market is stronger and higher under good demand. Western creamery in tubs is coming in quite freely and finds good sale at 27¢; 32¢.

CHEESE—Receipts are light, stocks light, demand good, and prices higher for mild new.

EGGS—The market is lower and easy at the de-

cline under free receipts of California and Eastern. The demand is very large and increasing.

FLOUR—The market is without essential change. Leading brands are steady.

WHEAT—Although there were about ten vessels loaded the past week, yet the tonnage loading is larger than last week. Good to choice shipping wheat is scarce, with the warehouses here and at Port Costa containing very little but that bought for export. The supply in the country to come forward is mostly poor grades. On Call, trading was fair, with dealers by a system of cross orders forcing prices down. To-day's Call sales are reported as follows:

Morning Session: Buyer season—100 tons, 1.38¢; 100, 1.38¢; 200, 1.38¢; 300, 1.38¢; 400, 1.38¢; 500, 1.38¢; 600, 1.38¢; 700, 1.38¢; 800, 1.38¢; 900, 1.38¢; 1000, 1.38¢. Afternoon Session: Buyer season—100 tons, 1.37¢; 100, 1.37¢; 200, 1.37¢; 300, 1.37¢; 400, 1.37¢; 500, 1.37¢; 600, 1.37¢; 700, 1.37¢; 800, 1.37¢; 900, 1.37¢; 1000, 1.37¢.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to Feb. 12, '87.	July 1, '87 to Feb. 11, '88.
Flour, qr. sks.	3,004,074	2,295,124
Wheat, cts.	10,554,173	5,931,188
Barley, cts.	1,866,722	1,725,693
Oats, cts.	109,707	136,909
Potatoes, sks.	642,811	798,994
Corn, sks.	66,593	152,626
Rye, sks.	17,749	15,324
Buckwheat, sks.	5,253	2,732
Beans, sks.	377,100	349,118
Bran, sks.	314,445	328,262
Hay, tons.	67,550	79,644
Salt, tons.	15,383	10,920
Wool, bales.	45,127	39,568
Hides, No.	70,284	65,470
Raisins, 20-lb boxes.	132,833	103,093
Quicksilver, flasks.	10,842	19,274
Hops, bales.	12,546	14,664

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to Feb. 12, '87.	July 1, '87 to Feb. 11, '88.
Flour, sks.	91,791	164,876
Wheat, cts.	378,091	667,735
Barley, cts.	1,985	75
Oats, cts.	263,641	154,370
Corn, cts.	71,637	12,590
Wool, bales.	9,060	7,284
Bran, sks.	27,918	44,048
Hops, bales.	754	321
Hides, No.	21,005	22,251
Rye, cts.	—	280
Potatoes, sks.	58,495	13,629

Cereals.

The figures presented below indicate that there were on Dec. 31, in the United States, after providing for all calls (including those for bread, seedling and unavailable reserves), 57,409,706 bu. of wheat available for export, compared with 93,000,000, with 85,000,000 and with 158,000,000 bu. at the corresponding dates in 1886, 1885 and 1884.

	1887-88.	1886-87.	1885-86.	1884-85.
Wheat crop, bushels, July 1.	436,339,000	477,218,000	537,112,000	512,768,000
Reserves available July 1.	18,608,127	30,516,000	38,455,000	38,980,474
Total supply, bushels, July 1.	454,947,127	507,734,000	575,567,000	551,748,474
Less seedling (winter and spring).	51,965,443	50,792,000	61,476,000	61,476,000
Remainder.	402,981,684	456,942,000	514,091,000	490,272,474
Exported July 1 to December 31.	350,088,304	375,920,358	361,071,906	349,409,506
Remainder.	52,893,380	80,921,642	153,019,094	140,862,968
Required for food and mills (4 months).	140,329,327	142,383,809	142,383,809	142,383,809
Leaving bushels.	208,764,053	238,537,833	210,635,285	208,479,159
Unavailable stocks.	40,000,000	40,000,000	40,000,000	40,000,000
Total bushels.	248,764,053	278,537,833	250,635,285	248,479,159
Deduct available wheat December 31.	199,327,005	217,730,294	221,617,744	215,305,555
Total available wheat, January 1 to June 30.	49,437,048	60,807,539	29,017,541	33,173,604
Remainder available.	44,493,136	54,730,300	27,615,744	30,165,555
Total available (consumption, out).	97,700,766	115,537,773	127,733,285	148,143,159
Deduct unavailable wheat.	40,000,000	40,000,000	40,000,000	40,000,000
Available for export December 31.	57,700,766	75,537,773	87,733,285	108,143,159

H. Kains Jackson writes as follows: An estimate of prospective supplies has been anonymously prepared by a firm dealing largely with California. The stock of foreign wheat on January 1, 1888, is taken at 2,500,000 qrs., including flour, and the sales of English wheat for January, February and March are reckoned at 2,000,000 qrs. Imports for the same three months are calculated as follows:

	Qrs.
Pacific Coast	350,000
Chili	50,000
Russia	500,000
India	100,000
Atlantic ports.	600,000
Other ports.	200,000
Flour imports	1,200,000

The grand total of supplies on these figures will be found to be 7,500,000 qrs., whereas winter rate of consumption will require 6,500,000 qrs. for the three months' food. If these figures be in any way correct, it follows that stocks will be reduced to just a million qrs., which is a dangerously small reserve at any time. Whether at the present time, with Europe disturbed, and an war not regarded as unlikely in the spring, such an exhaustion of reserves can be

quietly regarded by the trade, is a matter for the trade's own judgment.

The Eastern advices continue to note a decreasing visible supply of wheat. Trading there for export, which was fairly active at times in last month, has been quiet so far in February, but for home consumption the demand is good. Regarding crops, no advices are at hand.

Oregon advices report the shipments of wheat from August 1, 1887, to February 1, 1888, as aggregating 150,000 short tons, with eight vessels loaded and not included in the above, and 13 more to load. California millers are still taking quite freely of extra choice grades, while it is claimed that California exporters are buying to some extent. Oregon farmers are reported to be meeting the market fairly freely. Crop prospects in both Oregon and Washington are favorable.

In this State farmers are reported to have about finished plowing and seeding. The acreage to wheat is largely in excess of last year, and put in under the most favorable circumstances, the cold spell in last month having in nearly all the districts mellowed the ground. The rains of the past week were very opportune, but well-distributed spring rains are wanted to insure a large yield. With next month dry, the yield will most certainly be light.

The wheat market the past week has been irregular, with more or less of a deadlock between buyers and sellers. Several parcels of good shipping, favorably situated, fetched \$1.36½ to \$1.37½ for stiffening and topping off, but for parcels of the same grades otherwise placed the highest bids were \$1.35. The European markets strengthened, but charters here advanced from 25 to 35 per long ton. There is very little good shipping wheat in the State unsold, while even fair is getting scarce. But there is a good deal of poor yet to be had. The exports the past week were quite free, while an increase of ships chartered is reported.

In barley, the past week has not witnessed any material change. The rains were taken advantage of by the bears to hammer prices down on Call for futures. The stock of grain in this city is being gradually reduced, but still it is heavy and acts as an incubus on the market, although it is known that about all is held against Call Board sales. Inferior advices report a large consumption, and supplies decreasing quite rapidly. Choice Chevalier is in good request for Australasia, as is choice brewing barley for the East. California brewers are buying sparingly. Choice grades are very scarce, owing to there being too many small grains—grains that pass through the meshes and that do not sprout. Choice grades of feed are sold for brewing in many instances. The supply of poor feed continues liberal. The acreage seeded to barley is less than last year.

Corn has held fairly steady at full prices throughout the week. Choice grades are firmly held, and to buy, full prices are paid. The consumption, so far this season, has been larger than for the like time last season.

Oregon and Washington Territory continue to send us free supplies of oats, which cause that cereal to rule in buyers' favor. To make sales so as to save expenses, concessions are made for parcels on the wharf.

Rye is quiet and weak. Receipts are large, while the demand is light, owing to contractors for the compressed yeast having their wants met.

Buckwheat is quiet, but firm for choice.

Fruits.

Apples are in moderate supply, causing choice to fetch full prices, with now and then an advance for something extra to fill distant orders.

Limes and lemons are coming in quite freely, and although the call is good, prices favor buyers.

Oranges are meeting with an increased demand, both locally and for shipping. Values are firm, particularly for those well selected and well packed. The East is drawing more freely.

In dried fruits, the market is strong at full prices. There is an improved call for apples. The stock of all kinds is light for the season.

In raisins, the market exhibits great strength, under light supplies of choice, a fairly steady call, and an expected free demand to set in soon from the Territories.

Feedstuff.

The market for ground feed is fairly active, considering the improved pasture. Bran is steady, but middlings are easy. Feed cornmeal is strong. Ground barley is steady, with a good demand ruling, it being used chiefly with chopped straw.

Choice grades of hay are wanted, as are good grades, and for which an advance in a small way is paid over quotations. The poorer grades are firm, as is straw. Considerable of the latter is being used.

Vegetables.

There has been and continues to be a good demand for seed potatoes, with a slight advance paid over top quotations. Choice potatoes for the trade are firmly held under moderate receipts and a good demand. New potatoes show a decided improvement; they sell at from 2¢ to 4¢.

Some early asparagus comes in daily, and brings fancy prices.

Cucumbers continue to sell at from \$1.50 to \$2.50 per dozen.

Tomatoes from Los Angeles arrive more freely, but sell at good prices.

Cabbages are strong at full prices, with shippers in the market for all choice hard heads.

Mushrooms are in liberal supply, but meeting with a good demand, prices are fairly well maintained.

Live-Stock.

Beef cattle have been offering more freely, chiefly from distant points. The improving pasture in this State causes stockmen to hold back. Veal is wanted, and will fetch a slight advance on quotations. In mutton sheep there is nothing new to report. The extreme high prices are bringing out more supplies, causing an easier feeling to obtain. In milch cows the demand is good from both dairymen and families. The price, as usual, varies according to the age of the cow and the quantity of milk given from day to day. In horses, there is more inquiry for matched teams, single-footers and general utility horses. In any of these, good prices are obtainable for good animals. Work horses are slow.

Hogs come in sparingly, but then the high prices have reduced the inquiry, particularly so now, during the Chinese New Year's. The market closes barely steady. There is an improved call for stock hogs.

The market for dressed meat is quotable as fol-

lows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed, and one-half from the price of grass-fed, that is animals running at large).

BEEF—Stall-fed, 9¢; 9¢ per lb.; grass-fed, extra, 8¢; 8¢ per lb.; first quality, 7¢; 7¢ per lb.; second quality, 6¢; 6¢ per lb.; third quality, 5¢; 5¢ per lb.

VEAL—Choice, 12¢; 12¢ per lb.; fair to good, 8¢; 8¢ per lb.

MUTTON—Wethers, 9¢; 9¢ per lb.; ewes, 9¢; 9¢ per lb.; lamb-spring, 15¢; 15¢ per lb.

HOGS—On foot, grain-fed, 6¢; 6¢ per lb.; dressed 9¢; 9¢ per lb.; soft, 5¢; 5¢ per lb.; dressed, 7¢; 7¢ per lb. Stock hogs, 4¢; 4¢ per lb.

Miscellaneous.

Free receipts of dressed fowls from Nebraska continue to operate against this market, particularly for turkeys. Receipts of California are only fair.

Grain has, as usual, fluctuated from day to day. Hams, bacon and lard are very strong, with higher prices looked for.

Hogs are more inquired for, but the small supply of good to choice is against an active demand. Brewers have to content themselves with off grades or else pay good prices.

In wool there is nothing new to report. The stock here is about 2,000,000 lbs. It is generally conceded that the finer clips will fetch better prices this year than they did in 1887, owing to the change in fashion.

Overland shipments of produce from California in January were 28,045,000 pounds, the leading articles being as follows: Barley, 107,821 cents; beans, 4207 cents; Lima beans, 1423 cents; brandy, 18,360 gallons; wine, 268,485 gallons; honey, 30,120 pounds; hides, 223,990 pounds; hops, 209,020 pounds; potatoes, 8768 cents; dried fruit, 261,660 pounds; raisins, 1,346,666 pounds; citrus fruit, 603,580 pounds; canned goods, 976,460 pounds; wool, 1,166,330 pounds.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way	282,795	193,922
In port, disengaged	54,943	101,668
In port, engaged	491,087	17,509

Totals 388,825 313,399

To obtain the carrying capacity, add 60 per cent to the tonnage.

San Francisco, Feb. 15, 1888.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

Apples, bx com.	1 00 @ 1 50	Figs, loose	8 @ 11
do choice	2 00 @ 2 50	Nectarines	8 @ 11
Apricots, lb.	— @ —	do evaporated	12 @ 18
Bananas, bunch	2 50 @ 5 00	Pears	8 @ 10
Blackberries, ch.	— @ —	do pared	5 @ —
Black-tongues, cr.	— @ —	do evaporated	20 @ 25
Cherries white bx	— @ —	Pears, sliced	4 @ 5
do black bx.	— @ —	do grtd....	4 @ 5
do Royal Ann.	— @ —	do evaporated	10 @ 11
Cherry plums....	— @ —	Plums, evaporated	10 @ 11
Cranberries.....	10 00 @ 12 00	do bottled....	3 @ 5
Currants, ch.	— @ —	Prunes.....	7 @ 10
do French.....	— @ —	do French....	8 @ 11
Gooseberries lb.	— @ —	Zante Currants	8 @ —
Five, black bx...	— @ —	RAISINS	
do white bx....	— @ —	Deheca Olus, fcy	35 @ 3 50
Grapes, white....	— @ —	Imperial Calab.	— @ —
do black.....	— @ —	do fcy.....	2 00 @ 2 25
do Rose Peru...	— @ —	Crown London	— @ —
do Muscat....	— @ —	Layers, fcy.,	1 80 @ 2 00
do Tokays.....	— @ —	do Loose Mus-	— @ —
Isabel.....	— @ —	cateils, fancy	1 80 @ 2 00
Wine, Zinfandel	— @ —	do Loose Mus-	— @ —
do Mission....	— @ —	cateils.....	1 60 @ 1 75
Limes, Mex....	— @ —	Cal. Alencias..	1 60 @ 1 60
do Cal. box....	— @ —	do Layers.....	1 50 @ 1 50
Lemons, Cal. bx	1 75 @ 4 00	do Sultanias..	1 60 @ 1 75
do Sicily, box	3 00 @ —	Dried, sacks, lb.	5 @ 6
do Australian.	— @ —	Fractions come 25, 50 and 75	
Nectarines box	— @ —	cents higher for halves, quarters	

FEED.		Turkey Feathers,	
Barley, ton.....	16 50 @ 17 50	tail and wing.....	@
Feed meal.....	3 00 @ 3 10	Snipe, Eng. dos.....	—
Gr'd Barley ton.....	18 50 @ 19 50	do Common.....	—
Hay.....	11 00 @ 12 00	Doves.....	1 25 @ 1 75
Middlings.....	19 00 @ 20 00	Quail.....	1 00 @ 1 25
Oil Cake Meal.....	32 50 @	Rabbits.....	1 00 @ 1 25
do new process.....	28 50 @	Ears.....	11 @ 1 25
Straw, base.....	50 @ 65	Venison.....	—
FLOUR.		PROVISIONS.	
Extra, City Mills.....	4 00 @ 4 35	Cal. Bacon.....	10 @ 11
do Country Mills.....	3 75 @ 4 00	Heavy, B.....	11 @ 12
Superfine.....	3 25 @ 3 50	Medium.....	11 @ 12
GRAIN, ETC.		Light.....	12 @ 13
Barley, feed, cal.....	77 @ 85	Extra Light.....	12 @ 13
do Brewing.....	1 00 @ 1 20	Lard.....	9 @ 11
Chevalier.....	1 25 @ 1 37 1/2	Cal. Smoked Beef.....	11 @ 12
do Coast.....	1 00 @ 1 20	Hams, Cal.....	12 @ 14
Buckwheat.....	1 75 @ 2 25	do Eastern.....	14 @ 15
Corn, White.....	1 25 @ 1 35	SEEDS.	
Yellow.....	1 37 @ 1 35	Alfalfa.....	8 1/2 @ 9
Small Round.....	1 30 @ 1 37 1/2	Canary.....	3 1/2 @ 4
Norfolk.....	1 55 @ 1 60	Red.....	11 @ 12
Oats, milling.....	1 45 @ 1 60	White.....	20 @ 22
Choice feed.....	1 45 @ 1 47 1/2	Cotton.....	20 @ 22
do good.....	1 40 @ 1 43 1/2	Flaxseed.....	2 @ 3
do fair.....	1 30 @ 1 37 1/2	Hemp.....	4 @ 4 1/2
do black.....	1 30 @ 1 40	Italian Rye Grass.....	10 @ 11
do Oregon.....	—	Perennial.....	7 @ 9
Rye.....	2 25 @ 2 75	Millet, German.....	5 @ 6
Wheat, milling.....	1 45 @ 1 47 1/2	do Common.....	5 @ 6
do Choice.....	1 40 @ 1 42 1/2	Mustard, white.....	2 @ 3
do fair to good.....	1 37 1/2 @ 1 40	Brown.....	3 @ 3 1/2
Shipping choice.....	1 37 1/2 @ 1 38 1/2	Rape.....	14 @ 15
do good.....	1 35 @ 1 36 1/2	Ky. Blue Grass.....	15 @ 17
do fair.....	1 32 1/2 @ 1 33 1/2	2d quality.....	13 @ 15
HIDES.		Sweet V. Grass.....	75 @ 80
Dry.....	12 1/2 @ 13	Orehead.....	17 @ 18
Wet salted.....	5 @ 6 1/2	Red Top.....	9 @ 10
HONEY, ETC.		Hungarian.....	8 @ 9
Beeswax, lb.....	21 @ 25	Lawn.....	20 @ 40
Honey in comb.....	12 1/2 @ 16	Mesquit.....	8 @ 9
Honey in comb, fancy.....	16 @ 19	Timothy.....	7 @
Extracted, light.....	6 1/2 @ 6 3/4	TALLOW.	
do dark.....	5 1/2 @ 6	Crude, lb.....	2 @ 4 1/2
HOFS.		Refined.....	6 @
Oregon.....	8 @ 15	FALL, 1887.	
California.....	8 @ 15	Humboldt and Mendocino.....	15 @ 18 1/2
ONIONS.		Sacramento valley.....	12 @ 15
Pickling.....	—	Free Mountain.....	15 @ 18 1/2
Red.....	—	N'bern defective.....	—
Silverskins.....	1 50 @ 1 85	S Joaquin valley.....	12 @ 14
Cut.....	75 @ 1 25	do mountain.....	12 @ 15
NUTS—JOBBER.		Cava's & F'n'l.....	12 @ 17
Walnuts, Cal. lb.....	8 @ 10	Oregon Eastern.....	14 @ 20
do Chile.....	8 @	do valley.....	16 @ 21
Almonds, hd shl.....	5 @ 7	Southern Coast.....	9 @ 14
Soft shell.....	12 @ 13		

Sacramento Louisiana Tract.

This tract has been offered for sale by Messrs. Alsip & Co. of Sacramento, and is intended to supply a want long felt in this city in consequence of the indisposition exhibited by property-holders to sell. This tract is peculiarly adapted for a suburban district and will be to Sacramento what Kingstown is to Dublin or Brighton and Blackheath to London. The soil is superior and recommends itself, the location in every sense convenient, the roads always in excellent order and the new electric road almost completed to the Louisiana tract. It is supposed the business men of Sacramento will in their own interests secure a home lot and thus combine rural and city life daily. Should immigrants buy up, no better land could be found equally fit for cattle or fruit ranches, one acre of alfalfa giving three cuttings annually and yielding about 18 tons. The long-established firm of Messrs. Alsip & Co. have information that 18 inches of rain, which is about the general fall, insures a crop above the average, and the oldest pioneer has yet to see a failure. With such prospects buyers will be repaid without adding the surrounding scenery as well as the disposition of the citizens of Sacramento, widely known for their hospitality and affability.

Sacramento, Feb. 14.

From the American Agriculturist, New York.

A few years ago we knew not the potato bug, and the makers of hand water engines of all kinds could make their squirts to clean carriages, wash windows, put out fires and do various other feats in hydraulics, without regard to bug-killing. Now a pump that does not provide for the potato is not complete. Such was our thought as we unpacked the parts of Lewis' Combination Force-Pump. It must not be thought from this that the pump is complicated, as it requires but a single change to convert a regular force-pump, with its short hose, into a garden syringe; another slight change and there you are—a Paris-Greener or a London-Purpler—the potato bugs are provided for and the combination is complete. The thing is a perfect arsenal of water guns, each serviceable in its way and made for use rather than show.

"ALL KNOWN FERNS" is the title of a work now nearly completed by Dr. Lorenzo G. Yates, the noted Santa Barbara botanist. It is intended to bring together in an octavo of about 300 pages all the various discoveries in pteridology which have been made since the second edition of Hooker & Baker's "Synopsis Filicum" was published in 1873, and to furnish all the information extant "as to the known habitat and distribution of every recognized species, with synonyms and page references to other publications for more detailed descriptions of characteristics and habits of growth." Dr. Yates has been assisted in preparing the work by J. G. Baker of the Royal Herbarium at Kew. The price of the volume is not to exceed \$2.50, or \$3 if interleaved.

Thermalito.

The directors of this new colony are daily disposing of lots, and have, so far, succeeded beyond expectations. The citrus fair has had its effect so far and the recent exhibit at San Jose, which justly received general praise, must bring its own reward.

OROVILLE LANDS.—We have just learned from E. Tucker of Oroville that land sales in his office last month exceeded \$33,000, and during the months of March and April heavy sales are expected.

PACIFIC COAST WEATHER FOR THE WEEK.																																				
[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]																																				
DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
Feb. 9-15.																																				
Thursday.....	.00	40	Nw	Cy.	.00	48	NE	Cy.	.00	52	SW	Cy.	.00	52	S	Fr.	.00	49	SW	Cy.	.00	56	W	Cl.	.00	51	W	Cy.	.00	58	E	Cy.	.00	58	SE	Cy.
Friday.....	.21	42	S	Ry.	.26	52	NE	Ry.	.05	50	S	Cy.	.04	52	SE	Cy.	.07	50	S	LR.	.00	58	Nw	Cy.	.00	58	W	Cy.	.00	58	SW	Cy.	.00	60	SW	Cy.
Saturday.....	.32	52	Cm	Ry.	.74	62	S	Cy.	.75	52	W	Ry.	.03	56	SE	Cy.	.36	59	S	Cy.	.00	63	SW	Cl.	.00	63	W	Fr.	.00	62	SE	Cl.	.00	60	W	Cl.
Sunday.....	.44	52	S	Ry.	.20	56	SW	Cy.	.28	58	SE	Cy.	.13	56	S	Ry.	.35	57	SW	Cy.	.00	60	S	Cy.	—	—	—	—	.00	64	W	Fr.	.00	58	W	Cl.
Monday.....	.10	50	SE	Cy.	.02	54	SE	Cy.	.01	50	S	Cy.	.02	56	SW	Fr.	.00	49	E	Cy.	.T	50	W	Cl.	.00	63	W	Cl.	.00	54	E	Cy.	.00	58	N	Cy.
Tuesday.....	.00	52	Nw	Cl.	.16	58	S	Fr.	.10	54	N	Cy.	.12	56	SW	Cy.	.09	53	SW	LR.	.00	62	SE	Cl.	.00	57	W	Cy.	.T	54	SE	Cy.	.00	60	SW	Cy.
Wednesday.....	.00	52	Cm	Cy.	.00	54	Nw	Fr.	.00	64	Nw	Cl.	.00	52	Nw	Cl.	.01	52	S	Cl.	.00	48	E	Cy.	.00	58	Nw	Cy.	.T	50	W	Cy.	.03	60	W	Fr.
Total.....	1.07				1.38				1.19				.34				.83				.T				.00				.T					.00		

EXPLANATION.—Cl for clear; Ry, cloudy; Fr, fair; Fy, foggy; — indicates too small to measure. Temperature, wind and weather at 12.00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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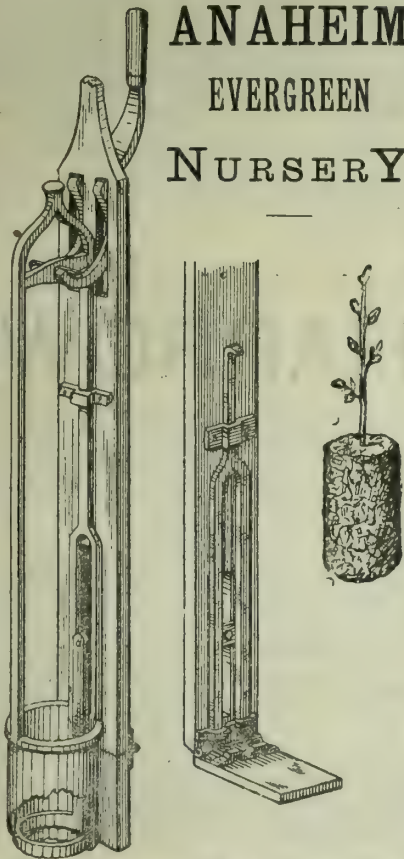
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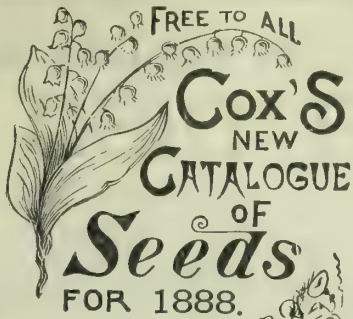
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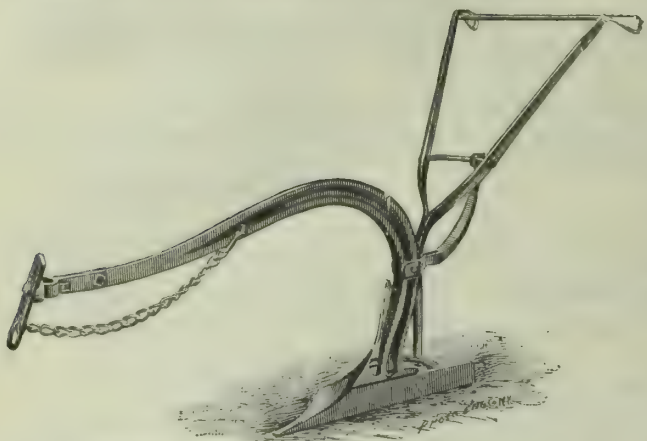
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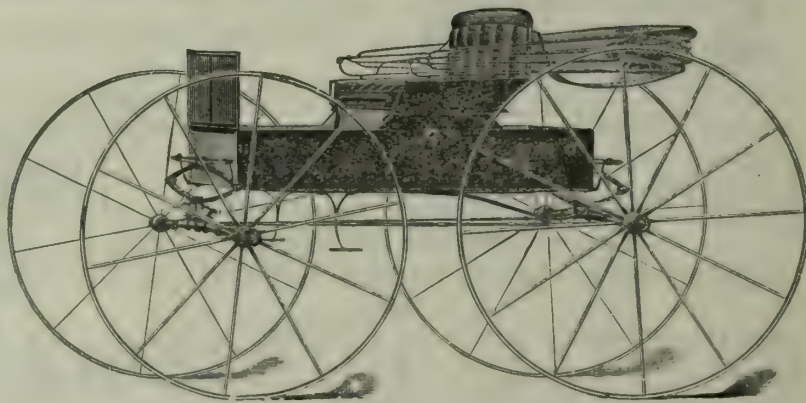
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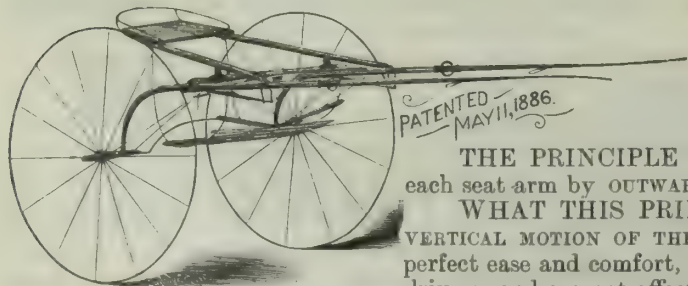
Of our large line of Vehicles and Harness for Farm, City and Livery use. Including, as it does, all grades of work and every variety of style, an investigation will well repay you. Of low-priced Buggies we have the best work, for the money, in the market. Numerous improvements for 1888 place it far in the lead of anything on the Coast—quality and price considered.

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THE PRINCIPLE OF THE FLINT consists in the spring being attached under the shafts, and connected with each seat arm by OUTWARDLY FLARING SHACKLES which entirely encircle the shafts and WORK INDEPENDENTLY of them. WHAT THIS PRINCIPLE ACCOMPLISHES.—The weight of the driver in his seat causes NO LATERAL OR VERTICAL MOTION OF THE SHAFTS. It prevents any galling or chafing of the horse. The driver not only rides with perfect ease and comfort, but ABSOLUTELY STEADY. The shafts always balance, regardless of the different weights of drivers, and are not affected by his weight when riding on uneven roads.

CONSTRUCTION, MATERIAL, ETC.—Shafts, Cross Bars, Seat Arms, etc., are of the very best selected, seasoned second growth white ash. WHEELS are of the finest quality Pinneo & Daniels compressed band. SPRINGS, best Swede steel and oil tempered. AXLES, Liggett's double collar interchangeable steel axles. Cane seats, tipped and leathered Shafts, and the best finish and proportions of any cart manufactured.

On March 1st WE WILL REMOVE to more commodious quarters at 33 and 35 MAIN STREET, two blocks below our present location and a few doors south of Market St., where we invite our many patrons and the trade in general to call and see us.

PACIFIC RURAL PRESS

TWENTY PAGE EDITION.

Vol. XXXV.—No. 8.

SAN FRANCISCO, SATURDAY, FEBRUARY 25, 1888.

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A Scene in Madagascar.

Interested, as Californians are, in plant growth and natural scenery, we have thought that the glimpse at Madagascar which we give on this page would be acceptable. Madagascar, though it has been known for more than a thousand years to the Arabs and for more than three hundred to Europeans, is still but imperfectly explored.

Its coast line has been accurately laid down and various incursions have been made into the interior, but there is much still awaiting the venturesome explorer. It is an interesting land from whatever point of view it be regarded. It is the third largest island in the world; nearly 1000 miles in length. It has vast low, flat plains along its southern shores, but in the northern portion much of the coast is precipitous, the high land often approaching the sea, and it is in such a situation that the artist has chosen the scene shown upon this page. The loftiest mountains are nearly central in the area of the island, and reach an elevation of nearly 9000 feet.

The most interesting feature of the engraving is the glimpse given of the peculiar vegetation of Madagascar. There are several fine specimens of the "traveler's tree" (*Urania speciosa*), with its graceful crown of plantain-like leaves growing in a fan-shape at the top of a lofty trunk, and supplying a quantity of pure, cool water, and every portion of it being of some service in building. Another plant of which two specimens are shown in the foreground, one on each side of the chasm, is the rofia palm (*Saguaruffia*), from whose pinnate leaves a valuable fiber, used in making cloth, is obtained. The grand forest tree towering aloft in the center of the engraving is another characteristic growth of Madagascar, the spice tree (*Ravintsara Madagascariensis*), which has fragrant leaves and fruit. These are but a few of the peculiar growths of the island, the flora of which, according to the botanists, a small part is clearly Asiatic while another closely corresponds with the tropical zone of Africa, while the fauna is so nearly allied to the Asiatic and Malayan that it is surmised that it was once part of a vast archipelago, occupying what is now the Indian ocean. The people, too, appear to be of Malayo-Polynesian



A SCENE IN MADAGASCAR, SHOWING CHARACTERISTIC PLANTS OF THE ISLAND.

stock and not African, though there are inter-mixtures of African and Arab elements on the western and northern coasts. The inhabitants are not civilized in a European sense, but they

are not a savage race and some of the tribes can hardly be classed among barbarous people. They have never been cannibals. They are law-abiding and loyal, living in settled communities.

The Cattle Interest.

The present high meat prices should induce still wider attention to live-stock interests. It is true that this branch of our agriculture is progressing, though not as rapidly as the fruit industries. It will be a great mistake to let all the available capital go to the improvement of fruit lands. Investors should look beyond the smiling valleys and the warm slopes and see that our progress is built evenly, and that the situations which will yield green feed, fodder and grain for meat animals are turned to their proper uses. It is clear that the time has come when one can profitably do much better work in producing beef, mutton and pork than was warranted a few years ago. Our local demand for these foods is increasing with our great advance in population, and the general condition of meat production in the country at large also justifies local efforts. The past winter's experience has gone far to prove that growing tender stock without provision for food or shelter in a blizzard-beset country is very hazardous, and the fear that the great cattle kings of the Territories would crush the country with a beef surplus seems to have been misplaced. These considerations, and others like them, indicate that tame beef from small farms is worth the producers' attention, and we like to see a disposition to give it.

One valuable surety of a good beef supply for California is found in the way the Nevada growers have stood the shock of the severe winter. The *Virginia Transcript* says: "Our cattlemen began right and have continued in the right way. They have always kept their business well in hand—have never rushed in thousands of head of cattle without knowing how they were to be carried through the winter, as has been done in Montana and other regions. They have taken an account of provender on hand and have rid themselves in time of superfluous stock. They started on a solid basis—that of providing a supply of food for winter—and each year that foundation has been growing broader. There are now in all

parts of the State thousands and thousands of acres of alfalfa-fields where a few years ago there was nothing. This year more land will be sown to alfalfa than before in any two years."

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

The Santa Cruz Mountains.

EDITORS PRESS:—Having lately visited Skyland, one of the picturesque regions of the Santa Cruz mountains, a few notes gathered on my trip may prove of interest to readers of your journal. The stranger passing through the Santa Clara valley by railway scarcely imagines, as his eyes rest upon the evergreen mountains that lie to the westward, that so many human habitations may be found there as exist to-day. A visit in person is necessary to realize the fact that not only hundreds of homesteads are scattered from base to summit, but thousands have sought and found a Mecca in these mountains. South of Los Gatos creek, which affords a pass for the narrow-gauge railroad from your city to Santa Cruz, the land for the most part belonged to the Government until a comparatively recent date. Now, however, all is changed. New cottages numerously dot the steep mountain-sides, and patches of clearing with orchards and vineyards in the various stages of growth, are unmistakable evidence that energetic and faithful yeomen have found a lodgment here, and will, in a few more years, largely swell the product of the fruits of California. Following up Los Gatos creek 3½ miles, I reach Alma, a small station on the railway, and a little distance beyond, stop for the night at the Forest house, which affords better accommodations for the traveler than he would reasonably expect to find outside a city. Col. S. O. Gregory, the manager and proprietor, is an enthusiast on mountain life—especially the Santa Cruz mountains—and his partiality, when the excellent quality of the fruits, the opportunities for hunting and fishing, and the pleasant and healthful climate are considered, is quite excusable.

The infusion of new blood in the proprietorship of the lands that have long been held along Los Gatos creek is all that is necessary to inaugurate such changes as will astonish the "natives." The old forty-niner "must go," or rather his shiftless methods. They can't stand before the enlightenment and progressive development that mark the period. No better evidence of the correctness of this position is needed than to visit the place of F. O. Zigler at Lexington, near Alma. This gentleman has lately purchased here a tract of 250 acres which he is converting into a mammoth orchard. Prior to taking possession he found the old place in a most dilapidated condition, but by the aid of a considerable force of men and liberal expenditure such changes are being effected that within a limited period the former owner will likely fail to recognize the place which for a score of years he perhaps called his "home."

Near Alma is the vineyard and winery of William Rihl. He has 23 acres of vines and is increasing his acreage. Last year he made 6000 gallons of wine. His winery constructed last year is two stories high and 40x50 feet in area. Mr. Rihl has expended \$10,000 on his place and proposes to still further develop and adorn it.

A few miles up stream is Patchen, where resides D. C. Feely, a prominent fruit-grower, with whose success your readers in general are familiar. He has done much to acquaint the world with the high quality of the Santa Cruz mountain fruits, having exhibited several varieties at the World's Fair in New Orleans 1885-6, and being awarded premiums over all competitors.

I dined with Joshua Norrish of Patchen, a gentleman who lately emigrated from Illinois, who has come to engage in fruit culture and share our "glorious climate." There is room here for many thousands of such men, and the country is acquiring them rapidly. This observation is forced upon me by actual experience gained on my trip.

No section of California which I have visited can boast of a better class of citizens than have sought an abode in these mountains. It seems to afford a natural retreat for not only those who realize the pecuniary gain that flows from the production of the choicest fruits of many varieties grown in the State, but among them are to be met many whose fortunes were acquired years ago in other and distant lands. Some are retired business or professional men who have been attracted hither not, as might be supposed, for solitude, but for the enjoyment of the sublime scenery afforded and the recuperation of their wasted energy. The less desirable locations, those which the Government until lately could not give away, are being occupied by citizens of foreign birth who appreciate more fully than the native-born American what it is to recline beneath their own vine and fig tree.

The evening of the second day's travel found me at the home of J. C. McCracken, where I received a warm welcome. It was like meeting old friends, and the entertainment for the night was duly appreciated. Mrs. McCracken, most Californians are aware, is a gifted writer. Her contributions to the *Overland Monthly* and numerous other newspapers and periodicals evince taste and thought, and withal the power of expressing the same in a pleasing manner. Mr. McCracken's place is on an eminence that commands a delightful view of the country on a clear day for 100 miles around. On arising

in the morning, a strange sight met my gaze. A dense fog resembling a hugesnowbank rested upon the landscape beneath. It appeared almost possible to walk out upon it, but in a few hours the vapor arose and a chasm hundreds of feet in depth was presented to the westward.

At the home of D. H. Montgomery, I was shown some of the finest Newtown pippins I have yet seen, and pears of the Easter Beurre variety which weighed from 17 to 20 ounces each.

I also visited the home of E. Meyer in the same neighborhood. He has a tract of 1500 acres specially adapted to fruit, about 100 of which are planted to trees and vines. Thirty acres are in bearing vines. Mr. Meyer has commenced the manufacture of wine, making last year 5000 gallons. He is about to commence the construction of a winery with a capacity of 1,000,000 gallons, which to complete will necessitate the expenditure of \$20,000. The winery is called the Mara Vista. Mr. Meyer is one of the most enterprising men of his section, having constructed over 10 miles of wagon-road within the past few years at his own expense; and building wagon-roads in the mountains is a very expensive job.

Passing through the district known as Skyland, I found much to admire, not only in the natural surroundings, but the thrifty orchards and vineyards of Blake & Hersey, Adams, Mrs. M. G. Norton, Prof. C. H. Allen, Judge Miller, Thos. Slaughter and others. I was impressed with the truth that a mountain home has in some respects a percentage over those of the valley. I think it is safe to prophesy that before the lapse of this century, with present progress as a criterion, these mountains will afford homes to more than treble the present population, as they are only beginning to be appreciated by the average citizen. F. B. L.

THE VINEYARD.

Grape-Growers' Convention.

The Viticultural Commission is mailing for distribution the completed program of the order of exercises to be held at the convention next month in Pioneer hall. It is as follows:

Wednesday, March 7th—Raisins; Table and Shipping Grapes; Markets; Appointment of Committees.

Thursday, March 8th—Varieties to Plant; Resistant Vines; Vineyard Operations; Vine Diseases; Remedies.

Friday, March 9th—Wine and Brandy; Making and Marketing; Cellar Operations.

Saturday, March 10th—The Use of Wines and Brandy; Legislation and Miscellaneous Matters.

The subjects to be spoken on and the names of the speakers are as follows:

T. C. White, Fresno, "Raisins—Drying, Packing and Preparing for Market." Dr. W. S. Manlove, Viticultural Commissioner for the Sacramento District, "Table Grapes." R. J. Harrison, San Francisco, "Wine Storage and the Preserving of Fruits in Cold Storage." Leonard Costes, Napa, "Best and Cheapest Methods of Obtaining a Grafted Vineyard on Resistant Stocks." C. J. Wetmore, Secretary of the Board of Viticultural Commissioners, "The Chaintre System of Pruning and Conducting the Vine in California." H. W. McIntire, President of the Vine Growers' and Wine-Makers' Association, "Distillation of Grape Brandy—How to Establish and Conduct a Distillery." Frank West, Stockton, "Wine Cellars for the Interior Valleys." Dr. John A. Stewart, Santa Cruz, "California Wines." H. A. Merriam, Los Gatos, "Wine and Brandy Making as a Profession." Professor W. B. Rising, State Analyst and Professor of Chemistry at University of California, "Sophistication of Wines." E. H. Rixford, Secretary of the Vine-Growers' and Wine-Makers' Association, "General Hints on Viticulture." J. H. Wheeler, Chief Executive Viticultural Officer, "Some Pests and Diseases of the Vine, with Remedies." J. L. Heald, Crockett, Contra Costa county, "Wine-Making Machinery." H. A. Pellet, St. Helena, "Fermentation." Professor E. W. Hilgard, Professor of Agriculture at University of California, "Results of Experimental Fermentations Made in 1887." Arvad Haraszthy, President of the Board of State Viticultural Commissioners, "How to Drink Wine." F. W. Pohndorff, Mission San Jose, "Wine as a Temperance Agent."

PROF. VIALA'S REPORT.—The visit to this State of Prof. Viala of the National School of Agriculture at Montpellier, France, was mentioned at the time in the *RURAL*. One of his objects was to study the wild vines of America growing in their native soil, and he has sent his report to the Minister of Agriculture, copies of which have been received in this State. It has been translated and issued in pamphlet form in English, and forms Appendix 1 of the report of the Chief Executive Officer of the State Board of Viticulture for this year. Copies of this report are now being mailed to viticulturists throughout the State.

GRAPE IN NEW YORK.—There are 14,000 acres of vineyards along the Hudson river valley, and the average yield is four tons to the acre. At three cents a pound this means \$240 per acre to the grower. Some grow larger crops than this average, and realize \$300 per acre in sales.

THE DAIRY.

Feeding Values of Forage.

EDITORS PRESS:—I wrote you early last fall, giving you my experience in Kaffir corn. At that time I had not tested its qualities as agreed, but now that it is all fed up I can write knowingly. I planted Kaffir corn, Blount's Prolific corn and Dara Sorghum. The Dara Sorghum proved very sensitive to frost. It was vouched for as "a wonderful producer of forage, soappetizing that even the hogs eat it ravenously." Those hogs must have been in the condition of the Prodigal Son when "he fain would fill his belly with the husks the swine did eat," for my stock refused to eat it, green or dried. It was a complete failure.

The Blount's Prolific corn was sown after the frosts. It came up well and grew 12 to 18 feet high. Had it been cut when in the silk I think it would have made good feed, as the stalks were full of ears. As it was, it was allowed to ripen up the lower blades. They dried up and a late wind whipped the stalks clean one-half the way up from the ground. When the fodder was fed the cattle ate the remaining blades and the tender tops—the bulk of the fodder, the stalks, being left in the rack. To have it eaten up clean the stalks had to be cut up and steamed.

The Kaffir corn I thought had succumbed to the frosts, but to my surprise it came up. As I wanted the seed it was allowed to ripen, although it would have allowed cutting three times during the season for feed. The stalks and blades remained green even when dried. Being green there was no loss of blades as with Blount's corn. The grain heads were cut off for seed and the fodder fed. At first I credited the evident preference which the cattle showed for the Kaffir to its being a change; but, as the winter progressed and the Jerseys allowed the Blount's cornstalks to fill the manger, while not a vestige of the Kaffir ever remained, I was forced to conclude that the cattle would not eat up entire the thick stalks of the Kaffir, and refuse the stalks of the Blount's corn, unless there was that in it that they very much preferred. It proved all and more than was ever claimed for it as a forage plant. There was no preparation; the Kaffir was fed in the original bundles, not even untied. There was no waste; not a particle was ever left, and the yield of milk was fine; the butter hard and a bright yellow, with the grain and flavor characteristic of the Jersey. The grain of the Kaffir is a fine feed for poultry or stock, and is said to make an excellent flour.

The crowning virtue of the Kaffir is the fact that it will do well on any bottom land, without irrigation if well cultivated. In fact, in Placer county, I saw a patch on high land that had had no water but had been well cultivated, and the grower was loud in his praises of "Kaffir for a dry ranch." Can any of the readers of the *RURAL* give their experience in Stewart's Hybrid Sorghum? What I desire most to know is, do the cattle eat it up clean without preparation, and do they do well on it? *Murphy, Cal.* E. H. SCHAEFFLE.

The Dairy in Northern New York.

EDITORS PRESS:—Perhaps a few notes concerning the new devices now in use among the dairy farmers of my native State—New York—to better the quality of their dairy products, lessen the labor and cost of production, and obtain the best prices, would interest some *RURAL* readers.

The difficulty of securing good, competent female help among the dairy farmers was one of the principal causes that at first led to the organization of the plan of co-operative dairying, and it has proved to be a great relief to the farmers' wives and families, whose resources of strength were too often sadly over-taxed, and the result has been so highly satisfactory that it is not likely to be discontinued, more especially as the profits of dairying have not been diminished, but rather increased where the management has been good.

Having read a statement of the methods of making both butter and cheese at the Ogden creamery, located in Franklin, N. Y., and as this method of making cheese may be new to some, we give it, as it has proved to be remunerative to the parties who leased the factory, and has also proved satisfactory to their patrons.

A. R. Brown & Co. of Guilford, N. Y., manufacturers of the Arctic creameries, are the lessees, and own all the fixtures and machinery used in the building, and receive a stated price per pound with a guarantee that a good marketable product shall be produced.

The advantages claimed for this mode of setting milk are convenience, small space required as compared with many kinds of dairy apparatus, and the rapid and even cooling of the milk, the water being conveyed through the milk vats so as to cool both bottom and center of the vat as well as outside.

It is asserted that in this creamery, with the water at 40° F., all the cream can be obtained from the milk in 12 hours.

The Arctic creamery apparatus is arranged on a platform above the level of the cheese vats, and just below the level of the platform where the milk is weighed, so that when the

milk is received at the factory it is at first weighed and the account taken of the number of pounds furnished by each patron, and then run into the creamery vat; after standing a sufficient time, the cream is removed and the milk drawn off into the cheese vats, where it is heated to the required temperature for cheese-making, by steam pipes connected with the engine which furnishes the motive-power used for churning, also for pumping water.

Part of the season they made what is called night skims, setting the milk for 12 hours, then skimming and mixing the skimmed milk with the morning's milk and the fresh buttermilk combined to make cheese.

The cream is allowed to ripen till it develops a slight degree of acidity, and the churning is done in a rectangular box churn of a capacity of 300 gallons.

The cream is churned till the butter comes in a granulated form, when the buttermilk is drawn off and mixed with the milk for making cheese. After August 1st both messes of milk were skimmed, letting one mess stand 24 hours, the other 12 hours. This, of course, makes rather a lean cheese, but purchasers are found for it at a price that proves remunerative; pays for handling the milk in this manner.

The butter granules are washed entirely free of buttermilk by a flow of water through the churn, and every operation of butter and cheese making is conducted with the utmost neatness and precision, and the results show the profit to the managers and patrons of this careful and systematic manner of conducting all their operations.

The milk furnished at this creamery for the month of August brought the patrons \$1.19 per cwt.

Some may object to a skim cheese, but I have eaten cheese made on this coast and sold as a whole milk cheese not as rich as this skimmed milk fortified with rich, sweet buttermilk-made.

There are many fine cheese dairies on this coast, that turn out a fine article, but there is more inferior cheese made than there need be. As to butter, many Eastern people have admitted that good butter is the rule here; that California people have no reason to "quarrel with their bread and butter," as both articles are better than the average furnished at hotels and eating-houses in the States east of the Rockies. *M. A. S.*

[Of course, in considering the applicability of all these creamery appliances in this State, it must be remembered that in all parts of the State, except the Sierra dairy region, ice is a luxury, and water at a temperature of 40°, or anything like that, costs much money—more than any dairyman has yet found it profitable to expend in that way. We don't have ice-houses in our back yards in this climate. For this reason and because of the advantage of not setting the milk at all, the Centrifugal cream separators are being so largely used here. Of course, for making both butter and cheese from the same milk, the sweet skim-milk fresh from the Centrifugal is a best possible condition for skim-cheese making, provided the milk is not skimmed too clear of fat, which is possible with the Centrifugal.—EDS. PRESS.]

Oleomargarine Contest Renewed.

Dispatches from Washington foreshadow the renewal of the bitter fight of two years ago over the passage of the Oleomargarine bill.

The oleomargarine interest has caused the preparation of an abstract which has been, or will be, placed in the hands of every Senator and Congressman. The abstract asks for the repeal or modification of the law, and says that the passage of the law was obtained by fraudulent means; that bogus samples, concocted by the opponents of oleomargarine, were submitted, and that the law destroyed the industry to the benefit of another. It is also asked that oleomargarine be included in the general law concerning adulterated food, and that the tax be reduced to one cent per pound, and that the license fee for dealers should not exceed that charged for selling liquors and tobacco.

In answer to this the Mercantile Exchange, speaking in behalf of the dairy interests, states that the samples submitted for analysis were procured in the open market, where they were being sold for butter, and that in the manufacture of oleomargarine, with a temperature sufficiently high to kill the germs of disease, without spoiling the product, disgusting animal substances may be deodorized and used without danger of being detected in the result, and the substance may be made so as to be unwholesome, but no one can tell even from a chemical analysis what fats and oils have been employed.

The bill already introduced in Congress by oleomargarine makers provides for the repeal of the present law and the doing away with taxes and license fees. It provides for the sale of imitation butter in original packages of not less than five pounds, and on the outside of the package the ingredients of the mixture must be stamped in plain letters. Another section refers to pure food, and is evidently inserted for the purpose of obtaining the support of those interested in the passage of a Pure-food bill.

HORTICULTURE.

Limits of Profitable Citrus Culture.

At the meeting of the American Horticultural Society in Riverside, the following interesting essay was read by H. J. Radisill of Riverside:

The cultivation of citrus fruits is unquestionably one of the most attractive branches of horticulture. They do not fail with their bright evergreen foliage, fragrant blossoms, and golden fruit to stimulate even the octogenarian in horticulture to a renewal of his interest in this occupation, and to a desire to plant and own a grove.

Until within a comparatively recent period the Latin and Mongolian races have possessed a monopoly of citrus-fruit culture. But now the Anglo-Saxon has entered the field in both continents, and, with his accustomed system and energy, is infusing new life and new ideas into this calling, and true to the instincts of the race, makes the pertinent inquiry, "What permanent profit is there in it?"

The family of citrus fruits is divided into five prominent branches, to wit: the orange, lemon, lime, citron, and the shaddock, or pomelo mosse or pomalo, and in the profitability of their cultivation stand in the order named.

Therefore, in treating this subject I will consider only the orange as the representative of the family, the hardiest of the race, the most generally cultivated, and the most profitable.

Originating, as it is now supposed to have done, in the warmer portions of Asia, the foothills and tablelands of the Himalaya mountains, it was but little known, and only occasionally mentioned in myth and story until about the tenth century of the Christian era, when it was first distinctly noticed by Avicenna, a prominent Arabian physician of that period.

From that time it was gradually introduced and acclimated along the shores of the Mediterranean sea. The sweet orange passing through Persia and Syria to the Ionian isles, the shores of Italy, Sicily and the south of France, and according to Lowdon, reaching the south of England about the 16th century, where it was cultivated only for a short time successfully as a wall fruit. The bitter orange passed through Arabia, Egypt and the north of Africa to Spain and Portugal.

Through the Spanish and Portuguese explorations and conquest it was carried to the Azores and the Madeira islands, to the West Indies, and to Florida, Mexico and South America. In situations favorable to its growth it is now found in a zone spanning the earth, extending from 40° south to 46° north latitude, and from the level of the sea to an elevation of 5000 feet above.

It is especially cultivated for profit in Syria, Turkey, Egypt, Northern and Southern Africa, Greece, Italy, France, Spain, Portugal, the Azores, West Indies, Brazil, Mexico, a portion of the Gulf Coast of the United States, Florida, Southern California, and to some extent in Central and Northern California, Sandwich islands, Japan, Australia, a portion of China and India. If we were to judge, therefore, from the great area of territory and remarkably diverse conditions in which the citrus fruits are found, we might readily conclude that they could be profitably grown at any point adapted to them within the latitudes named above.

This is not the case, however, for experience has taught, and is annually teaching us, that climate, soils, varieties and markets influence and control the profitability of citrus-fruit culture to a greater or less extent than mere geographical limits. We will therefore consider these in the order named.

Climate.

That of the Azores has been considered by many of the authorities as the best for citrus fruit culture.

Possessing a moderately humid atmosphere with a mean temperature of 58° in winter, 61° in spring, 68° in summer, and 62° in autumn, and a minimum temperature of only 40° and a maximum of 90°, and free alike from the desiccating winds of Africa, and the cold northerly winds that prevail throughout Southern Europe, the citrus fruits are produced there readily, without irrigation, in great quantities and of the best quality.

The isothermal lines that indicate the limit of the growth of the citrus fruits along the northern shores of the Mediterranean, under which name I include all its arms or branches, such as the Aegean and Adriatic seas, etc., show a much greater diversity of location than those along the Pacific Coast, and a greater range of temperature than the climate of the Azores. At Joppa, on the coast of Syria, in latitude 32° north, the orange is grown profitably near the sea-shore, and inland to an elevation of about 800 feet above sea level, but only extending about four miles distant from it. This narrow belt, in varying widths, follows the shore-line around the Aegean and Adriatic seas, to Venice, Italy, in latitude 45°, where, however, the orange is not grown successfully for market, but what few are grown require expensive winter protection.

At Lake Garda, the largest of the Italian lakes, and in latitude 46° north, having a peculiar and exceedingly sheltered position, the orange and lemon have been profitably grown for centuries. This, I believe, is the extreme northern limit of profitable citrus fruit-growing in the world.

The eastern shore of Italy is too cold for the

citrus fruits, and only in favored spots along the western shore from Calabria, north to Genoa, can they be successfully grown.

From Genoa, the line passes westerly and southerly along the coast of France to Barcelona, Spain, in latitude 42°, thence in a narrow belt along the sea-coast to latitude 37°, and thence west along that parallel of latitude to the Atlantic ocean, thence north up the coast of Portugal to latitude 41°. Near the southern limits of this isothermal line there are large areas of country in Asia Minor, Thessaly, Calabria, and even Sicily, not adapted to citrus-fruit culture, on account of the extremes of heat and cold prevalent.

Experienced cultivators in these countries claim that a maximum temperature of over 104°, and a minimum of 28° Fahrenheit, are both injurious to the growth of the orange.

While the limit of safety as to temperature may be considered as located within this range of the thermometer, orange-growers in Southern California have found that under favorable conditions both the tree and fruit will bear a much higher temperature and for a brief period a temperature of 22° without serious injury. Shelter from strong winds from any quarter is also a condition of successful culture of this fruit, while sufficient moisture to keep the tree in a healthy, vigorous growth is a necessity.

Soils.

Although the orange tree is found to flourish well in warm, fertile soils, composed principally of sand and loam, or sand and clay, it will not continue productive, for even a brief period, without maintaining its vigor and strength by liberal applications of manure; hence the limit of profit in this direction is very soon reached by the decrease in the crop produced and the increased cost of fertilizers. Orchards depending entirely upon irrigation for their supply of moisture have, I think, a decided advantage over those dependent upon the rain, as the waters used in irrigation both winter and summer, especially in open ditches, carry with them a large amount of fertilizing matter, which can easily be placed by this system to use a common expression, "where it will do the most good."

Varieties.

It is only within comparatively a brief period that horticulturists have recognized the necessity of adapting varieties to localities, to make a success in fruit-growing, and to-day there are many intelligent people who do not know that there is any material difference in oranges, and that they are not ripe and edible as soon as they take on their yellow color.

It is now well known that the whole citrus family is prone to change from differences in soil and climate, as well as from its natural tendency to "sport," when cultivated from seeds after the manner of most of our orchard fruits.

It is also said that in many parts of the West Indies and South America the whole orange tribe is found growing wild, springing up spontaneously from the seeds of the trees originally planted by the Spaniards, varying in size, form, and in every gradation, from the lime to the shaddock. Oranges are often found there equal in flavor and sweetness to those of the Azores, though of much larger size, while others in the same grove vary from these to a degree of sourness and acid bitterness sufficient to draw blood from the mouth accompanied by severe pain.

There you may see the lemon, citron, lime, shaddock and sour, sweet and bitter oranges, growing indiscriminately together in the same forest. They are round, flattened, rough, smooth, obovate, pear-shaped, thick and thin skinned, juicy, dry, some with and others without seeds, some bearing seeds at the end outside of the fruit, while others present a Navel-like protuberance at the same point with no seeds, and in passing through these groves it will be observed that some trees will contain but little fruit, while others will be loaded to excess.

I consider this tendency of the citrus fruit to sport, and its adaptation to localities, as one of the most promising aids, in the hands of intelligent horticulturists, to the gradual extension of citrus-fruit growing into regions now thought to be unfavorable to it. We have already the sour-orange stock, and another from Japan as claimants for superior endurance of low temperatures and moist subsoils, with the power to impart this quality to some extent to more valuable but much more delicate varieties, grafted upon them. The claim for the Japan varieties is, that it will endure for a brief period a temperature of near the zero of Fahrenheit. In the foothills of the Himalayas, and also in the tablelands of the province of Durango, Mexico, it is said there are varieties that are grown successfully within the limits of the snow-line, but the minimum temperature of the region is not given.

There is, therefore, much to encourage the fruit-grower in less favorable localities in a search for varieties that may possess a greater endurance of occasional low temperatures and yet retain the qualities that will commend them to the great orange-eating public.

Markets.

Fruit-growers have long since realized that they may grow fruits successfully, cheaply and in abundance, but owing to many and various causes, the financial result may be a failure, from his inability to secure a market, or, if secured, the cost of placing them absorbs the entire value of the shipment, and sometimes requires an extra assessment to pay freight charges and commissions. As with the decidu-

ous fruits, so with the citrus fruits there are many localities producing the most delicious oranges but entirely too tender for transportation to distant markets. In Fayal and Treceira it has ceased to be exported, not being able to compete with oranges sent from other countries, in the markets of England, the only markets really within reach of so delicate a fruit.

Humid atmospheres and localities along the sea-shores produce this character of fruit, while the more elevated and arid sections produce a fruit equally rich in flavor, but of a tougher texture of skin, able to bear rougher usage and longer transportation. Another point to be considered in regard to markets, especially of the United States, is its appearance in the markets in competition with deciduous fruits, and the season best adapted to its use.

From July to December the great variety of deciduous fruits crowd the markets, and hence at this time the demand for citrus fruits is usually quite limited. Again, from December to March throughout the Northern States, a prevailing temperature considerably below zero materially interferes with the transportation and also discourages the use of oranges to a great extent. It is, therefore, only from March to July when the increasing temperature, especially in malarial districts, makes this fruit so desirable that the great demand usually exceeds the supply, and the profit inures to those localities that can promptly meet it.

Much has been said as to prices and profits of citrus-fruit growing gathered from many localities. Suffice it to say, that in Italy and the eastern shores of the Mediterranean the profit is quoted at \$80 to \$150 per acre. Taking into consideration the known longevity of the tree and its wonderful capacity for producing fruit under favorable conditions, some 20,000 to 38,000 specimens from a single tree, it must be admitted that it is an exceedingly profitable branch of fruit-growing.

A seedling orchard of 80 trees per acre, in full bearing, producing an average of 3500 specimens, about 20 boxes, could be sold for 25 cents per box upon the trees, and realize to the owner some \$400 per acre, and the cost for caring for such an orchard in cultivating, irrigating, pruning, including the price of water, would not exceed \$35 per acre.

In conclusion, it must be said that while this fruit is grown in the exceedingly favorable localities named, yet, as a great commodity of commerce, the principal supply is furnished by points in the Mediterranean below the 38° of latitude. On this continent, on the Atlantic Coast, its successful culture is below the 30th parallel; while on the Pacific Coast, so far, it is below the 35th parallel; but, as I have stated in the beginning of this article, the Anglo-Saxon has put his "hand to the plow," and no one is wise enough to limit his powers in this direction except by an Arctic zone.

State Convention of Fruit-Growers.

The following well-known horticulturists of the State have been selected by the State Board of Horticulture to prepare essays to be presented at the Ninth State Convention of Fruit-Growers to be held at Santa Barbara the second week in April:

A. F. Kercheval, Los Angeles, "A Poem on the Future of Santa Barbara."
L. M. Holt, Riverside, "On the Future of Citrus Culture in California."

James Bettner, Riverside, "Railroad Transportation for Southern California Fruit-Growers."

Frank Kimball, San Diego, "Lemon Culture and Lemon Caring."

Jeanne C. Carr, Pasadena, "Horticulture in Southern California."

J. M. Asher, San Diego, "The Guava Culture in California."

Dr. O. P. Chubb, Orange, "The Future Eastern Market for California Citrus Fruits."

J. W. Salley, Pomona, "Pruning Citrus Trees."

M. Baldrige, Azusa, "How to Propagate Orange Trees."

Alexander Craw, Los Angeles, "Rose Culture and Propagating from Cuttings."

Joseph Sexton, Goleta, "Culture of the Soft-Shell Walnut."

Spencer K. Sewell, Lamanda Park, "How to Dispose of Our Citrus Fruits, and What is Required for Success."

Milton Thomas, Los Angeles, "What Varieties of Fruit Trees to Plant in Southern California."

H. C. Ford, Santa Barbara, "Ornamental Plants and Shrubs."

W. C. West, Fresno, "Fig Culture in California."

A. Scott Chapman, San Gabriel, "The Most Profitable Varieties of Citrus Fruits to Grow."

Hon. Russell J. Heath, Carpinteria, "The Hints and Profits of English Walnuts."

Mr. D. Edson Smith, Santa Ana, "Condition of Orange Orchards in the Santa Ana Valley."

Byron O. Clark, Pasadena, "On Muscat Raisins."

O. N. Caldwell, Carpinteria, "Apple Culture."

H. Goepfer, Santa Ana, "Fruit-Drying."

Dr. O. H. Conger, Pasadena, "Grafting Fruit Trees."

Professor D. W. Coquillett, Los Angeles, "Improved Methods in Chemical Fumigation."

Joel B. Parker, Orange, "Evaporated Fruits."

George W. Ford, Santa Ana, "Soft-Shell Almonds and Walnuts."

W. M. Williams, Fresno, "Shipping Fruits."

I. H. Thomas, Visalia, "Salt and Lime Remedies."

T. J. Swayne, San Diego, "On the Guava."

THE VETERINARIAN.

Ticks or Warts?

EDITORS PRESS:—Mr. D. T. Hall desires to know something as to the nature of certain "granulations" which have grown in the ear of his mare. He says that the part is very sensitive, and she will not readily allow the bridle to be put on. These peculiar growths are not often seen in the ear, but when they do exist in that part they always make the horse very unwilling to have his head handled. Although I have not seen the particular mare in question, yet I entertain very little doubt as to the nature of the "granulations," so called by this gentleman. They are warts, i. e., enlarged papillae. If they were on the nose or the face it would be much easier to cure them. Strong acetic acid or glacial acetic acid is the best medicament, and it should be applied by means of a feather or camel's-hair brush. Great care must be taken that the acid does not run down into the internal ear, else the poor animal would suffer much pain and the remedy would be worse than the disease.

I suggest that a "twitch" is placed upon her lip, as without this she will not allow the acid to be applied. Do not use lunar caustic, as it may break and fall into the internal ear.

R. J. DAWSON, V. S.

Willard's Brick Stable, San Diego.

ASSOCIATION OF VETERINARIANS.—A meeting of veterinary surgeons of this city was held Wednesday afternoon, at which the California State Veterinary Medical Association was organized. According to the report in the *Bulletin*, Dr. Thomas Bowhill was elected president; Dr. T. M. May of Petaluma, vice-president; and Dr. J. G. Fitzgerald, secretary and treasurer. Those named, together with Dr. C. B. Orvis of Stockton, form the executive committee. The objects of the association were stated to be "to promote the science of veterinary medicine and surgery; to propagate a fraternal feeling among its members; to protect the rights and privileges of practitioners, and to elevate the standard of the veterinary profession generally by scientific intercourse." Drs. Bowhill, May and Fitzgerald were elected a Board of Examiners to pass on the qualification of applicants for membership and recognition as veterinarians. The secretary was directed to correspond with all veterinarians whose names can be secured and endeavor to bring them into active sympathy with the new association. An attempt will be made by the society to secure indorsement and material aid from the next Legislature, and it is within the scope of the organization to establish a veterinary college and stations at which proper attention may be paid to manifestations of disease in cattle and horses.

THE GARDEN.

Ground Cherries and Chervil.

EDITORS PRESS:—Your subscriber at Blocksburg can grow alkekengi or ground cherry as easy and in the same manner as tomatoes. A rich, damp, warm soil, or a dry, rich soil, if irrigated occasionally, will give a good crop. The common yellow is the best, and after once planting, there will always be volunteer plants about the place. Of course, it is easy to get rid of them by simply hoeing up the plants one season, allowing no berries to ripen. They are so good and so easily grown, I wonder at their rarity. I think not one land-owner in a thousand knows what they are. Stewed into a sauce, or preserved, they are about equal to strawberries, and are very good fresh from the bush when well ripened.

If this subscriber has not the right kind of seed, I will be glad to give him a few upon receipt of postal card containing his address.

Chervil.

While my hand is at the writing business, I may as well ask what you or your readers know of tuberous rooted chervil—*Chorophyllum bulbosum*. Is there any growing in this State so that fresh seed can be had? I have tried to buy it at our seed stores and failed, but have had it by mail several times from Eastern seedmen, but could not succeed in making it germinate. Have never eaten any, but the books describe it as being about equal to roasted chestnuts. If such should be the decision of my mind after having it on my palate, potatoes would find a poorer market thereafter. I'm not a very great eater, only taking two meals a day, and like but few dishes at a meal, but as the year rolls around it becomes very desirable and pleasant to have the greatest variety of eatables possible to obtain.

Rutherford, Cal.

R. E. WOOD.

[This is very interesting. Now will not other readers take up garden topics? It is just the time of the year for comparing notes and experiences.—EDS. PRESS.]

PATRONS OF HUSBANDRY

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Debris Question.

In view of the essays made, in ways more or less roundabout, to resuscitate the little giant and start the slickens factories again, and considering how many new settlers have come into the State, since the former battle for farmers' rights was won, who are unacquainted with the matters at issue, the following leader from last week's *Sutter County Farmer* seems altogether timely. Brother Ohleyer says:

At the first glance it would seem rather late in the day to undertake the explanation of the debris question, and so it is. But when a measure is before the Congress of the United States looking to the examination of this question with a view to adjust the difficulty between the farmer and the miner, we may well be excused for alluding to the threadbare subject again. And, strange as it may seem, the subject is but little understood outside of those having to battle with it; therefore we conceive it our duty to keep the question before the public in its true light and to correct erroneous impressions which are sought to be fastened on the public mind.

The debris question can only be a question where law and order do not prevail, and where the usages of organized society are set at naught. When all these are observed the question disappears like the fog before a noon-day sun. That the question has gained such a hold in our day, after a slumber of 20 centuries, is a sad reflection upon our boasted civilization, and we stand confronted with the deliberate attempt to undo justice and right and to turn back the wheels of progress, and to once more institute might for right.

To throw our refuse material on to our neighbors' premises without their consent, or into public streams, or on to public grounds, to the injury of the public, is the debris question pure and simple. That this may not be done among our fellow-citizens in the mining regions is most carefully guarded by law of their own making, and as between them it is most rigidly enforced (as innumerable decrees in our law books amply attest). Elsewhere the principle is as sacredly observed as is the right to life, liberty and the pursuit of happiness, and none knowingly dare infringe upon these universally recognized principles.

It is plain, then, to the most obtuse understanding that the "debris question," as between individuals, and as between them and the public, is fully and completely adjusted.

As between the farmers and the hydraulic miners the question stands adjusted in accordance with law and equity by consent of all parties. We say consent advisedly, because after the great Sawyer decision, in the case of Edwards Woodruff vs. The North Bloomfield, the defendants appealed to the U. S. Supreme Court, and without permitting it to come to trial they paid the costs and withdrew the suit, thereby acknowledging the legality and justice of the decision. Thus, as before remarked, the legal issue stands adjusted by the judgment of the Court of last resort and the highest legal power in the Republic. Of course every thinking mind knows now, and knew from the beginning, that no other solution was possible and retain our form of civilization. Imagine for one moment the result to the world of a decision or adjustment on a contrary basis. Not a being in the whole universe could afford to accept it, and least of all could our mountain fellow-citizens abide such an adjustment. For, just as certain as the established adjustment is reversed, the mighty corporations will sluice down to bedrock, not only the mountains but the inhabitants thereof, laying waste mountain, valley, rivers, bays, harbors and cities. Who, in this glorious State, a State so pregnant with the grandest possibilities in the near future, will or dare demand the upheaval of the well-settled adjustment?

THE GRANGE, says *Farm and Home*, is just what the members make it. Some farmers have the idea that if they organize a Grange, the meetings will be made interesting and the organization will be made a power by some mysterious strength incorporated in it. This is all bosh. The Order of Patrons of Husbandry has a splendid constitution and by-laws, and a compact, business-like organized basis, the very element of strength and perpetuity. But all these essentials, while they are the foundation of success, are of no account unless the members take hold in active earnest and make the meetings interesting and instructive, thus keeping up the interest in the Order. And the more thoroughly this is done, the more direct will be the educational, social and financial benefits of the Grange. But let nobody join the Grange, or a farmers' club, or any other organization, unless he is ready to do his share to make it a success. Every member has an individual responsibility that he should feel and do all that lies in his power toward making the organization a success in every way.

SISTER LANDER of Martinez, though still weak, is convalescent and has ridden out. She speaks gratefully of the thoughtful kindness of Grange friends during her illness.

Against Biggs' Bill.

Since our last issue went to press, news has come from Washington that Representative Biggs' bill, providing for a commission of Government engineers to reopen the hydraulic mining question in California, has been favorably reported to the House. Meanwhile the Anti-Debris Association has not been idle, but has drawn up and put in circulation the following memorial to Congress, which protest has been signed by the supervisors of Yuba and Sutter counties, President Stone and others, and will doubtless receive the signatures of the farmers and business men of the valley generally:

The undersigned, believing that such investigation is uncalled for, beg leave to submit a few reasons why this bill should not become law.

First—The question has already been investigated by United States and State authorities, reports of which are on file in the appropriate departments at Washington and Sacramento, and in all its bearings been passed upon by the United States Circuit Court of California in the celebrated Sawyer decision, said decision having been appealed from to the United States Supreme Court, and by the appellant withdrawn previous to adjudication. By that court the decision of the lower court has been accepted as a final settlement of the issue.

Second—A re-examination can add nothing to the information now on file, but may renew and prolong an agitation that will injure both sections and that can only end in the complete affirmation of the adjudication as made by both Federal and State Courts; also the opening of this question, as proposed, creates a feeling of unrest to the people of the great Sacramento valley, who have spent hundreds of thousands of dollars to preserve their homes, the valleys, navigable river channels and incidentally the bay and harbor of San Francisco.

Third—Hydraulic mining being a private industry prosecuted for private gain, in which the Government has no interest whatever, the appropriation of funds for the purpose proposed in the bill is inconsistent with governmental policy.

Fourth—For the truth of all these assertions we most respectfully refer you to the documents on file at Washington relating to the debris question, and also to the uniform decisions in numerous cases tried by all the courts, both Federal and State, against the use of river channels as places of deposit for mining tailings; and we also beg to refer you to the last River and Harbor Act relating to this question and to the harbor of New York, approved August 5, 1886, and found on pages 4 and 23, respectively.

Debts of Subsidized Railways.

We have received a letter from John Marshall of Sebastopol regarding the report of the commission on the Pacific railroads—that they have found fraud—and the majority's recommendation that the corporations be allowed 50 years in which to pay their debt. "In other words," he says, "they recommend that our respectable Uncle Sam be put in this dirty pen along with the other pigs."

"No! No terms with fraud. . . . Collect all dues and damages and then let the parties alone. I will tell you how this may be done. The Government can annul its second mortgage and change to an open account with the railroad, then sue and collect all that may be due. There is plenty of property there, and the stockholders will have plenty left to live on."

GRANGERS' INSURANCE.—There are two Patrons' fire insurance companies in Maine, in which the cost of insurance has been less than one-half the expense in stock companies. The Oxford county company has about 800 policies outstanding to the amount of \$810,000; losses last year, \$283.06; salaries and expenses, \$78; cash on hand, \$665; C. H. George, South Paris, secretary. The Patrons of Androscoggin have 1200 policies to the amount of \$250,000, with \$50,000 in premium notes, \$1400 in cash, \$3300 losses last year, and only \$175 for officers' salaries and all expenses; the secretary is F. A. Allen of East Auburn.

BENNETT VALLEY GRANGE is hearty and thriving. W. M. Whitaker writes to the *Patron* that they conferred the fourth degree on three brothers and two sisters last week, initiated another sister in the first and second degrees, and had more applications for membership, not to mention a sumptuous harvest-feast and subsequent speeches and music in open meeting. "A more enjoyable time was never spent in Bennett Valley Grange hall."

THE *Patron* this week republishes the National Grange's "Declaration of Purposes," together with the National Lecturer's instructions how to organize a Grange and reorganize one that has become dormant. We do not know where else so much practical information about the Order can be found upon a single page. Copies may be had of the Secretary of the State Grange, 220 Market street, S. F.

TARIFF DISCUSSIONS are still prevalent in the Granges. Besides Temescal, San Jose and Sacramento have lately been engaging in them, and Stockton proposes to wrestle with the problem next Saturday, when all interested Patrons are cordially invited to take part.

SACRAMENTO POMONA GRANGE, at a special meeting on the 9th instant, adopted the plan reported by a committee for a Patrons of Husbandry Mutual Fire Insurance Company. Another committee on constitution and by-laws is to report later.

Death of Joel Russell.

There is a strange and impressive dignity about death that compels attention, come when it may or under whatever circumstances. Its presence banishes all that is light and frivolous, and bids us think upon the change to which we all hasten. It is always a surprise and we are never quite ready to give it a welcome. We know that it is inevitable, that it is as common as birth, and is no respecter of persons. Still, though it come in old age, in life's late afternoon, or at the close of a long and wasting sickness, and we have had ample time to be prepared and reconciled to the event, when the whisper goes round the room that some one we loved or honored had gone, we start as out of a horrid dream, and in the fresh torrent of our grief refuse to be comforted.

These were some of the thoughts that rushed through our mind when picking up a paper the other morning we found our old friend, Judge Joel Russell, was no more. Only a few days before we had the pleasure of lunching with him in this city and he boasted of feeling unusually well. The slight paralytic shock he received about two years ago had greatly abated and he seemed the picture of health and talked with his usual vivacity about the fair promise of an abundant year. Last Sunday he was out riding and seemed to enjoy keenly the beauty of the day. In the evening, seated in his room talking pleasantly with a few friends, he suddenly threw up his hands and exclaimed, "Something is the matter with my head," and almost instantly passed away. Born in Waterford, Maine, in 1822, he was about 66 years of age.

He has always been recognized as a prominent and leading citizen, and with credit served the people of Alameda county one term as County Judge, associated with the late Judge Addison M. Crane. Though long an ardent supporter of the Republican party, his strong convictions in the direction of high moral reforms led him to espouse the cause of prohibition, and of late years he has been one of the recognized leaders of that movement in this State. In 1886 he was the Prohibition candidate for Governor. He was also an influential member of the Patrons of Husbandry, and had held some important positions in that organization.

Judge Russell is one of the pioneers. He came to this State in 1850, took up his residence at Stockton, but two years later purchased a ranch in Alameda county near Haywards, and engaged in the fruit industry, and was successful in amassing quite a handsome fortune. And thus year after year we witness the departure of that hardy and enterprising generation that laid the foundation of the greatness and prosperity of this State. Weary and exhausted by age or disease, one by one, they drop by the wayside, and a new generation will soon fill the places they occupied and carry on the work they commenced.

Judge Russell married Miss C. M. Barrett in 1856, who, with a daughter and two sons, survives him. We tender them our profound sympathy in this great affliction, and commend them to that infinite Love and Care that doeth all things well. A good neighbor, sterling citizen, a man of irreproachable domestic character has passed from our midst, and the vacancy created by his death in social and business circles will not be easy to fill.

INDORSES THE RESOLUTIONS.—W. H. Mullen of Big Bend writes: "I heartily indorse the resolutions of the Santa Rosa Grange in regard to taxing liquor and tobacco. I do not see why the Granges and the Good Templars and the prohibitionists do not join issues on that very important question, and we would soon put an end to the abominable traffic."

THE Anti-Saloon Republican National Committee have issued a call for a National Conference to be held in New York City, April 18th and 19th, "to assure and signalize the complete withdrawal of the National Republican party from complicity with the saloon infamy and to emphasize the positive antagonism thereto."

TEMESCAL GRANGE, at its regular meeting last Saturday afternoon, had the pleasure of welcoming Bros. Webster from Creston and Field of Maine. Washington's birthday was commemorated a little in advance, and there was some discussion on the tariff.

DISTRICT LECTURERS.—Worthy Master Overhiser has done wisely and well in appointing those veteran and efficient Patrons, Bros. G. P. Loucks and S. T. Coulter, Lecturers for Contra Costa and Sonoma respectively.

MAGNOLIA GRANGE, after two postponements on account of bad weather, got her officers installed last Saturday, and feels the better prepared to go on harmoniously working for the Good of the Order.

OREGON GRANGERS make good showing nowadays in their letters to the *Patron* from week to week.

ENTERPRISE GRANGE is increasing in numbers and preparing for a grand reunion in April.

THE trustees of San Rafael have adopted an ordinance to prevent the selling or giving tobacco to persons under 16 years of age. The fine may be \$5 or \$50 for each offense.

AGRICULTURAL NOTES.

CALIFORNIA.

Fresno.

VIGILANT AND PROMPT.—*Fresno Republican*, Feb. 17: Here of late a number of boxes of oranges have been shipped to this city, and in every instance the fruit has been found to be covered with the red scale. Yesterday the fishman, best known by his nickname of "All Alive," was found to be peddling red-scale oranges, and a number of gentlemen clubbed together, bought his load of fruit and burned it. "All Alive" said that he was ignorant of the fact of the fruit being infected, and also that hereafter he would have the fruit he received inspected before attempting to sell it. . . . In this connection it may be mentioned that the Board of Supervisors yesterday made an order appointing S. H. Cole inspector of fruit for this city. Mr. Cole will enter upon his duties at once, and will see to it that no fruit infected with the red scale or any other pest is sold here. The supervisors were in doubt as to their authority to make such an appointment, but realized the necessity of protecting our orchards against infection, and hence very wisely made the appointment and will investigate later. If they have no right, then they will see that the proper authority appoints some one, but in the meantime Mr. Cole will bar the door against the bugs.

Inyo.

TWIN-BEARING HEREDITARY.—*Inyo Independent*, Feb. 18: Three or four years ago Mr. J. B. Stewart of Big Pine bought a bull that was a twin. The first heifer from the bull bore twins, and recently one of these twins has given birth to twins. All the progeny of the bull are good, thrifty animals.

Lake.

SCOTTS VALLEY DOINGS.—*Cor. Avalanche*, Feb. 10: The farmers of Scotts valley have been improving the pleasant sunshiny days of the past week. On all sides can be heard the woodman's ax, while others are preparing their land for grain. Land has become too valuable to lie idle, and in a few years the large oak forests will all be cut down. [We hope not "all."—EDS. PRESS.] Several are putting in grain on their farms. A number are setting out fruit trees. G. Scudamore will add several hundred trees to his already famous orchard (He is the possessor of two diplomas from the N. O. Exposition). Porter Clendenin will set out six acres of Bartlett pears. Mr. C. sold his entire crop of Bartlett pears in S. F. the past season for four cents per pound. The trees, though young, bore 600 pounds to the tree, bringing him \$24 for each tree. Ed Vickroy will plant several hundred trees on his mountain land, mostly peaches. Charlie Griner will plant four acres of French prunes. Others will set out fruit in smaller quantities. The proprietors of the two nurseries here will endeavor to supply all demands for trees the coming season. People are beginning to appreciate home-grown trees.

Los Angeles.

EDITORS PRESS:—Seeding is progressing rapidly, and will continue all through this month and perhaps extend into March. Grain generally is looking well and has grown fast since the cold abated. The new growth of alfalfa is from 12 to 20 inches by actual measurement. Hay has an upward tendency, retailing in Pomona at \$20 per ton. The plowed land is reaching far up the hillsides. Every available horse is being pressed into service, and yet there will be land untillied. We look for a greater fall in hay this year than there has been in town lots, which, by the way, are a little below par just now. . . . I am informed that there is a joint-stock company forming in this valley to buy a steam well-borer to search for artesian water. This, I think, is the right way to advertise a country, by letting the passer-by see the thrift and energy of the people. Quite a shower fell last night, and it is still raining, with prospects for more.—D. J. O., *Spadra*, Feb. 16th.

A TRULY FROSTLESS BELT.—The Santa Monica Outlook lately thanked George Killen, who lives at the base of the mountains, about six miles northeast of Santa Monica and a mile north of the Sunset tract, for a present that would be a great novelty at this time of year to people living outside of a few favored spots in Southern California. This present consisted of a basket of large, ripe tomatoes just plucked from the vines. The tomato, as many well know, is a plant that succumbs to the slightest touch of frost. It is therefore one of the very best tests of superior climatic conditions. In most localities, even in Los Angeles county, the tomato vines were killed by the late unprecedented "cold snap" that visited Southern California. It will therefore be seen that the foothills in this locality lead all other places as being, *per se*, the frostless belt.

BUSY TIMES AT SAN FERNANDO.—*Cor. L. A. Times*, Feb. 18: While the weather has not been favorable all the week for pushing outdoor work, a good deal has been accomplished in the way of improving. The Wallace brothers have been busy laying off walks and driveways, and putting the grounds in order around the hotel, preparatory to setting out flowers and ornamental trees. . . . The teams have about finished plowing for barley on the Porter ranch, and will begin on Monday to break ground for the 480 acres to be planted in oranges. In ad-

dition to this large body to be set out this year, 34 parties have taken 330 acres under contract to set out at least one-half of it in citrus fruits before the 1st of May, and many of them will put out all they have purchased. Among the buyers is the Barnard & Benedict Crystallizing Co., who will at once set out their land in white Arabian figs, with the ultimate purpose of establishing a branch of their business here. . . . The newly planted grain-fields and volunteer grasses have responded to the rain of Thursday and Friday, and on every hand we see the promise of a bounteous harvest and prosperous season.

Modoc.

FARMERS PLOWING.—Adin *Argus*, Feb. 9: If man could arrange the weather to his own desire, a more pleasant winter than this could not be had. The first day of February found plowing being done (not by many, of course, but by two or three small farmers), and this week there are no small number of the tillers of the soil turning down the face of mother earth. Our lower country neighbors may think us rather late, but it is seldom the first of a winter month brings to us warm and dry weather and the initiatory steps to the season's farming.

Napa.

WINTER PEARS.—Napa *Register*, Feb. 17: Geo. Wildberger this morning left at this office a dozen good-sized pears that possess excellent keeping qualities. Said he: "I always have pears the year round. This variety, the name of which I do not know, will keep until the earlier varieties ripen." We found them to be of fine grain, excellent flavor, juicy and altogether a pear that must prove profitable for the grower.

Nevada.

A FRUIT-GROWING MEDICO.—Grass Valley *Tidings*, Feb. 18: The planting of between 750 and 800 fruit trees was completed at Dr. W. C. Jones' farm at Newtown yesterday. There are about 2400 trees in his orchard, comprising Bartlett pear, apple, peach, prune and others. Last year 6000 vines were set out, about one-half of which were placed in low land. As the low-land vines have not done well, and for the further reason that a new ditch makes alfalfa a more profitable crop in this particular spot, the vines have been plowed up and will be transplanted. All this orchard and vineyard work has been done in two years, and in two years more the doctor will have a profitable piece of property that will annually return increasing revenue.

San Luis Obispo.

NATIVE VINE.—San Miguel *Messenger*: H. M. Maxwell of Indian valley brought to this office this week a sample of the *vitis Californica*, grown from seed planted last April. The vine has made a growth that is almost marvelous, the root having gone to a depth of over 2½ feet and is half an inch in diameter. This native grapevine is said to be the best stock on which to graft the less hardy grapes, and from the sample it would be supposed to have remarkable vigor and vitality. Mr. Maxwell is preparing to plant a vineyard of this stock, and will graft to choice varieties.

San Joaquin.

ATLANTA MINUTES.—Cor. *Independent*, Feb. 14: Seeding time is now past and the farmers are plowing their summer-fallow ground. The prospects for a large yield are very good. . . . The hog-cholera has done quite a destructive work among the swine. Luckily there were some hogs that the disease did not reach. In consequence of the loss, pork is now selling at a high figure. . . . An unusually large number of coyotes have been seen prowling about this section this season—as many as five at one time.

Santa Barbara.

OLIVES IN THE SANTA YNEZ.—Santa Barbara *Independent*, Feb. 18: Alden M. Boyd has shown us some extremely handsome specimens of olives grown on his place in the Santa Ynez valley, picked since the cold weather, which many feared might injure olive trees unused to such a comparatively low temperature. But Mr. Boyd assures us that all the trees in the Santa Ynez are uninjured. Even the fresh shoots of the trees are as healthy as ever. At Mayor Coffin's office may be seen specimens of the olives lately picked, which are uncommonly large.

MONSTER MUSHROOM.—E. C. Tallant brought in from the Hope ranch yesterday a magnificent mushroom, measuring 8 inches in diameter and 25 inches in circumference. It occupied a whole frying-pan and made a fine dish.

Santa Clara.

FIFTH DISTRICT AGRICULTURAL ASSOCIATION.—San Jose *Herald*, Feb. 20: A meeting of the directors of the San Mateo and Santa Clara District Association No. 5 was held at the office of Montgomery & Rea Saturday afternoon, at which there were present J. W. Rosa, Ed Younger, Sam Rucker, H. H. Main, Ed Topman and G. H. Bragg. Mr. Bragg was elected secretary pro tem, and was instructed to cast the ballot for Ed Topman for president and DeWitt Tisdale for treasurer for the ensuing year. Mr. Younger submitted a statement showing that the society was \$1800 in debt. The question of consolidation with the Santa Clara Valley Society was then taken up. The proposition made by Mr. Younger was that the Santa Clara County Society pay the District Association this sum this year and take the State appropriation of \$1800. In case agreement of this kind was made, the Santa Clara Valley Society would have the entire field to

itself and could conduct the races and agricultural fair without opposition. Three of the directors present are also members of the other society. As they are aware that the debt was incurred by improvements at Agricultural park, they expressed themselves as willing to assume the liability, but would not agree to pay it all in one year. They hold that under the law the society cannot go in debt, and suggested that if they be allowed a clear field and to take the State appropriation they would pay out of this sum \$900 this year and \$900 next year. There was but little difference between the societies as to the plan of settlement, and it was thought that there would be no difficulty in adjusting the matter.

Santa Cruz.

FAIR ASSOCIATION.—Pajaronian, Feb. 16: The directors of the Pajaro Valley Fair Association met Saturday at the town-hall, Mrs. A. P. Roache presiding. The report of Treasurer Uren was read and accepted. It showed the total receipts of the fair to have been \$1666.25, and the disbursements \$1058.87, balance on hand \$607.38. The treasurer was instructed to turn over to the secretary all bills and vouchers of the late fair association. The resignation of Mrs. M. E. Tuttle, as a director of the fair association, was read and accepted and Mrs. Tuttle was tendered a vote of thanks for her faithful and valuable services while a member of the board. Mrs. Libbey resigned the secretaryship of the board. Julius Lee was elected a life member of the association as a recognition of his valuable and gratuitous legal services for the board. The directors of the former Pajaro Valley Fair Association were elected life members. . . . Adjourned to March 10th.

Solano.

GRAIN IN THE MONTEZUMAS.—Denver *Republican*, Feb. 17: The area seeded is the largest for many years, being about three-fifths of the agricultural land of Eastern Solano, and from present indications the yield will be as abundant as the area under crop is great in extent. During the prevalence of the extreme cold weather several weeks ago, it was feared that wheat which had been planted shortly previous would be injured and its vitality destroyed; but the alarm proved to have been false, as the grain-fields, as far as the eye can reach, are covered with a healthy, luxuriant growth of young grain. The cut-worm, which has proved a formidable ground pest in this section for many years, either froze to death or has taken refuge deeper in the ground, for his work of destruction to the young grain is not as extensive this season as heretofore, and the black bare patches which invariably marred the beauty of almost every wheat-field are rarely to be seen this year.

FLOCKS FARED HARDLY.—While grain-growers are in the best of spirits over the prospects, stock-raisers have less reason to rejoice. Cattle are poor and many have died. Sheep-raisers are unfortunate this season because of the scarcity of feed and the extreme cold weather which combined to work sad havoc among the sheep-herders in Denver township. W. D. Merrill, who owns a large flock, informed us a short time ago that 50 per cent of his lambs and many full-grown sheep died during the January storm. Zack Bethel, whose flock consists of several thousand selected Shropshires, also lost a large number of lambs, notwithstanding the care given them by three men whom he had employed. Dead sheep and lambs are to be seen in almost every field in which sheep are kept; and it may be the carcasses that attract to the sheep ranges valuable dogs and worthless curs from far and near, causing the sheep-raiser uneasiness of mind for the safety of his flocks. A war of extermination is periodically waged on these perambulating canines by means of strychnine with which dead sheepmeat strewn over the ranges is liberally seasoned.

Sutter.

SEEDLINGS FROM FRANCE.—Sutter *Farmer*: James T. Bogue, one of the Sutter county nurserymen whose depot is in Marysville, has lately received from Southern France over 700,000 seedlings of fine quality and variety which he will plant for budding and grafting purposes in his large nursery a few miles below Yuba City. Mr. Bogue's stock is immense, and he says he has never seen anything like the demand for trees this season. He intends to plant in this county this spring over a million stocks of various varieties of trees and 100,000 grapevine cuttings.

Tulare.

LEVELING HOG-WALLOWS.—Visalia *Times*: William Mehtrens of Lewis Creek has a hog-wallow leveler of his own invention at work on his ranch. The machine consists of two scantlings 24 feet in length, bolted together with 10-foot scantling on which are fastened iron plates with the lower edge sharpened. The ground to be leveled is first plowed, and then this long sled is dragged over it, which pulls the loose dirt on the knolls down into the hollows. Mr. Mehtrens had quite a number of acres over which it was difficult to run a header on account of the hog-wallows, and he devised this cheap method of leveling it. Twelve to 16 head of horses are used in dragging the leveler, which accomplishes the work designed in a satisfactory manner, and on which there is no patent.

SHIPPING FIREWOOD SOUTHWARD.—Several carloads of wood have been shipped from this city to Los Angeles, and W. W. Stousland goes thither to perfect arrangements for forwarding a large quantity. It is quoted at \$18

per cord in Los Angeles, while coal is scarce and selling at from \$20 to \$25 per ton. The present demand for wood is likely to denude our forests of oak trees within a very few years.

Yolo.

PROSPECTS ABOUT DAVISVILLE.—Woodland *Democrat*, Feb. 16: Farming is progressing slowly on account of the weather, and each day diminishes the prospect of heavy yield from winter-sown wheat. Barley and early-sown wheat are looking well, however, and give promise of a heavy crop. The January frosts did, some damage to the grain on the adobe soils, but from this it may yet recover, and with favorable weather hereafter there are good prospects throughout our section. Treat & Lennox are planting a nursery of 300,000 trees, comprising almonds, prunes and peaches.

SUB IRRIGATION.—Dixon *Tribune*, Feb. 18: Irrigation will shortly begin on the Briggs estate and continue until the ground is thoroughly saturated. The system adopted in this vineyard is what is known as the sub-irrigation system, invented by a resident of Los Angeles. Over 200 miles of pipe are employed in conveying the water to the various sections. These pipes are of concrete and range in size from the mains two feet in diameter to the feeders of two inches.

ALFALFA CROPS.—Woodland *Cor.* Winters *Express*, Feb. 16: Four cuttings of a 15 acre tract of alfalfa meadow, belonging to R. B. Blowers, yielded 13 tons of hay to the acre, which was sold at \$9 per ton in the field. The fifth cutting was thrashed and yielded about 400 pounds to the acre. Mr. Blowers feels confident that the fifth crop would have yielded two and one-half tons of hay per acre.

ARIZONA.

PULSE AND CABBAGES.—Florence *Enterprise*, Feb. 11: H. G. Ballou has a field of grown cabbages that withstood the unusually cold weather of the past winter without showing the least damage. The heads are now large and solid, and his experience demonstrates the capability of this valley to grow vegetables during the entire winter months. He has also green peas now ready for use that were grown during the winter. The people of this valley have hardly begun to learn the possibilities of the soil and climate.

NEVADA.

NEVADA CLIPS PREFERRED.—Elko *Free Press*, Feb. 11: Nevada wool commands better prices than any other clips. Justin, Bateman & Co., wool commission merchants of Philadelphia, in their circular under date of January 24th, give the following facts in regard to Nevada wools: "Notwithstanding the lack of demand for other Territorial wools, the fine clips of Nevada, which are particularly suited to the present wants of manufacturers in this market, owing to their softness of finish, are inquired for to-day and command relatively better prices than other Territorial wools. The market has been cleared of these qualities, and much more could be placed immediately at full quotations."

A GARDEN SPOT.—Virginia City *Enterprise*, Feb. 17: Mason valley now presents a verdant and beautiful appearance. Dr. Kirby, who visited the valley two or three days ago in answer to a professional call, expresses himself as astonished and delighted with what he saw. The only snow visible was on the Sierras, 40 miles distant. The ground in the valley is dry, and farmers are engaged in plowing. The alfalfa fields are showing up finely, green and beautiful. All the people of the valley are flourishing and in high spirits, making money, and at the same time improving their lands and surroundings, as regards buildings, orchards and the like. They claim to have the garden spot of Nevada.

TENTS FOR HARVEST HELP.—Some one has been suggesting to the Vacaville *Reporter* that tents could be secured cheaply for the use of transient help during the harvest, and the suggestion appears to be a good one, as each crew occupying a tent in the orchard, which would easily accommodate from four to six persons, would not object to paying a dollar or so per week for its use, and in a few weeks the amount paid out for the tent would be refunded, and at the close of the season it could be stowed away for future use, and not remain cumbering the ground as a building would. This is worth considering, as a number of tents could be grouped together, and the occupants could form "messes" in army style, selecting some one of their number as cook, and so everything could be run smoothly.

GREAT RABBIT DRIVE IN PROSPECT.—They have been making elaborate preparations in Fresno to have a grand rabbit-drive next Sunday, February 26th, west of Selma and south of the colonies. Meetings have been held and committees appointed; excursions are planned from north and south; a barbecue at the close is probable, and altogether the managers are endeavoring to arrange a sweeping slaughter which shall beat even Bakersfield's record.

THE Annual Stallion Exhibition at Livermore is to be held Saturday, March 10th. Entries will be made from Alameda, San Joaquin and Contra Costa counties, and the show is expected to surpass all its foregoers.

What a Traveler Thinks of Modest

EDITORS PRESS:—Some time ago I partly agreed to give the readers of the *RURAL* a few of my individual opinions about the little city of Modesto, the county seat of Stanislaus county.

This beautiful town is situated on the northern bank of the Tuolumne river, and is bisected by the S. P. R. R., which cuts the city into almost equal portions, although at present most of the private residences and nearly all the business houses are on the northeastern side of the railroad.

The city is laid out on a generous plan; wide streets and large blocks, with cross alleys, making it a very convenient town to get around in. It can boast quite a large number of fine business blocks, several banks, some very imposing public buildings, as the court-house, public school, etc., and in the line of elegant private residences Modesto competes with any city of her size in the State. Business is dull here just now, but if the prospect for a large wheat crop continues as favorable as at present, the time is near when Modesto will "boom" again as she did in 1880.

Speaking of dull times reminds me of what Gov. St. John said in one of his stirring speeches which I had the pleasure of listening to in this place a few weeks ago. Referring to the old stock argument of the liquor men, that if you stop saloons you injure the business of the towns, the Governor said he had been told several times since coming here that, "in spite of their 30-odd saloons" business was a little dull at present, and he advised them to apply their own logic and double the number of saloons, and, as a matter of course, the business would be doubled immediately. "Don't you see?" My private opinion publicly expressed is that what Modesto and the surrounding country needs worst or best of all is more water and less whisky.

If the Supreme Court sustains the legality of the Wright Irrigation bill, the outlook for an abundant supply of water is very bright; but the prospects for the curtailment of the sale of the stronger liquid are not very flattering, although the temperance element is up and doing, and I earnestly hope they may succeed in the near future in driving every saloon far beyond the limits of their beautiful city.

But as I did not start out with the intention of writing a temperance essay, I will close for the present, and take up the line of march for Merced county, from which you will probably hear from me again—provided that some one or more of your readers don't get "riled" and choke me for this. W. W.

THE BOTAN PLUM IN PLACER.—C. M. Silva & Son, the Newcastle and Lincoln nurserymen, write us, under date of Feb. 18th, as follows: We have fruited the Botan plum (described and illustrated in your issue of this date) for several years. Your cut is a good representation of our Botan; color, red; shape, oblong. It is the earliest to ripen of any of the Japanese plums, and like them all is remarkable for firmness and keeping qualities. Its desirable color, firmness, and early ripening will undoubtedly make it a valuable fruit for Eastern shipment. The tree is a much more vigorous grower with us than is the Kelsey; healthy and upright. It comes early into bearing, one-year-old trees in the nursery rows being often loaded with fruit. It is well worthy of extended trial.

GRAPE GROWERS' MEETING.—E. H. Rixford, secretary, reminds us of the approaching annual meeting of the Grape-Growers' and Wine-Makers' Association of California, which will be held at Pioneer hall, Fourth street, near Market, San Francisco, on the 6th day of March, 1888, commencing at 11 o'clock A. M., when the annual election will take place. The afternoon and evening will be devoted to discussion. During the remainder of the week the convention under the auspices of the Viticultural Commission will be held at the same place, to which members of this association are invited to send exhibits.

IN BEHALF OF HOME FRUIT GROWERS.—A dispatch from New York, 21st, states that members of the N. Y. Mercantile Exchange and others engaged in the fruit trade have petitioned Congress to protect the fruit-growers of California, Florida and other fruit-producing States, by retaining the duties now imposed on foreign fruits; also, to repeal the law relating to damage allowance on oranges, lemons, dried fruits and nuts of all kinds.

HERE, INVENTOR!—Henry Mohr, a successful barley-grower of Mt. Eden, lately remarked to the *Haywards Journal* that something which has long been needed in the invention line, and would be a boon to farmers, is some device that would separate the wild oats from the Chevalier. It is true we have succeeded in having pretty clean grain by cleaning our land, but still the wild oats will show themselves as the grain ripens.

AN OUTLET FOR OWEN'S VALLEY.—The Carson & Colorado railroad will probably be soon extended from Keeler, Inyo county—its terminus at present—to connect with the S. P. R. at Mojave. This will be of inestimable advantage to Owen's valley and render its rich land far more desirable for settlement.



A Plea.

Columbia, large-hearted and tender,
Too long for the good of your kin
You have shared your home's comfort and splendor
With all who have asked to come in.
The smile of your true eyes has lighted
The way to your wide-open door;
You have held out full hands and invited
The beggar to take from your store.

Your overrun proud sister nations,
Whose offspring you help them to keep,
Are sending their poorest relations—
Their unruly, their vicious black sheep.
Unwashed and unlettered you take them,
And lo! we are pushed from their knee;
We are governed by laws as they make them,
We are slaves in the land of the free.

Columbia, you know the devotion
Of those who have sprung from your soil;
Shall aliens born over the ocean
Dispute us the fruits of our toil?
Most noble and gracious of mothers,
Your children rise up and demand
That you bring us no more foster-brothers
To breed discontent in the land.

Be prudent before you are zealous—
Not generous only, but just;
Our hearts are grown wrathful and jealous
Toward those who have outraged your trust.
They jostle and crowd in our places,
They sneer at the comforts you gave;
We say, shut the door in their faces
Until they have learned to behave!

In hearts that are greedy and hateful,
They harbor ill-will and deceit;
They ask for more favors, ungrateful
For those you have poured at their feet.
Rise up in your grandeur, and straightway
Bar out the bold, clamoring mass;
Let sentinels stand at your gateway,
To see who is worthy to pass.

Give first to your own faithful toilers
The freedom our birthright should claim,
And take from these ruthless despoilers
The power which they use to our shame.
Columbia, too long you have dallied
With foes whom you feed from your store;
It is time that your wardens were rallied
And stationed outside the locked door.

—Ella Wheeler Wilcox.

Joaquin Miller in the South.

EDITORS PRESS:—Jay Gould has no interest
or influence whatever in all that new network
of railroads which is now being woven up and
down the once arid regions of our Republic
known as the Far Southwest. Was he pre-
vented from extending his lines in that direc-
tion because before the discovery of the arte-
sian well he could find no water there with
which to water his stock?

The road from San Bernardino is a bold and
curious work. Its bed is as rolling and un-
dulating as the stormiest sea. The scenery
is rocky, ragged and full of fine surprises.
Nothing can be imagined finer than the wide
reach of orange lands, with little towns in
the midst of laden groves, away down in the val-
ley under us as we climbed up about the fertile
hills that hung above Riverside. New towns
all along here; tents, half-built houses, the
clatter of saw and hammer, the roar of progress
in the air.

At one place I noticed an enterprising com-
pany of town-builders had plowed up about 40
acres of sagebrush and sand and planted the
whole field with little white stakes; no house
was yet visible.

If this generous use of stakes continues, why
would it not pay to incorporate under the
name of "The Great Town Lot Stake Co.,"
and furnish stakes solely to those who use
little else in making new cities?

We saw new grass knee-high all along here
and seas and seas of flowers. Many contented
herds of cattle rested along the way. But now
and then a circle of ravens up against the
sapphire skies told very well that the grass
had not always been knee-high here, nor the
weather nearly so lamb-like. For many dead
cattle lay on the emerald hills.

You strike the stately old ocean suddenly
about half-way from Los Angeles to "boom-
land," and you have a spectacle that stands
without parallel in the glory of mighty waters.
I have been taken by enthusiastic Englishmen
—born seamen and lovers of the sea are those
bold fellows on their stout little island—to see
long sweeps of mobile water many times. But
there is nothing in England, nothing in or
about all Europe, all the world, I will say
with positive assurance, that can equal the
stateliness of those long and unbroken waves
that thunder in on the snow-white shale here.
Eight thousand miles of unbroken movement
and march have given those great waves here a
precision of weight and majesty that compels
your respect. You stand out on the platform
as you glide on out of the little town of La Mar,
and you stand with uncovered head. Far out
at sea lie black blotches of kelp and seaweed,
with many seabirds, but no ships go up and

down these awful and sublime seas save at
rare intervals. The Governor of the State, with
whom I traveled in this recent trip to the
South, pointed out to me his residence here.
And I can commend his good sense in select-
ing this thunderous sea-beach. The heart of
nature beats stoutly here.

I am told that a railroad is being built, and
indeed is almost completed, which has the surf
of the Pacific ocean for its western fence, and
that you step into the cars near the Golden
Gate and keep right along the sea-sand all the
way from San Francisco to San Diego! Com-
ment on such a work is idle; but how a ride on
such a road would delight the sea-born Briton!

Not seen San Diego? If I had not seen San
Diego as she now is, with all her boom, and
whirl, and rush, and uproar, I would drop every-
thing and go and see her now and at once, while
the spell of creation is upon her. It is a sight
not to be encountered again in a century. It
upsets all preconceived ideas. I had expected
to find a tumultuous, even rude lot of gamblers,
much like the men in the early days of gold.
Nothing of the sort; gamblers they may be here,
but they are mighty good-natured about it all,
and trouble is rarely heard of. No hard words,
no violence, nothing at all but the best of tem-
per and the boldest faith. You never see a
policeman. The crime record is almost down
to a par with any pastoral little village. As
said before, the whole thing is new here, as new
as the new and unpainted towns of ten miles
breadth.

Will it burst? No; for it is not a bubble.
What is back of it? The United States. You
see this is not a sudden thing at all. Five years
ago the red tide little place rose up and quietly
and confidently started for the front. She
walked on leisurely for a year, and then began
to go faster, and so far as I can see, all there is
of it she has simply got good wind, good legs,
good lungs, and is "in for a run; that is all.

You should see one of their good-natured
auctions here; auctions where they sell a whole
city. Maybe nobody has seen the city yet;
maybe the road to it has not yet been surveyed.
But they will complete the survey to-morrow,
lay the ties next week, and before a month is
over the cars will be steaming into the new
town! I can't help repeating for the third
time that the whole business of city building is
so utterly new here that all precedent is upset
and you soon find yourself laughing merrily at
it all and ready to believe with the rest and even
take part in the fashioning of this wonderful
city that is built on air.

There is a place about 15 miles back from
the Bay of San Diego called Sweetwater Dam.
Now I pledge you my word there is not, or
was not a month ago, a single house there.
Yes, tents, thousands of tents, but not a single
house in all this city of Sweetwater Dam. And
yet the cars are so packed and crowded, both
going and coming to and from this town 15
miles out and with not a single house in it,
that people never think of trying to get a seat,
but are quite content to cling on, hold on to
each other like swarming bees. Well, now
there can be no burst to a thing like this, for
there is nothing there to burst. See? And
this is only one example of about forty like
towns from one to twenty miles around. But
of course in most of the new towns, and where
they can get lumber, they are building.

One notable thing here is the new people.
The Greek army under the walls of Troy, the
Argonauts of '49, no body of men in history
that I know of was ever bolder in faith or big-
ger in heart.

"Look here," said Senator Bowers, who
keeps the Florence hotel, the one fashionable
place in San Diego, "look here, I am going
over to the Coronado hotel to live with my
family for awhile the day she opens." Now,
when you understand that the Coronado hotel
is the finest hotel on the face of the earth, and,
of course, the rival of Senator Bowers' fash-
ionable resort, you will begin to understand some-
thing of the spirit of these city builders down
there on the sunlit edge of everlasting summer.

"I am building a little twenty-mile railroad
out to my town in the mountains," said the
governor, "but don't quite see how I am to get
into town."

"Run in on our tracks," promptly answered
the president of an opposition railroad. "Yes,
use our tracks, our depot, anything you like, and
as long as you like!"

Now, of course, I have not space to write
these things down literally and lay roads and
sections down like corduroy roads, and show
the gradual approaches which lead up to the
facts. But what I have set down is substan-
tially the truth and the true spirit that prevails
in San Diego. There is a new flow of blood,
a new force. The best of Boston, the best of
Chicago, the best of New York—shall I say the
best of San Francisco, even?—is contributed
here. And as these people have money, plenty
of it apparently, plenty of good sense, plenty of
pluck, boundless belief in themselves and San
Diego, why, you see there is no telling where to
set the limit to their enterprises.

No, I don't advise you to buy lots there. I
don't believe in town lots anywhere. A man
who loves Mother Earth wants a little more
than a grave; but I do advise you to go and see,
feel, live San Diego, if only for a day.

JOAQUIN MILLER.

Oakland, Feb. 18, 1888.

How Mr. Gilhooley Broke up Two
Setting Hens.

[Written for the RURAL PRESS by M. E. D.]

Mr. Gilhooley bought a dozen hens last
spring to lay eggs, but two of them soon grew
obstinate and determined to set. Now, Mr.
Gilhooley did not wish them to set, and regu-
larly for two weeks, on returning home at
night from his office, did he try, one after
another, all the remedies of which he ever
heard to cure hens of setting, but it did no
good.

Yellow and Speckle clung to their respective
nests in the barn with true feminine persist-
ency.

At last he hit upon a plan that he thought
would be effective. He reasoned thus: "No
matter how well those two hens may agree in the
main point of setting, they won't both want to
set in the same place." Forthwith Mr. Gil-
hooley procured a stout cord some two feet in
length, tied one end of it to Speckle's left
leg and the other end to the right leg of Yellow.

The ki-awk, ki-awk, ki-awk, of the frighten-
ed hens quickly brought Mrs. Gilhooley to the
door, who watched the proceedings in silence a
moment before inquiring in a puzzled tone:

"Whatever are you going to do to those hens
now, Hiram Sylvester Gilhooley?"

And Hiram Sylvester replied:
"I'm going to break those plaguey hens of
their propensity to incubate if it takes till next
winter!"

"Oh, now, Mr. Gilhooley," said the sympa-
thetic lady, "it's natural, you know, and I'm
sure the poor hens are not to blame."

"Humph! I'd just like to know who is,
then," said Mr. Gilhooley, crossly.

When the hens were placed on the ground
they gave a parting ki-awk and with spread
wings darted toward the barn; Speckle got
the first start, and pulling Yellow's leg straight,
jerked her over on her side; this unexpected
hindrance brought Speckle to grief, and the
astonished hens both lay kicking in the dust.
They struggled until close enough together to
right themselves, when they regained their
feet once more. Again and again they tried
their first experiment with the same result,
until finally Yellow concluded to scratch for
grubs and wait for better things.

Speckle discontentedly sat down to rest, but
presently she again concluded to go home, and
in spite of a clucking remonstrance, pulled the
philosophic Yellow from her breakfast.

"Those hens remind me of married life,"
mused Mr. Gilhooley. "A man gets tied to a
discontented wife, and she is always hauling
him away from comfort." Mrs. Gilhooley em-
phasized this wise remark by slamming the
door, when Mr. Gilhooley consulted his watch
and found himself overdue at the office.

The poor hens passed the day in futile at-
tempts to reach their nests.

That night, when Mr. and Mrs. Gilhooley
were taking their tea, suddenly a great
squawking caused them to rush in the direc-
tion of the barn.

Mrs. Gilhooley grabbed the lamp, exclaim-
ing: "Sylvester, some one is stealing the
chickens!"

Out they both rushed, but as Mrs. Gilhooley
flung open the barn-door, the sudden draft
blew out the light, leaving them in total
darkness.

"I'll go back after the lantern," gasped Mrs.
Gilhooley, hurrying toward the house as fast as
she could in the dark.

A few days before Mr. Gilhooley had purchased
a young horse, which was standing untied in his
stall. Evidently he wished to investigate the
cause of the commotion, for he ran out of the
open barn door, flinging the astonished Mr.
Gilhooley full length with such haste that he
yelled "Fire! Murder! Thieves! Police!" be-
fore he realized what had happened. As quickly
as possible he scrambled to his feet, brushed off
the straw and dirt from his ample person, all
the time repeating interjections to himself with
unusual force and rapidity.

When Mrs. Gilhooley returned with the
lantern they proceeded to investigate the
chicken-roost. There they found the two set-
ting hens suspended by the legs, fluttering and
squawking in terror. They had managed in
some way to reach the perches, one just above
the other, but an inadvertent jerk by the lower
hen had thrown the other over, and there they
hung suspended, being unable to get either up
or down.

A noise in the direction of the kitchen garden
next attracted Mrs. Gilhooley's attention.

"What's that in the garden?" she whis-
pered.

"It's that confounded horse, he's loose,"
Gilhooley replied. "You stay here while I go
and catch him."

"Oh, Sylvester, I'm so afraid it's a burglar."
"Burglar, indeed! I rather guess I know
it's a horse," saying which Mr. Gilhooley crept
softly along the fence in the direction of the
noise.

Immediately the horse gave a frightened
snort and galloped around the lot. He repeated
this until Mr. Gilhooley, losing patience, started
across the backyard to head him off. Now,
Mr. Gilhooley is a large man and attains vast
momentum in running, so that when he struck
the clothesline it sent him rapidly backward
several feet, and in attempting to keep his
equilibrium he came in violent contact with the
wheelbarrow, over which he sprawled, landing
much in such a position as a mammoth toad ex-

hibits on alighting from an unusually long jump.
There was a long silence after this catastrophe,
and when the trembling Mrs. Gilhooley ventu-
red into the kitchen she found her dis-
gusted spouse rubbing liniment upon his
numerous bruises.

The horse jumped over the fence and is prob-
ably in Texas now; but Mr. Gilhooley has ef-
fectually cured two hens of setting.
Ventura.

Whisky and Poverty.

[Written for the RURAL PRESS by Mrs. J. M. K.]

On reading an excellent article in the RURAL
of Jan. 28th, entitled "What Civilization has
Done for Mankind," I was ready to ex-
claim, "All true! A very simple way to ac-
count for ignorant and shiftless poverty."

That portion of humanity who refused or were
incompetent to march with progress and are
simply left behind. But the subject will not
be so dismissed. There comes a whisper,
"Who, or what, made thee to differ?" The
strong should help to bear the burdens of the
weak, and this moral truth unrecognized, we
must face the problem as a national necessity.
An inquiry into the causes of want and crime,
with a view to apply remedies, now demands
the earnest attention of both statesman and
philanthropist. It is doubtful that any con-
siderable portion of the poorer classes of to-
day have come down by regular descent from
those who refused to become herders, farmers,
etc.

Kind nature seems to prevent any permanent
division lines lest we forget our common
brotherhood. We know that good and bad
qualities, greater and less abilities, like thermal
lines, cross and recross all arbitrary classification.
In the ranks of the needy poor to-day, that
class spoken of as "those who tend to idleness,
vice, and crime," there are far more than can
be accounted for by want of natural ability, or
yet from innate depravity.

We know, too, that persons are constantly
dropping down from good positions to degrada-
tion and want. In searching for cause there is
a wide latitude in theory, those who never
knew want, generally finding it wholly in
difference of character and habits. While
those who never knew aught else, find it in un-
just laws, or simply account for it by good and
bad luck. No doubt there are laws that en-
able one who has amassed considerable means
to use it to gain an unfair advantage—the
giving of public lands to great corporations
and other outrages. But with all these have
those contended who have earned comfort and
plenty.

The honest poor and their would-be helpers
should first look for cause and cure near
home, as work in that line can be begun
at once. Of poverty in cities I know
nothing by personal observation, but infer the
same causes work there as among our tramps
(generally improvident workmen) and transient
farm help. Living near a railroad town, feed-
ing scores of tramps yearly, as well as employ-
ing a number of workmen, I have made their
habits and character a study, and am free to
say, I believe there is no good excuse for beg-
ging from door to door; also that every work-
man should in time be able, as many have, to
rent or buy land for himself. The direct and
principal cause of their destitution I find in the
saloon and the vices and pernicious sentiments
fostered by that element, such as "It is mean
to save," "The world owes me a living," "All
in luck," etc. I have made no new discovery,
only verified the words of an ancient writer,
"The drunkard and the sluggard shall come to
poverty."

Whisky and poverty. Barefooted children in
all our large cities, with their miles and miles
of saloons. Children crying for bread, when the
drink bill of the nation, \$900,000,000, is far
greater than all the bread and meat consumed
by us. And this enormous amount paid by
only a portion, possibly not more than one-half
our citizens, while the other half builds orphan
asylums and organizes charities to mitigate the
miseries of the traffic. That there is no whole-
sale death by starvation proves our abundance
and generosity. Having found extreme want
to be caused principally by bad habits, let us
plead the culprits' claims to mercy.

We, who through no grace of ours were born
to learn lessons of thrift and sobriety since in-
fancy, who help each other to stand and ad-
vance, can hardly estimate the advantage we
have over those born to ignorant and evil influ-
ences. Thousands are yearly swelling the ranks
of those ignorant in hand or brain of any useful
employment. How can we give high wages for
poor service?

Shall we turn our faces away saying, "Let
the wicked mend their ways?" This will not
help one whit. Nor will the conservative man
who sneers "fanatic" when the temperance
cause is urged be likely to offer any substantial
help; only stand in the way of those who ear-
nestly strive to lift some of the world's burdens.

I had proposed speaking of remedies, but
must defer until some future time. I cannot
in a single column strengthen my position by
numerous illustrations, analogies and statistics,
as I could in a volume, but believe I have sug-
gested a truer cause for "the persistence of
poverty amid advancing wealth" than has
Henry George, a cause he seems to have pur-
posely avoided.

Yes, Mr. George, since I have thought it all
over, though at first I felt a qualm of remorse

for a partnership in a certain barren hillside, I have concluded as we worked and saved the best years of our lives to earn it, we have a moral as well as legal right to it, and don't propose to divide it with those who say by their actions "whisky instead of land."

Tracy, Cal.

An Indian "Cry."

[Written for the RURAL PRESS by MAUDE S. PEASLEE.]

I had been teaching in Pleasant Valley, Nevada Co., for several months when the lady with whom I was boarding told me that the Indians were soon coming for their annual "cry." The burying-ground was in a large field on the ranch, and she said that the Indians of the vicinity had come there for years to deposit the ashes of their dead, burned at the time and place of their decease. The next day, Sunday, they began to assemble at the appointed place, coming from Nevada City, Grass Valley, Colfax, and the surrounding country. Their numbers are rapidly diminishing every year, and this time there were scarcely 50 present. They soon had their poor ragged tents put up and their scanty baggage disposed of. Their "camp-fire" was a pitiful sort of caricature of the ones we have read of in accounts of powerful tribes. These "Diggers," as they were called, were no doubt descendants from the Putes.

The next evening, with a party of "pale-faces," I followed the sound of shrill sobbing to the camp. A group of the mourners stood around the grave where the ashes of departed Indians had in past years been deposited. The tears streamed down the squalid faces and they rocked themselves backward and forward while moaning, as if in agony. The head of one of them, an old squaw bereft of her husband, was covered with pitch scraped from the pine trees, to remain there until time wore it and her grief away. Crouched by their campfires were others less afflicted, who watched the whites with scowling faces. In large, very closely woven baskets was their soup, made of acorns. It much resembled thick bean soup. Some of the party tasted it and pronounced it quite palatable. It is cooked by dropping heated stones into the basket, and is called "three-fingered soup," because conveyed from the basket to the mouth of the Indian by the curved first three fingers of his dirty hand. There were a number of them eating, and they used the fingers as easily and satisfactorily as John Chinaman does his chopsticks. There were a number of children of both sexes, though none under three years of age. Several depraved-looking white men hung around the place, who, we were told, had taken squaws for wives and depended upon them solely for support. I noticed one very pretty Indian girl of about 16 years of age. She was very dark and quite shy.

A large pile of wearing apparel, bearskins and nicely woven baskets were erected near by to be burned at daybreak for the use of the departed ones in the "Happy Hunting-Grounds." The next morning the cries became almost deafening, and subsided only as the flames died out.

By the next evening the Indians were all gone, leaving, as they fondly imagined, the dead well provided for. The following morning we went to the place to secure relics, if possible, but the Indians had taken away all their belongings, and all we found was some beads from the funeral-pile. Any one would pass the one open grave, only two or three feet deep, a dozen times a day without giving thought to the pile of ashes in the shallow hole. The winds blew much of the deposit away, but I suppose it was much deeper once.

Grass Valley, Nevada Co.

A Voice from the Mountain-Top.

EDITORS PRESS:—The recent cold snap (I cannot call it a "blizzard" as your Butte-county correspondent does) gave us old Californians quite an icy grip, making it hard on the poor stock (and woodpile, too). I fear our Eastern visitors are bringing their snow and winds with them! We had 18 inches of snow, and the thermometer went as low as 15° one or two nights—not very cold for a Minnesota climate, but too cold for a perfect California winterless land, where roses and heliotrope are said to blossom the year round, etc. Now, I believe in telling the truth about our climate, and then our visitors from other States will not be disappointed nor blame us for untruthful statements about our "cloudless skies" and "balmy winters," etc. Certain it is that our climate, taken as a whole, is a chilly one. While the warm months are few, they are interspersed by cool, windy spells which make fires comfortable, even in summer. I speak whereof I know, having lived in Sacramento, Vallejo, San Francisco, Santa Cruz, San Jose and here, at an elevation of 2700 feet, back of Saratoga and Los Gatos. While it is true that roses and most of the garden shrubs thrive the year round in California, yet the fact remains that it is more comfortable and healthful for the inhabitants to have fires night and morning to sit by, even if the windows are open. And my experience, after a residence of 35 years, of trial proves that a greenhouse is a useful and useful addition to every garden, where the choice varieties or duplicates of plants may be safe, in

case of a cold snap like the one of the past winter.

To be comfortably and healthfully clothed, one needs as warm flannels as at the East, though not such an abundance of outdoor wraps, perhaps, when in the open air. Our climate is also a variable one, changing from mid-day to night and morning several degrees in temperature; then, while the sun is warm, the wind is cool, and all these changes must be guarded against, and prepared for, as a heavy cold is the consequence.

While every part of the State has its attractions and disadvantages, I know of none so little understood as this Santa Cruz mountain range, with its wonderful possibilities of fruit-growing, grand views and healthful climate. All lacking to its settling-up are good roads; and when they are built, the prices of land will double in value. Here is an opportunity for enterprising settlers to reap the benefit of getting good homes cheap and reaping the reward of their courage and toil.

MRS. L. D. JEWELL HERRING.

Los Gatos.

YOUNG FOLKS' COLUMN.

The Nursery at Night.

The day is done, and in their cosy nest
The rosy darlings lie in perfect rest,
Their shining tresses softly straying o'er
Those dimpled cheeks that we may kiss once more
Before we go; but let the kiss be light.
Good night, sweet slumberers!
Good night! Good night!

Anon we see a smile all gently play
O'er a sweet face, then slowly die away—
The little brain with fairy fancies teems,
And Flossie wanders in the land of dreams,
There she will wander till night's shadows flee.
Good night, my little one,
God guardeth thee!

She sees serenest sunlight, fairer flowers
And bluer skies than grace this world of ours,
As down the silent slopes of shadowland
Again she guides her hoop with eager hand,
Or may a mythic butterfly pursue.
Good night, my pretty one!
Till morn, adieu. —F. B. Dovelton.

Notes from "Jasper Hights."

[Written for the RURAL PRESS by LILLIAN HOLLY.]

On the evening of the 21st of September the sky was overcast with clouds and there were flashes of lightning and heavy thunder, and in the middle of the night we were awakened by a pouring rain. It rained so hard that we could hardly hear each other's voices; it slackened for a few moments and there was perfect silence, and then came a torrent of hail that seemed to be hurled from the sky upon our cabin-roof. We had to put our hands to our ears to lessen the noise, for it seemed as if it would deafen us. An old resident said that he had never witnessed such a storm before, and that he thought it must have been a cloud-burst, though others thought not. From the time mentioned to Dec. 28th, we had only slight showers, so that the farmers began to fear another dry season, but a heavy rain falling at that time, their fears were quieted. From Dec. 28th to Jan. 4th, it rained copiously so that the hills were soaked, and the Cholame creek in the Cholame valley overflowed its banks. But on the morning of Jan. 4th the wind, which had been in the south, changed to the north and the weather grew cold, and when we arose the next morning we looked from the window upon a white world. In fact, as Whittier says in "Snow-Bound,"

"We looked upon a world unknown,
On nothing we could call our own."

The snow remained upon the north side of the hills for a week. Two miles east of our place they had very little snow, while six miles west the snow fell to the depth of six inches. On the 21st of January it began raining again, and on the 22d we had the hardest rain of the season.

The next day after the rain in September, I went out for a walk and I saw a tarantula fastened to one of the bars on the bar-wire fence, and afterward went around and found four tarantulas and two grasshoppers. They were fastened there by the butcher-birds. Our chickens catch the tarantulas and eat them, considering them great delicacies. The butcher-birds are very tame. One little bird was so tame that he would fly into our barn every morning when papa fed his horses, and putting his head on one side would chirp at him; but alas! one day as he sat on the window-sill looking in at us with his head perched on one side in the cutest way imaginable, our naughty cat made one spring and caught it, and that was the last of our pretty bird. Why should cats be so cruel? From your little friend,

LILLIAN.

P. S. Where can any one get Guinea fowls and eggs?

LILLIAN.

Cholame, San Luis Obispo Co.

How One Scholar Understood a Lecture.

—A pupil in a public school at San Jose, the *Herald* says, lately wrote the following composition on the subject of a physiological lecture to which the school had just listened: "The human body is made up of the head, the thorax and the abdomen. The head contains the brains, when there is any. The thorax con-

tains the heart and the lungs. The abdomen contains the bowels, of which there are five: A, E, I, O and U, and sometimes W and Y."

Joe's Studies in Natural History.

[Written for the RURAL PRESS.]

The chipmunk is about as big as a small house-rat. It has red and black stripes on its back and is white underneath. It lives in trees and under rocks. It carries nuts to its nest and keeps them for winter. The chipmunk is much prettier than a rat is.

Once my dog made a wood-rat go up a tree and I climbed up the tree and caught him; the rat turned around and bit my coat, and he would not let go, and I took him home and then I killed him. The wood-rat is about as large as two chipmunks. Its nest is made of sticks and pieces of bark, piled about three or four feet high in the brush. They make a rattling noise with their tails when they are frightened.

JOE P. HERRING,

(11 years old.)

His Orders.

"I've got orders, positive orders, not to go there—orders I dare not disobey," said a youth who was being tempted to a smoking and gambling saloon.

"What special orders have you got? Show us your orders."

John took a neat wallet from his pocket and pulled out a neatly-folded paper. "It's here," said he, unfolding the paper and showing it to the boys. They looked and read aloud:

"Enter not into the path of the wicked, and go not in the way of evil men. Avoid it; pass not by it; turn from it, and pass away." Proverbs 4: 14-15.

"Now," said John, "you see my orders forbid me going with you. They are God's orders, and, by His help, I mean to obey them." —*Exch.*

Good Health.

HEALTH HINTS.—A man had a finger nail torn off, causing very great pain; brown sugar was thrown on a pan of burning coals, and the finger held over the smoke for 20 minutes. The pain was removed, and in due time a cure was effected. In *Health at Home* it is narrated that a horse seemed to be dying of a festering wound. Some old shoes were cut up in a hog-trough and set on fire under the horse, so that the smoke would reach the wound. In a few hours the swelling began to subside, the wound discharged, and the horse got well. An old lady was knitting a stocking. A member of the family came in with a painful wound. She unraveled the stocking, put the yarn on a shovel of burning coals, caused the smoke to ascend against the wound, giving immediate relief. The first thought of ordinary readers is that of wondering that such a "simple" thing should have such beneficial effects. Instead of burdening the mind with the remembrance of old leather, and brown sugar, and yarn stocking, it is better to ascertain the general principles; for one may have the most agonizing sore, and be a thousand miles from an old shoe, or spoonful of brown sugar, or a yarn from a stocking. What then? In all cases there was smoke; out of smoke creosote is made, and carbolic acid is of the same essential nature, hence the application of these useful substances to all varieties of wounds, burns, and sores. Their essential nature is two-fold—they arrest decay and purify. —*Hall's Journal of Health.*

THE OBJECT OF COOKING THE FOOD is to dissolve the adhesive substance which holds the fibers of food together, so that the digestive fluids can the more readily act upon every part of the food. "The starch granules of corn, wheat, rye, and other grains, with those of the potato, turnip, and other vegetables, are very difficult of digestion in a raw state. The digestive fluids act upon them slowly and only with great difficulty, owing to their insolubility. When subjected to heat, these granules swell very greatly in size, and rupture, when they become easily soluble. This effect of heat is familiarly illustrated in the parching of corn, the effect upon the whole kernel being due to a similar effect upon each individual granule. The indigestibility of raw fruits is due to unruptured starch granules which they contain; hence they are improved by cooking." —*Pacific Journal of Health.*

THE INDIAN AND PHYSICAL PAIN.—The general idea that the Indian endures pain stoically is not sustained by the observations of Dr. Corbusier among the Apaches. He says that "they do not endure physical pain any better, if as well, as the whites. Great or continuous pain renders them stupid, and oftentimes delirious, and the stolidity with which Indians in general are credited is not well maintained by them under small surgical operations, the one of tooth-extracting almost always eliciting a groan or a yell."

DO YOU SMOKE?—Hundreds of boys, says the *Scientific American*, apply for enlistment in the United States Navy, but are rejected because they cannot pass the physical examination. The first question is, "Do you smoke?" The invariable response is, "No, sir," but the tell-tale discoloration of the fingers at once tells the truth.

DOMESTIC ECONOMY.

CEMENT TO MEND IRON POTS AND PANS.—Take two parts of sulphur and one part, by weight, of fine black lead; put the sulphur in an old iron pan, holding it over the fire until it begins to melt, then add the lead; stir well until all is mixed and melted; then pour out on an old iron plate or smooth stone. When cool, break into small pieces. A sufficient quantity of this compound being placed upon the crack of the iron pot to be mended, can be soldered by a hot iron in the same way a tinsmith solders his sheets. If there is a small hole in the pot, drive a copper rivet in it and then solder over it with this cement.

WOODFORD PUDDING.—Three eggs, one teacup sugar, one-half teacup butter, one-half teacup flour, one teacup jam or preserves, scant teaspoon soda dissolved in three teaspoons sour milk, mix well and bake slowly. Sauce—One egg, one large cup sugar, one small cup butter, mix well, put on stove and stir until melted, add tablespoon wine, brandy or whisky, and pour on immediately.

BAKED OMELET.—Take six eggs, three even spoonfuls flour, a little salt, and beat them well together—the more it is beaten the lighter it will be—then add one pint of hot milk and keep on beating. Have a hot dish with some melted butter the size of an egg, and put into oven. Bake 20 minutes, and eat when it comes from oven, for it will fall soon. This is very nice for breakfast.

CHOCOLATE CUSTARDS.—One-fourth of a cake of chocolate, one pint of boiling water, six eggs, one quart of milk, one-half cup of white sugar, two teaspoons of vanilla. Dissolve the chocolate in a very little milk, stir into the boiling water and boil three minutes. When nearly cold add the beaten eggs, stir into the milk, flavor and pour in cups; set in boiling water and bake.

CREAM CAKE.—One cup of butter, two cups of sugar, whites of two eggs, three and a half cups of flour, one cup of sweet milk, one teaspoonful of soda, one teaspoonful of cream of tartar. For the cream: One pint of sweet milk, sweetened to taste, yolks of three eggs, thicken with flour to the consistency of custard, flavor with lemon. This amount makes two good sized cakes.

FRUIT CAKE.—Two cups of molasses, two cups of brown sugar, two cups of butter, one cup of milk, five cups of flour, five eggs, one pound of raisins, one pound of currants, one-half pound of citron, one teaspoonful of ginger, and one teaspoonful of nutmeg, one and a half teaspoonfuls of allspice and one and a half of cloves.

SAGO PUDDING.—Boil five tablespoonfuls of sago, well-picked and washed, in one quart of milk till quite soft, with a stick of cinnamon; stir in one teacup of butter and two of white sugar; when cold, add six eggs well beaten and nutmeg to taste. Mix all well together and bake in a butter-dish three-quarters of an hour.

WHITE SPONGE CAKE.—One and two-thirds cups granulated sugar, whites of eight eggs beaten to a stiff froth, one good cup flour, one teaspoon cream tartar mixed thoroughly in flour, mix together and bake in basin lined with well-buttered paper three-fourths of an hour. Season with extract lemon when done.

EGGLESS CAKE.—One and one-half teacups of sugar, one teacup of sour milk, three teacups of flour, one and one-half teacups of butter, one teaspoonful of soda, one-half teaspoonful of cinnamon, one-half teaspoonful of nutmeg, one teacup of raisins chopped and floured.

BOILED ICING.—Three cups of white granulated sugar, one cup of water, boil to a clear syrup, beat the whites of four eggs to a stiff froth, pour into the hot syrup, stir frequently while cooling. The cake should be cold before icing.

SUGAR COOKIES.—Two eggs, a little more than one-half cup of butter, one cup of sugar, one-half teaspoonful of soda (scant) in four tablespoonfuls of water.

EGG ROLLS.—Two cups of sweet milk, two eggs, one-fourth teaspoonful of salt, 3½ cups of sifted flour, one teaspoonful of baking powder; bake in gem pans.

POTATO ROLLS.—Add to 12 mashed potatoes salt, butter and a cup of milk and two eggs; make into rolls, cover with flour, and fry brown in butter.

RICE CAKES.—To one and one-half cups boiled rice add three eggs and flour and milk enough to make a batter, adding a little salt. Fry a light brown.

THE WHITE RIVER DISTRICT, east of Delano, is developing with wonderful rapidity. A year ago it was used for little but a pasture-ground for sheep and cattle. To-day nearly the whole is under cultivation or about to become so. An immense area will be seeded with wheat this year for the first time. The rainfall up to the present has been ample, and an occasional shower will insure a good crop. Land that was held at not more than \$5 or \$10 an acre a year or two ago is now in demand at \$25 and \$30. A number of small orchards are being set out, and James Slayton is planting about 30 acres to choice fruit trees. Several persons have planted a few fig, olive and orange trees, and we hear of one gentleman near Delano who has secured several thousand olive cuttings.



A. T. DEWEY.

W. B. EWER.

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Agricultural Implements—Bull & Grant Farm Imp't Co.
Fashion Catalogue—H. C. F. Koch & Co., N. Y.
Plums—C. M. Silva & Son, Lincoln, Cal.
Resistant Vines—A. Dahms, Sonoma, Cal.
Daisy Harness—Chicago Harness Co.
Cattle—J. B. Fort & Sons, Olema, Ills.
Colusa Nursery—L. F. Moulton, Colusa, Cal.
Swine—T. Hogan, Martinez, Cal.
Seeds—G. W. Park, Fannettsburg, Pa.
Hydraulic Press—A. Kern.
Organs—Kohler & Chase.
Calf Feeder—J. B. Small & Co., Boston.
Pear Trees—G. Tosetti, San Leandro, Cal.

See Advertising Columns.

The Week.

The fine days are seeing trees planted by the tens of thousands. We have alluded from week to week to the unexampled demand for nursery stock, especially of certain sorts, which were long ago exhausted. Of late, planters have largely agreed to substitutions and seem determined to plant something anyway. We are not sure but the fact of limited supplies of the favorite kinds may in the end be of benefit in leading to a greater diversity in planting. Choice of fruit varieties is proceeding more upon prophetic views of market values than upon the actual adaptations of soil and situation. Such is always likely to be the case when a planting boom is on, and a planting boom has the ill-features which pertain to other booms. Still the trees are being set, nurseries are being stripped of yearlings and dormant buds, and the orchard area of the State is being increased at a rate which passes addition. The disposition to plant is a good one, and for the most part the planting will be profitable if suitable after-care be given. For a few days the northers have been

sweeping across the State, crusting some soil and drying the roots of trees in planting. No harm will result, however, if rain follows, as it is likely to, and the drying of the soil may help some dilatory cultivators. It is too early for serious injury from the dry wind.

The Republic Perpetual.

Owing to the necessities of the case, we are closing our forms on the National Holiday instead of participating in the formal observance of the day. This may perhaps be atoned for by directing our pen to a patriotic theme, and what can be better and indeed of greater practical value just at this time than to consider the element of perpetuity in our national institutions?

Look where we may, and we look in vain for a constellation of men such as our Revolutionary fathers. Never before or since have such councils or conferences met as those who signed the Declaration of Independence and formed the Constitution of the United States. They stand unequalled for wisdom, justice and pure humanity. Not a man but was a star of the first magnitude. Not one that subsequently trailed his honor in the dust. They were all angels of light and they built well and for all time. They discovered that man, in one age, was little qualified to make laws for another, so they cunningly contrived that the Constitution should be amendable forever as the people improved in wisdom.

No nation had ever done so before. The tendency of tyranny is to dictation. "Hereditary ever" is stamped upon all its work. No change without revolution. Stand still or fight is the challenge of every other government on earth. The laws of the Medes and Persians are the laws of the world.

When we see the foundations of a new building, we can well discern if it be for a temporary structure, or one for the ages. So in government it is not what men say that will endure, but what they do. The Medes and Persians said, "Unchangeable forever!" and they have passed away. Our fathers wrote, "Amendable forever," and it shall run while time shall last and man remain to know it.

But men talk even now that the Republic is a failure, and the end is near! They may banish their fears. The Republic has come to stay, and it has that within that means eternal life.

And this is it. "Amendable forever!" There is nothing that majorities cannot move. There is nothing guaranteed but this right of the majority to have its own way. The majority need not rebel. Why should it? It can do better in peace. And the minority dare not rebel, cannot do so with any hope of success. One disastrous failure has illustrated that fact. We may as well sit down and wait for majorities. It will always be the safest and the best.

Mankind are naturally conservative. Those who are doing reasonably well as things are, do not seek change. They fear confusion and insecurity. As our fathers said, they do not take up arms, even against an evil rule till it becomes intolerable and no longer to be borne with honor.

This explains why nearly all mankind to-day suffer the rule of arrogant minorities against their better judgment. They are doing reasonably well as it is, and will remain so till some disturbing element brings confusion, and then they will strike for a better system. They will not make the confusion, but being in it, will aim to come out better than before.

In the United States we are just now nursing two dangerous classes—the great rich and the disaffected poor.

No man who has a just discernment and a strong sense of virtue and patriotism can fail to confess that our corporations and combined capitalists are not conducing to the honor, the integrity, the peace, happiness and character of the Republic. The friends of true Republican freedom at home and abroad are justly alarmed at the evil influence of their counsels at Washington. It is neither in harmony with a sound religion, a laudable morality, nor a grateful patriotism. We all feel that a check has to be applied somewhere, unless a more moderate course be adopted among themselves.

On the other side, we are importing crime, ignorance and disaffection. We are doing it faster than we can educate and assimilate. The antagonism between overbearing capital and ag-

gravated, unemployed and suffering labor is becoming more and more intense. It threatens conflict. It imperils the peace and happiness of all. It is, and must be, a matter of deep concern to every true patriot. We must have peace at any cost. But we should rather court it by wise measures than provide bayonets to command it.

Unhappily we are not able to say that either of these dangerous classes is wholly right or wholly wrong. The capitalist combines for nefarious purposes, corners, trusts, advantages unknown to the moral code. Labor does the same, not to reason and arbitrate alone, but to coerce, to boycott, and destroy. It is all wrong. It can lead to nothing but evil. We should, and we shall, when we see our way to do so, restrain both, till we can apply remedial legislation.

But these two classes, the great speculators who turn over millions with the stroke of a pen, and all the disaffected, unemployed, who are ready for strategy and spoils, are only the extreme wings of the great American people.

Out of 12,000,000 voters, the rich wing cannot count on five per cent when a question of their supremacy or utter defeat is fairly made. Let them once strike at any vital part of the Republic, and the popular vote will bury them out of sight.

The other wing will never wield a tenth of the popular suffrage. There are not a million of men in the United States who are in any such desperate strait as to strike one blow against the Constitution of our fathers. It stands there, commanding the respect of all, and "amendable" at their pleasure. Why sweep it away? What shall take its place? There is nothing! No man can propose anything worthy to succeed it.

And there, between these two weak wings, is the Grand Army of the American people, 50,000,000 strong. They reach all the way down from these overgrown speculators, through men of property and education, to the tradesman, the farmer, the mechanic, the industrious and well-affected laborer and to all who love Republican liberty. They have ten millions of votes against one. They can put millions of stalwart soldiers in the field, and equip them, too.

Oh, the Republic is safe in their hands! Safe now and forever!

Selling Fruit in Towns.

We are in, first, last and all the time, for any honorable effort which tends to increase the consumption of California-grown fruit and vegetables. We print elaborate articles about the distribution of California fruit at the East and enlarge upon the great benefits which would accrue from placing our fruit on the tables of the people of lesser means instead of confining it to the sideboards of the wealthy. This is a good scheme and we hope it will ere long be fully realized. But while we labor thus to distribute our fruit thousands of miles away, we should not forget that much more fruit should be eaten by those of moderate means residing in the towns and cities of California. It is a fact that at present, in many towns fruit grown just outside the corporate limits is doled out in little lots at retail at nearly as high prices as the Eastern retailers charge for it. This is owing largely to a host of petty ordinances which prohibit peddling within town limits except on payment of ridiculously heavy licenses. The money for these licenses is ostensibly needed to meet town expenses, but the fact of the matter is that the rates are so high that very few can pay them, and as a result the sale of fruit is confined to a few fruit stores, where, as a rule, exorbitant prices are charged. It follows from this that the poorer classes in towns, people with large families, cannot afford to buy fruit, and the poor children famishing for it are forced to steal it or rescue decaying specimens from garbage barrels, etc. It is a most lamentable state of affairs, and we are glad indeed to see that a decision by the Hon. F. E. Spencer, Superior Judge of Santa Clara county, is likely to accomplish much in righting the wrong. A man was arrested and imprisoned by a San Jose justice of the peace for peddling fruit in the city without a license, in transgression of an ordinance which provided that such a peddler in San Jose should take out a license, for which he had to pay \$50 per month. The peddler appealed to the Superior

Court and came before Judge Spencer on habeas corpus. The peddler's attorney, N. H. Castle, made an excellent showing for him, contending, according to the report in the *Mercury*, as follows:

He took the position first that the license demanded (\$50 per month) was not in accordance with the intention of the statutes concerning the licensing of hawkers and vendors. He said it had been placed so high that it was, to a great extent, prohibitory. The statutes of the State of California were framed to protect the people from the insidious encroachments of monopoly, and it could be seen at once that the ordinance under which the defendant had been convicted did, in a measure, favor extensive dealers, inasmuch as it barred the competition of small dealers.

He called attention to the fact that, while the municipal ordinances placed the license on fruit-vending as high as \$50 per month, they only imposed a tax of \$20 per year on the vegetable vendors. This was unjust and discriminating. The vending of fruits, he said, is an honorable business, as much so as the vending of vegetables, poultry, butter, eggs, etc. In many instances the vendor's stock in trade would not be of as much value as \$50.

He recited a great many cases touching the point being considered. He referred to Dillon's and to Cooley's constitutional limitation and to several decisions of the Supreme Court of different States, California among the rest. It had been decided by the able authorities to which he referred that whenever a tax or license was levied that tended to discriminate between branches of the same legitimate business, it became null and void.

He referred to that section of the Constitution of the State of California which granted to cities the power to impose licenses for the purpose of regulating a pernicious traffic, or for raising revenues sufficient to discharge the obligations incurred by the city.

He contended that the case of his client came under the latter head—the raising of revenues—consequently no license could be exacted that was beyond a reasonable limit, hence the ordinance was in excess of the power granted by the Constitution and therefore void.

Such in outline was the claim of the peddler's attorney. Judge Spencer, after considering the question, delivered the following opinion:

The ordinance, under which the conviction in this case was had, provides, among other things, for the following schedule of licenses imposed upon hawkers and peddlers. Those engaged in peddling wearing apparel, groceries and other articles shall pay a license of \$50 per month. Those engaged in peddling fruits shall pay \$50 per month, and those engaged in peddling vegetables, meats, poultry, eggs and butter shall pay a license of \$20 per year.

I am disposed to look at the business from which the revenue is to be derived, whether it be an obnoxious or legitimate business. The carrying on of the retail liquor business, for instance, would probably uphold a heavy tax.

This business is small and the profits, as shown by the learned counsel, would in many instances barely exceed the license imposed. The imposition of such a tax is onerous, in fact tending to be prohibitory. It is an unreasonable and unjust imposition. There is no reason why the vendor of vegetables should be taxed \$2 per month and the vendor of fruit 25 times that amount for the same period, when it is evident that the same imposed upon the various vocations and arbitrary and grossly discriminating. I think, therefore, that the ordinance should not be upheld, and that the conviction is illegal.

It is the judgment of this Court that that portion of Section 7 which relates to the peddling of fruits and vegetables, requiring in the first instance a fee of \$50 per month, is void, as unreasonable and unjustly discriminating. It is ordered that the prisoner be discharged.

We have given this matter at considerable length, because it seems to us of much importance. It involves the whole question of restrictions upon the free sale in towns of the fresh produce of the surrounding country. The health of the townspeople, the growth of a generation of strong and healthy youth, depend much upon the free sale at low rates of the freshest food supplies, and to restrict such sale under pretense of town revenue or protection to established green grocers is short-sighted, and as has been shown by Judge Spencer, illegal. In many towns there should be 20 wagon-loads sold where one is sold now. Fruit should be set down on the doorsteps of the poor by the box, where now seldom a paper-bag full rests. The orchards are full of fruit that is much too ripe for long shipment, which is just in shape for consumption in large quantities in the neighboring towns. Let it be freely distributed and eaten, and let all petty ordinances be swept away.

This is a matter to which the fruit-grower should give attention as well as to the greater distribution at distant points. We hope the decision by Judge Spencer may be made of wide value.

The Sugar Trust.

We have already expressed our opinion in a general way of the great monopolistic tendency of the day, which is resulting in the organization of the so-called "trusts." We are glad to see that popular attention is being loudly called to the imminent danger of oppression and extortion through such organizations by the action of the Senate of New York State, in appointing a special committee to examine into their methods and influences. It is becoming more and more apparent that a strong and wide-reaching effort against monopolies must be a leading issue in our politics, and this effort will be hastened by the uprising of the trusts. People have become too much accustomed to oppression through the great monopolies of transportation and communication, the railroad and the telegraph.

Though there has been a growing popular effort against these gigantic monopolies, and something has been accomplished by national legislation, like the Interstate Commerce Act, there has still remained a great amount of popular inertia which was willing to acknowledge the sovereignty of the railroads and telegraphs and bow before it, or else accept it as inevitable. Something like the same disposition was meted out to the great oppressions of the Standard Oil Company. But the recent general movement of capitalists in the organization of "trusts" has excited the people more than has the grasp of a few giant monopolies which has been gradually tightening around them during the last quarter of a century. This alarm is natural, and we trust the result will show that organized capital has overreached itself and thus secured its own remedy by the awakening of the people to existing and impending evils.

These considerations are suggested by the telegraphed statements concerning the inquiry now being prosecuted by the special committee of the New York Senate, and some of these are as follows:

Opening with the sugar trust, Henry Havemeyer testified that when the trust was formed each stockholder surrendered the stock held in each company, and was given the stock of certificates in the combined companies in return. There was no written agreement as to what should be done by the Board of Management of the organization after the surrender of the stock. The board has a right to place its officers in any of the refineries. The arrangement was made about the 1st of last December, the most active men in its consummation being J. E. Parsons and John R. Dospassos. The witness acknowledged that one refinery in St. Louis, two in Louisiana, one in Boston, two in Philadelphia and two in San Francisco had been forced into the pool, which now controls 32,000 barrels a day capacity. The production of sugar since December 1, 1887, has decreased about a fourth and the price has gone up. The North River Company has gone out of business entirely, but the board has taken its stock. The amount of stock of the combined companies for which certificates have been issued was \$45,000,000. The board has decided to close more refineries, those in Boston being among the number. They will all get their share of profits, as if running.

This gives some idea of the magnitude of the operation as well as an inkling of the policies adopted. The leading points are the aggregation of \$45,000,000 arrayed against the legitimate forces of production, trade and consumption. There is also the fact that certain producing capital is to be paid for idleness and the wages and considerably more are to be extorted from consumers, while the laborers are to have their bread snatched from their mouths that capital may become opulent through this idleness. Still beyond is the fact that consumers are to be robbed, and this means not that

sugar-eaters alone are to be mulcted, but that other industries which use sugar as a raw material are to be robbed; and still beyond that those who furnish other materials which are used with the sugar in manufacture are to have their enterprises hampered, checked in their growth, and possibly even made unprofitable. To see how wide-reaching this wretched greed of the sugar-makers is, think for a moment of its effect upon the great canned

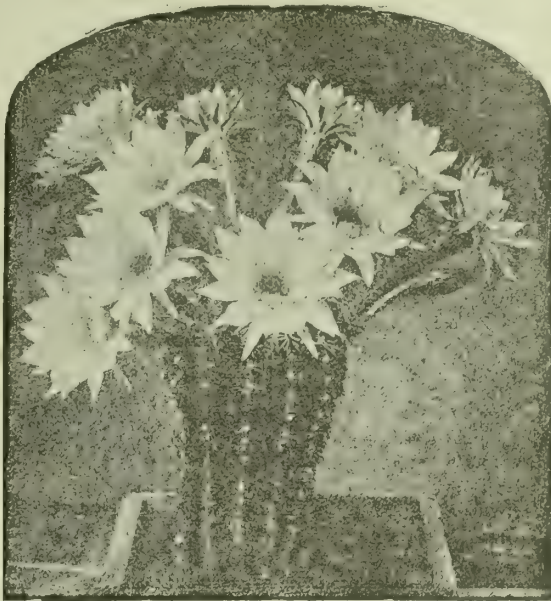
and preserved fruit industries of the country. The manufacturers' industry is checked, the army of artisans who labor on fruit, on tin, on lumber in the employ of the canners, is thrown out of work or reduced in reward, the fruit-grower is robbed of his just returns, and with him falls hardship upon the whole community in which he lives and who share the profits of his business—all this for the imme-

diat benefit of the few millionaires whose money enables them to enter a "trust" to depress manufacture and elevate market values as they see fit.

This is only a hint of what is now in progress in this country, for the sugar trust is only one of a host of oppressive monopolies recently born. Are the people to sit quietly while such enterprises are in progress? We think not; and honor is due to the Empire State that action calculated to awaken and warn the people has already been taken.

A French Draft Horse.

Although we have given many engravings of French draft horses, there is a grace and spirit about the portraiture by Lou Burk which we give on this page which entitles it to a place in our columns. Leaving aside the individuality of the animal, the portrait may be presented rather as a good representative of the breed which by generations of breeding and selection



AN ECHINOCACTUS IN BLOOM (See next Page).

has gained a fixed type, which is, of course, the secret of value in any established breed; for the fixedness of type, of course, means its transmission to progeny even when the prepotent animal is associated with the unfixed blood of common females, as well as when mated with females of his own royal blood.

The type shown in the engraving can be recognized in many horses imported to this



A TYPICAL FRENCH DRAFT HORSE.

State as well as from others which have been bred from them on our soil. This type is also representative of the band of French horses lately brought here by the veteran importer, James A. Perry, and which are mentioned in our advertising columns as to be sold at auction in this city on Wednesday, March 7th.

This sale it should be noted is a joint offering of French horses and Angus cattle, and therefore should draw out a good attendance of both horsemen and cattlemen.

Successful Sale of Live-Stock.

The series of annual sales of the produce of the Cook Stock Farm located at Danville, Contra Costa county, was inaugurated by holding the first sale at the Bay District track, in this city, on Thursday, the 16th inst. The stock sold comprised some of the most fashionable bred trotting and roadster stallions, brood mares, colts and fillies of high form, style, and action. It is claimed that no such class of stock has ever been offered at auction in this State, and the result shows that the public is conversant, and getting better qualified each year to judge of the various strains of blood that go to make up a first-class animal.

The demand for this character of horses is constantly increasing, and, as shown at this sale, buyers are willing to take them at prices that are certainly remunerative. This sale should be the means of encouraging others who are breeding this class of stock to hold similar meetings, whereby the public could have an opportunity to make selections of such animals as are wanted without being hampered with a reserve or fancy price, set in most cases at private sale by the owner's pride or length of purchaser's purse. It is evident from the experience of this sale that the competition created by actual buyers, when confident no price has been fixed upon, results in prices that should be satisfactory to the most conservative breeder.

This custom has leaped into prominence in nearly all Eastern States, as a means of sale of blooded stock of all kinds. The breeders themselves have found it more profitable, as a rule, and have secured larger returns than from private sale.

This sale, like the most important ones so far held in this State, was conducted by Messrs. Killip & Co., whose reputation for working up and managing sales of live-stock is well established on this coast. Mr. Killip's persuasive cry brought out several bids at this sale after the bidder had reached his limit. These occurrences were the occasion of much merriment. Mr. Samuel Gamble, the superintendent of the Cook Stock

Farm, was on hand and aided greatly by his statements as to breeding, dispositions, speed, etc., of the animals offered. His recital of the various pedigrees back four and five crosses was remarkable, and showed a retentive memory well adapted for the business in hand. The implicit confidence had by the public in Mr. Gamble's statements had much to do with the success of the sale. Every animal offered was sold. Appended is a complete list of

Prices and Purchasers.

Stallions—Yosemite sired by Egbert, 1136, first dam by Woodford Mambrino, M. A. Sparks of Galt, \$1025; Clovis, sired by Sultan, 2:24, first dam by Thorndale, S. N. Straube, \$2000.

Brood mares—Crary, chestnut filley, sired by Steinway, 1808, three-year record 2:25½, first dam Old Dove, said to be Eclipse stock, with foal by Clovis, J. J. Hallian, \$285; Maud H, light-bay mare, sired by The Moor, 870, first dam Katydid, by Fireman, Pleasanton Stock Farm Company, \$340; Lady Wattles, bay mare, sired by Abbotsford, 2:19½, first dam Lady Budd, H. Pierce, \$525; Phaeola, roan mare, foaled 1887, sired by Silver

Threads, son of The Moor, sire of Beautiful Bells, dam of Hinda Rosa, 2:19½, and Sable, dam of Sable Wilkes, 2:18, first dam Minnehaha, H. Pierce, \$2175; Olita, iron-gray mare, sired by Nutwood, 2:18½, first dam Maud M., F. H. Burk, \$800; Mattie, bay mare, sired by Whipple's Hambletonian, 725, S. Straube, \$500; Nettie, four-year-old record 2:26, bay mare, sired by Elms, 891, first dam Lady Winkley, 2:34, M. Salisbury, \$510; Annie Laurie, three-year-old record 2:30, bay mare, sired by Echo, 462, dam by Jack Hawkins, J. N. Ayres, \$800; Ida Davis, bay mare, sired by Belnor, first dam Danville maid, S. N. Straube, \$325; Cambridge, bay mare, sired by

Jimmy, first dam Miss Arner, Thomas A. Pearson, \$80.

Trotting colts—Castro, iron-gray colt, sired by Clovis, 4909, first dam Carrie Stoner, Thomas A. Pearson, \$105; Arthur Orton, light bay colt, sired by Steinway, 1808, first dam Maud H., F. H. Kentfield, \$175; Steiner, full brother to H. R. Covey and Charles Deby, brown colt, sired by Steinway, 1808, first dam Kitty G., B. Gonzales, \$1500; Stein, bay colt, sired by Steinway, 1808, first dam Lady Wattle, C. H. Maddox, \$170; Coptis, brown colt, sired by Clovis, 4909, first dam Annie Laurie, T. Whitely, \$250; Syrian, bay colt, sired by Yosemite, 1808, first dam Kitty, H. M. Waterbury, \$50; iron-gray colt, sired by Clovis, 4909, first dam, Maud, Thomas A. Pearson, \$65.

Trotting fillies—Collette, bay filly, sired by Steinway, 1808, first dam Annie Laurie, S. P. Jefferson, \$365; Miss May, bay filly, sired by Steinway, 1808, first dam Kitty, Rosedale Stock Farm, \$220; Mattie Consuela, brown filly, sired by Steinway, 1808, first dam Mattie, S. M. Straube, \$1675; Nettie Seale, bay filly, sired by Steinway, 1808, first dam Nettie, A. W. Wilson, \$440; Cressida, brown filly, sired by Yosemite, 4906, first dam Maud H., George Ball, \$200; Ella D., chestnut filly, sired by Yosemite, 4906, first dam Nettie, M. Salisbury, \$340; Carrie Malone, bay mare, sired by Steinway, 1808, first dam Kitty G., D. M. Murphy, \$1600; Maggie McMahon, bay filly, sired by Cresco, 4908, first dam Annie Laurie, G. W. Woodward of Yolo, \$220; Eola C., bay filly, sired by Cresco, 4908, first dam Olita, H. Pierce, \$230; Chance, bay filly, sired by Cresco, 4908, first dam Miss Arner's saddle pony, Thomas A. Pearson, \$65; Cynet, bay filly, sired by Steinway, 1808, first dam by Woodford Mambrino, Rosedale Stock Farm, \$420; Theodosia, brown filly, sired by Steinway, 1808, first dam Mattie, S. M. Straube, \$800; Edie C., brown filly, sired by Cresco, 4908, first dam Kitty, T. A. Pearson, \$160; bay filly, sired by Steinway, 1808, first dam a gray Norman mare, T. W. Whiteling, \$80; Alla Y., bay filly, sired by Yosemite, 4906, first dam Alla, T. A. Pearson, \$150; Leoline, bay filly, sired by Clovis, 4909, first dam Leah, by Woodford Mambrino, W. Page, \$195; Milly H., brown filly, sired by Clovis, 4909, first dam Mattie, by Whipple's Hambletonian, S. M. Straube, \$310; Yonniolo, iron-gray, sired by Yosemite, 4906, first dam Steinola, by Steinway, W. Page, \$420.

Trotting geldings—Belnor, full brother to Stewart, 2-23, bay gelding, sired by Strathmore, 408, first dam Carrie Clay, E. Miller, \$300; Cleon, brown gelding, sired by Steinway, 1808, first dam Nourmahal, H. A. Rosenbaum, \$265; Conclave, bay gelding, sired by Steinway, 1808, first dam Annie Laurie, F. C. Talbot, \$205; H. R. Covey, bay gelding, sired by Steinway, 1808, first dam Kitty G., by Electioneer, Reina Hughes, \$1600; George D. Chapman, bay gelding, sired by Steinway, 1808, first dam Maud H., L. J. Rose, Jr., \$210; Conference, chestnut gelding, sired by Steinway, 1808, first dam Kitty Tricks, S. M. Straube, \$375; Charley G., bay gelding, sired by Cresco, 4908, first dam Lady Slasher, Joseph Rosenthal, \$175; Commentary, chestnut gelding, sired by Steinway, 1808, first dam Alla, Charles H. Ackerson, \$270; California, bay gelding, sired by Belnor, first dam Leah, by Woodford Mambrino, T. A. Pearson, \$140; Consul, bay gelding, sired by Belnor, first dam Alla, by Almot, T. A. Pearson, \$180; Caesar, bay gelding, sired by Steinway, 1808, first dam Olita, Pleasanton Stock Farm Co., \$510; Calaveras, roan gelding, sired by Belnor, first dam Phaceola, M. Hoeftich, \$300; Critt, chestnut gelding, sired by Steinway, 1808, first dam Lady Wattle, H. Pierce, \$110; W. S. Burpee, dark bay gelding, sired by Cresco, 4908, first dam Maud H., S. M. Straube, \$200.

Cleveland bays—Bay colt, sired by Duke of Wenlock, first dam Cook carriage mare, William Irwin, \$75; black colt, sired by Duke of Wenlock, first dam Bertie, T. A. Pearson, \$90; bay stallion, sired by Duke of Wenlock, first dam Dove, Jr., W. M. Newhall, \$145; bay colt, sired by Duke of Wenlock, first dam Sallie, F. H. Burke, \$170; iron-gray gelding, sired by Duke of Wenlock, first dam Maud, T. A. Pearson, \$75; bay colt, Star, sired by Duke of Wenlock, W. M. Newhall, \$75; gray filly, sired by Duke of Wenlock, first dam Maggie, T. W. Whiteley, \$115; brown colt, sired by Baron Hilton, first dam gray Norman mare, T. A. Pearson, \$80; brown filly, sired by Royal S. udley, first dam Puss, F. Moulton, \$105; bay filly, sired by Baron Hilton, first dam Cook carriage mare, F. Sanborn, \$80; chestnut filly, sired by Baron Hilton, first dam Old Dove, J. Whiteley, \$120.

Roadster geldings—Convention, bay gelding, sired by Steinway, 1808, first dam Kitty, Dr. H. E. Carpenter, \$235; Cleveland bay, Charles Ackerson, \$120; Comet, brown gelding, sired by Steinway, 1808, first dam Puss, William Bogan, \$150; Cato, gray gelding, sired by Steinway, 1808, first dam Dove, Jr., F. Bellmer, \$85; Curley, bay gelding, sired by Steinway, 1808, first dam gray Norman mare, Dr. Leonard, \$160; Colon, brown gelding, sired by Steinway, 1808, first dam Puss, T. A. Pearson, \$120; Centropio, brown gelding, sired by Steinway, 1808, first dam Bettie, G. Grindell, \$135; Cleveland, bay gelding, sired by Steinway, 1808, first dam Dove, Dr. Leonard, \$310; Sanford, black gelding, sired by Steinway, 1808, first dam Miss Arner, Joseph Rosenthal, \$155; Jumbo, brown gelding, sired by Yosemite, 4906, first dam Lucy, Arthur Williams, \$90.

The Citrus Fair at Riverside.

[No. 2.]

The recent brilliant exposition at Riverside calls for far more notice than could be squeezed into two columns; so we resume our description at the point where we found ourselves last week obliged to write "to be continued."

Reluctantly hurrying by the citrus displays of H. E. Allatt, G. W. Garcelon, Mrs. Magee, A. S. White and other Riversiders, we find on the west north table the North Anaheim or Fullerton exhibit—large, clean Washington Navel, Mediterranean Sweet, Paper-rind St. Michael, Tangerine and seedling oranges, Sicily and Lisbon lemons and Mexican limes, by the Semi-Tropical Fruit Co. and a dozen other contributors, beside Rambo apples by F. H. Keith, English walnuts by A. Langenberger, guava jelly by Mrs. R. J. Northam, and ostrich plumes and eggs from the Southern California Ostrich Farm Co. The eggs being about the size, shape and smoothness of our very largest oranges, some one called them "Anaheim Navels."

The next table southward bore the Glendora output, one of the finest brought in "from abroad." The fruit was of deep color and excellent flavor, comprising the most popular varieties of budded oranges, besides lemons, dried peaches and superior second-crop raisins, from M. R. and J. Baldrige, C. T. Robedeau and others.

In Ontario's display, which W. E. Collins cared for, the foremost feature was a pyramid of Washington Navels, large and uniform. There were also lemons and Mediterranean Sweet oranges.

In the northwest corner T. J. Swayne of San Diego showed very fine Washington and Australian Navel, Malta Blood, Mediterranean Sweet and Seedling oranges, Bonnie Brae, Sweet Kind and Lisbon lemons, Mexican limes, dessert raisins, olive oil and pickled olives.

Ventura county had the booth farthest from the door on the north side of the hall, where she was represented by displays from the orchards of N. W. Blanchard, H. C. Crumrine and E. S. Thacker.

The second booth from the stage, devoted to the Duarte of Los Angeles county, was fragrant and fascinating with choice fruit, free from insect pests. In making this exhibit there were used six boxes of Washington Navels, three boxes of Konabs, Baldwin's Favorite, Golden Kings and Du Roi seedlings, three boxes of Mediterranean Sweet, two boxes each of Malta Bloods, Paper-rind St. Michaels, Tangerines and Mandarins, two boxes of lemons, one box of Persian limes, one box budded and a large quantity of Mexican limes. The arrangement of this display was artistic and won much credit for Messrs. Chipendale, Scott and Watson, who had it in charge.

The next booth was divided between Etiwanda and Highlands. The former showed sun-dried apricots, preserved apricots, peaches, pears and grape jelly, by W. McBain, raisins, and a few plates of oranges and lemons of excellent quality. From the latter W. R. Ingham, Gov. Waterman and others had a variety of choice budded and seedling oranges, Lisbon and Eureka lemons, raisins and the citron of commerce, both green and dried. This display, which overflowed upon the table opposite, was praised highly. The last booth on this side nearest the entrance was well occupied with the products of East San Bernardino valley, as described in our previous article.

Up in the gallery H. B. Everest, the Two-goods and other Riverside growers had fine citrus fruits for which there was not room below.

Good apples in considerable variety were shown by Robert Strong of Westminster, Jasper and Sickler of Julian, and G. H. Keen, Cajon Pass. D. T. Russell of Riverside also had some nice White Winter pears.

A remarkable collection of apples from Arkansas—61 varieties—made by Col. Babcock and exhibited by W. S. Thomas of Little Rock, furnished an interesting study for pomologists. This was part of the collection which won the Wilder medal at Boston last September.

A creditable display of citrus fruits, English walnuts and raisins came from F. Cunningham's Agua Tibia ranch in San Diego county. Specimens of Elsinore's boasted coal attracted some attention.

The Oregon Fruit Evaporating Co. exhibited a large lot of dried cherries, plums and berries, and canned corn and fruit.

To Pomona's assortment of prevailing citrus products, A. R. Meserve added Japanese persimmons, C. F. Loop English walnuts from trees half a century old, Easter Beurre pears and pickled olives, and Mrs. Taylor some fine specimens of apples.

Besides his superb lemons and oranges, already spoken of, E. W. Holmes had the only show of "Zante currants" on the floor of the hall.

J. R. Noland had an orange, 21 months from the bud, that measured 14 inches in girth.

A case of beautiful raw silk, produced at Riverside from worms fed upon the osage orange, is mentioned by one correspondent.

Among the distinguished guests who visited the fair, besides the many members of the American Horticultural Society, were Gen. and Mrs. Fremont, Joseph Pulitzer of the N. Y. World, accompanied by Mrs. Pulitzer, and Luis Torres, Governor of Sonora, Mex. Gov. Torres has arranged for a large shipment of young budded

Riverside Washington Navel orange trees to his ranch in Sonora, as soon as he can get the ground prepared to receive them.

A very pleasing incident was the presentation of a complimentary ticket to the venerable and kindly Dr. J. P. Greves by Mr. Holt, with appropriate remarks on behalf of the pioneer settlers. This ticket was a solid silver plate 2½ by 4 inches, on which was engraved the following:

Southern California Citrus Fair.
February 7, 1888.
Complimentary to Dr. J. P. Greves,
The Father of Riverside.
L. M. HOLT, Manager.

The doctor was visibly affected by this congratulatory token from those who recognize the soundness of his judgment in locating the settlement 17 years ago.

What with the magnificent and unequalled exhibit, the delightful weather, and the number and character of those who attended, the Tenth Annual Citrus Fair at Riverside was in truth a memorable occasion.

A CACTUS IN BLOOM.—We give on page 165 an engraving showing the bloom of a species of echino-cactus. These plants are strikingly beautiful and could be used to much greater advantage in open-air situations in California than they are.



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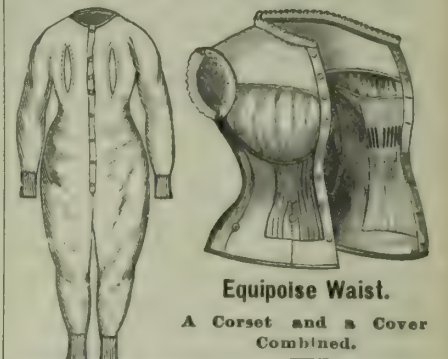
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A THOROUGHbred JERSEY BULL CALF, ONE month old and weaned. Is out of Corretta, with a butter test of 21 pounds of butter a day, who is also the dam of Fino, who took first premium over all competitors at State Fair. The calf is sired by a registered Bull from the best strain of butter stock. Apply to

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FOR RENT,

For Five Years or More,
3000 ACRES FARMING LAND
At \$1.50 per Acre.

10,000 ACRES GRAZING LAND
At 35 cents per Acre.

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WM. H. MARTIN, Manager,
Flood Building, 809 Market St., S. F.

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Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of
SANTA CRUZ COUNTY.
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Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil. TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for homes or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

E. de la CUESTA, Agent, Santa Ynez.

McCLUNG & PRAY, Agents, 325 Montgomery St., San Francisco.

SIDNEY LACEY, Agent, Los Angeles.

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Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES

At \$75 per Acre,

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. One hundred and seventy-five acres at Palermo are now being set out in the choicest varieties of Florida Orange Trees. Maps and further particulars of

McAFEE BROTHERS, Agents, 10 Montgomery St., San Francisco.

T. B. LUDLUM & CO., Agents, Oroville, Cal.

WEST COAST LAND COMPANY.

CONTINUED EXTRAORDINARY SUCCESS. 26,000 Acres sold in 17 months in subdivisions averaging about 80 acres, to over 300 families, and amounting to \$700,000.

38,000 acres to be closed out this year without any general advance in prices.

Location—San Luis Obispo County, at present terminus of the Southern Pacific Railway. A GRAND NATURAL PARK, and in climate, location, quality and price, far surpassing any other section of the State. Specially adapted to the production of wheat, oats, barley, olives, raisins, wine and all deciduous fruits.

RICH SOIL, NO WASTE, SUFFICIENT RAINFALL, NO IRRIGATION.

Average price \$25 an acre; terms five years, 6 per cent. These lands are selling rapidly, and parties interested in having a home in one of the finest sections of the State and on the through overland railway, should examine and select at once. Take S. P. Railway at San Francisco, to Templeton in 8 hours. Apply to or address

C. H. PHILLIPS, MANAGER,
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Well Drills
FOR EVERY PURPOSE
SOLD ON TRIAL.

Investment small, profits large. Send 20c for mailing large illustrated Catalogue with full particulars.

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GRAIN WAREHOUSE,
SAN FRANCISCO, CAL.
75,000 TONS CAPACITY. 75,000
Storage at Lowest Rates.
CHAS. H. SINCLAIR, Supt.
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Manufacturer of CUSTOM MADE
Boots and Shoes,
20 Fourth St., Pioneer Building.
FACTORY, N. E. Cor. Battery & Jackson,
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Full line of Ladies', Misses' and Children's Fine Shoes

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In Button, Congress and Balmorals; Opera and French Toes. SEND FOR TRIAL PAIR.

CUSTOM HEAVY WORK A SPECIALTY.

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Oil Tanks, etc., for Olive, Mustard, Rape, etc., Oil Manufacturing, FOR SALE on account of retiring from business.

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46 Sixth Street, San Francisco.

THE LOUISIANA TRACT!

SITUATE ONE MILE FROM THE FLOURISHING

City of Sacramento,

With a Population of 30,000, and

1/4 MILE from Terminus of an ELECTRIC RAILWAY, now in course of construction.
SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. 5 ACRES IN FRUIT, well attended to, will make a handsome income. One Acre in Strawberries will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$60, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

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EDWIN K. ALSIP & CO., REAL ESTATE AGENTS,
SACRAMENTO, CAL.

Catalogue of Lands issued monthly. Send for one.

HOMES and RANCHES!

E. TUCKER,

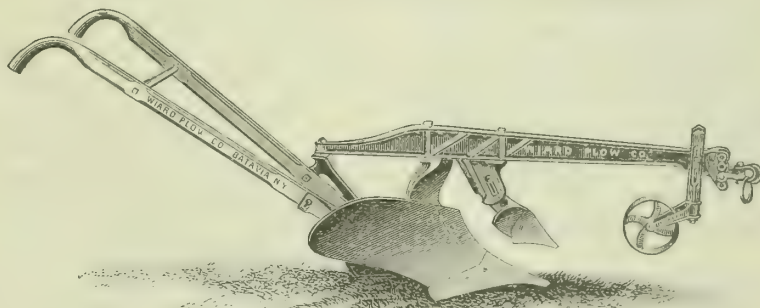
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Improved and unimproved lands to any extent from 5 to 5000 acres with good, comfortable homes and all necessary conveniences, for sale on desirable terms. These lands require no irrigation, Railways convenient, ample supply of water, and the climate cannot be surpassed. Apply as above.

THE WIARD PATENT HAND AND SULKY PLOW,

With Either Chilled Iron or Steel Moldboards.



For General Purposes—For Fruit Culture.

Flat Land Plows with Wood, Cast, or Malleable Iron Beams.

Swivel Plows for Level Land or Side Hill, with Late and Important Improvements.

OUR PLOWS ARE FIRST-CLASS IN ALL RESPECTS,

And take the lead wherever introduced.

We offer to sell exclusively to good, responsible, live men at Central Points in the Pacific States, and solicit correspondence and inquiries.

WIARD PLOW COMPANY,
BATAVIA, N. Y.

CACTUS BARB WIRE,

Twisted Ribbon,

FLAT STEEL RIBBON FENCING,

PLAIN WIRE,

WIRE STRETCHERS,

FENCE STAPLES,

Mesh Wire and Steel Garden Gates.

Special Prices Quoted for Large Lots.

SEND FOR PRICE LIST.

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WINCHESTER HOUSE,

44 Third Street, San Francisco, Cal.

This Fire-proof Brick Building is centrally located, in the healthiest part of the city, only a half block from the Grand and Palace Hotels, and close to all Steamboat and Railroad Offices.

Laundry Free for the use of Families
HOT AND COLD BATHS FREE.

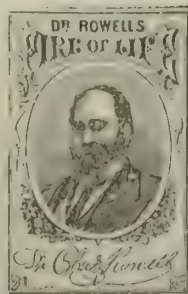
Terms, Board and Room, \$1.00 per Day

And upward.

ROOMS WITH OR WITHOUT BOARD.

FREE COACH TO THE HOUSE.

J. POOLEY.



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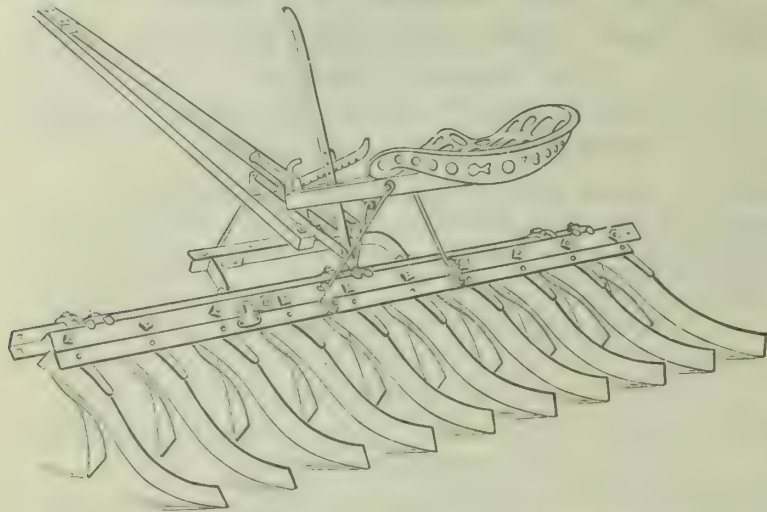
A MAGIC CURE

Rheumatism, Neuralgia, Pneumonia, Paralysis, Asthma, Sciatica, Gout, Lumbago and Deafness.

Every body should have it.
G. G. BURNETT, Agt
327 Montgomery St., S. F.
Price, \$1.00. Sold by all Drug-gists. Ask Call and see

DR. CHAS. ROWELL.
OFFICE, 426 Kearny St.,
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ACME PULVERIZING HARROW, CLOD CRUSHER & LEVELER.



DON'T BE DECEIVED BY WORTHLESS IMITATIONS.

All genuine bear Trade-Mark, have Steel Clod Crushers, Double FLEXIBLE Gang Bars, and the Improved Style also has

ADJUSTABLE REVERSIBLE COULTERS,

Which when worn may be turned end for end, thus giving double the amount of wear. Works the entire surface of the ground. No other Harrow combines these points.

Sizes: 3 to 12 Feet. With or without Sulky.

ILLUSTRATED PAMPHLET FREE.

DUANE H. NASH, Sole Manufacturer,

MILLINGTON, MORRIS COUNTY, NEW JERSEY.

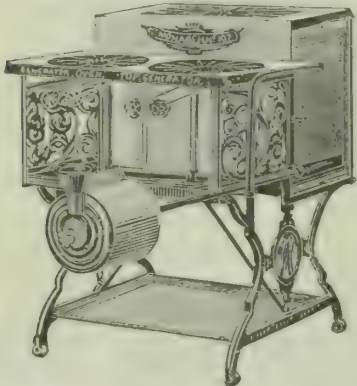
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BULL & GRANT FARM IMPLEMENT CO.,

14 & 16 Main St., San Francisco, and 211, 213 & 215 J St., Sacramento, and

STAVEL & WALKER, Portland, Oregon.

No. 107-\$25.00.



MONARCH GASOLINE RANGES

ARE THE BEST.

Gasoline Stoves, \$5 to \$35. Gas Stoves, 75 cents to \$35. Oil Stoves, 75 cents to \$30.

WOOD AND COAL RANGES.—Royal, No. 6, \$16. No. 7, \$20. Pacific No. 6, \$18. No. 7, \$25. Lamps, 20c. to \$10. Hanging Lamps, \$2 to \$20. Agate Ware, Tin Ware, and Kitchen Ware at low prices.

JOHN F. MYERS & CO.,

Opp. Baldwin Hotel, 863 Market St., S. F.

HELPS for PLAYERS & SINGERS.

In addition to a large Instruction Book, such as the New England CONSERVATORY METHOD (for the Piano, \$3), every pupil needs a great deal of easy music for practice. This is found in a very cheap and convenient form in

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Of collections of Studies and Exercises for Piano, we publish no less than Two Hundred and Thirty! Please send for lists and catalogues.

HANDY BOOKS FOR MUSIC LEARNERS ARE:

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Very useful musical writing book.
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OLIVER DITSON & CO., Boston.

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LITTLE'S CHEMICAL FLUID NON-POISONOUS

SHEEP DIP.



One gallon, mixed with 63 gallons of cold water, will dip thoroughly 180 sheep, at a cost of 1 cent each. Easily applied; a nourisher of Wool; a certain cure for SCAB. Also,

LITTLE'S PATENT POWDER DIP.
(POISONOUS.)

Mixes instantly with water. Prevents the fly from striking. In a 2 pound package there is sufficient to dip twenty sheep, and in a 7-pound package there is sufficient to dip one hundred sheep.

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SUCCESSORS TO FALKNER, BELL & CO.,
No. 406 California Street,
SAN FRANCISCO, CAL.

NO SECOND APPLICATION!

The parties who have used our New Cleanser write us that they are surprised at its staying qualities. The scale, the aphids, etc., do not like to go back again where it has been used. It makes a RESISTANT STOCK of the tree.

After two years' experience, we have to announce that there has not a single case come to our knowledge where the Woodbury Tree Cleanser has not fully and satisfactorily accomplished everything that has been promised.

By reference to a late report from Prof. Klee, we observe he states that he has found very good results from it in almost every case, and that he has encountered no occurrence of any injury from its use. We are informed that it has his recommendation as a thorough-going, successful and cheap Winter Wash; and it is certainly endorsed by the leading orchardists in the State. [Please send for their published letters.]

It has had an unexampled success in exterminating Scale on all kinds of Fruit Trees. It is sent all ready for use, and instructions, which are very simple, are furnished with every package.

Price 3½ cents per pound in cases, 80 pounds in a case; in 8-pound cans, same price, 15 cents extra for can; 3½ cents per pound (10 per cent off) in barrels; about 400 pounds in a barrel.

We also make a fine

ROSIN WASH,

Containing no Kerosene, perfectly harmless and thoroughly successful. This is the valuable remedy strongly recommended by Prof. Klee for the Cottony Cushion Scale or "Icerya." Price ½ cent per pound higher than the Woodbury Tree Cleanser. We also manufacture the fine Anti-gumming Farm Machine Oils and general Lubricating Oils. We respectfully solicit correspondence.

WOODBURY OIL COMPANY,

123 CALIFORNIA STREET,

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FERTILIZERS!

Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

California Bone Meal and Fertilizer Co.,

116 CALIFORNIA ST., SAN FRANCISCO.

"QUICK MEAL" Gasoline Stoves.

No Smoke, No Soot and Absolutely Safe.

Less Expensive to Operate than Wood or Coal Stoves.

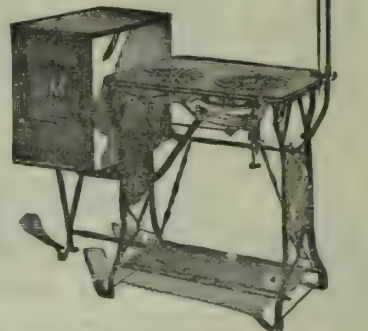
SMITH & CO.,

Pacific Coast Agents,

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All Sizes of Stoves.
Catalogues Mailed Free.



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ENTERPRISE
Self-Regulating
WINDMILL

Is recognized as the
BEST.



Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating,

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order, as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES (as always before),
LIVERMORE, ALAMEDA CO., CAL.

San Francisco Agency, JAMES LINFORTH
120 Front St., San Francisco.

J. L. HEALD'S
AGRICULTURAL WORKS,
Crockett, Contra Costa Co., Cal.

Stationary Engines and Boilers.

Portable Straw-Burning Boilers & Engines.

IRON AND BRASS CASTINGS.
Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,
including Grape Crushers and Stemmers, Elevators, Wine Presses and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.

RESISTANT VINES—RIPARIA.

One Year from Cuttings. Address

A. DRAHMS,

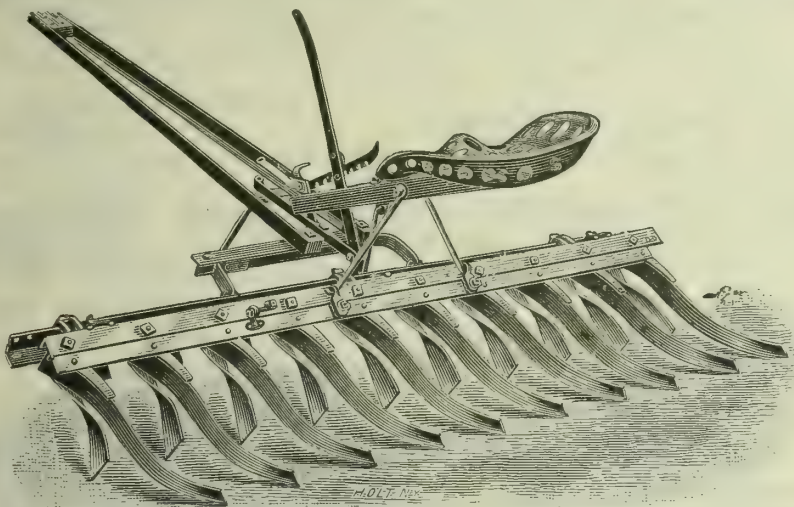
Sonoma, Cal.

The Acme Harrow.

One of the most largely used implements for fine tillage in this State is the Acme Pulverizing harrow, clod-crusher and leveler. Our readers are aware that we have often referred to this implement and commended it. It has been continually improved by its enterprising manufacturer, Duane H. Nash of Millington, N. J., and the engraving on this page shows it in its present form.

The Improved "Acme" Pulverizing harrow not only has flexible gang bars practically like the old style, but the coulters are both reversible and adjustable. By reversible is meant that when the coulters are worn on the end they may be turned about end for end, thus giving double wear and making each coulters worth double an old-style coulters. By adjustable is meant that the coulters may be adjusted to the right or left so as to overlap and cut over the entire surface of the ground, or, where there is rubbish, can be made not to overlap so as to avoid almost entirely clogging in rubbish. These are important considerations and are commended to the attention of our readers. The Acme may be seen at the Bull & Grant Implement Co.'s places in S. F. and Los Angeles.

THE LAST OREGON WOOL CLIP showed an increase in quantity of about 15 per cent as compared with the previous year; the quality of the staple remains about the same; but the clip of Eastern Oregon was delivered in a dirty and unmerchantable condition. The Willamette



THE ACME HARROW.

valley wool was somewhat off color and dingy in its appearance, the demand and price being both lessened by this circumstance. There has been a slight increase in the number of merinoes in the Willamette valley, and their wool is also a shade better in quality. There has been but a slight demand for the bulk of our wool. Choice grades sell readily at fair prices, but inferior, poorly packed and dirty wool remains on hand and cannot be forced upon the markets of the country. I cannot impress too strongly upon the farmers of Oregon the importance of making every effort to improve their sheep, and to furnish wool that has been carefully sheared and properly packed, free from dirt and foreign matter of all kinds.—Cor. Oregon Ex.

THE PALERMO NURSERY AND CITRUS ASSOCIATION has filed articles of incorporation. Its objects are to buy and sell lands, water and water rights, to buy, sell, and grow trees, and to engage in the general business of fruit-growing. The capital stock is to be \$60,000, of which amount \$5700 has been subscribed as follows: Irwin C. Stump, \$1500; W. F. Bogart, \$600; E. W. Townsend, \$600; O. W. McAfee, \$1500; A. S. Baldwin, \$1500.

CITRUS JAPONICA.—A few mornings since Mr. Amore, of the Japanese Tree-Importing Company, gave us a handful of the fruit of the *Citrus Japonica*, which are a pleasing novelty in the citrus line. Dainty little oranges they are, the size and shape of a Queen olive, juicy and finely flavored. You may eat one up at a mouthful, peel and all. The trees, he informs us, grow to a height of 12 feet and bear profusely.

A BILL to provide for the establishment of an experimental grass and forage-plant farm, and for conducting experiments relating to grass and forage plants, has been introduced in Congress by Senator Platt of Connecticut.

HOLSTEIN-FRIESLIANS.—The advertisement of J. B. Fort & Sons, which appears in this issue of the RURAL, will scarcely be overlooked by those who are interested in thoroughbred cattle.

THE President and Mrs. Cleveland, with Secretary and Mrs. Whitney, Col. and Mrs. Lamont, have gone down to Jacksonville, Florida, to visit the Sub-Tropical Exposition.

THE PACIFIC RURAL PRESS is the leading agricultural weekly of the Pacific Coast. It is the acknowledged authority on all farm topics.—*Marysville Budget.*

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING FEBRUARY 14, 1888.

- R. 10,901.—GAS REGULATOR—M. J. Amick, Portland, Ogn.
- 377,801.—RUBBER HOSE—James Crampton, S.F.
- 377,743.—DEPRESSION PULLEY FOR CABLE RAILROAD—G. W. Douglas, S. F.
- 378,002.—STREET-SWEEPING MACHINE—Wm. Haas, S. F.
- 377,829.—WASHING-MACHINE—N. S. Johnson, Portland, Ogn.
- 377,760.—AMALGAMATOR—W. & G. W. Johnson, Portland, Ogn.
- 378,056.—GATE—R. B. Lyon, Sonoma, Cal.
- 377,785.—DAMPER REGULATOR—Jos. St. Mary, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

Everything for the Garden

Is the comprehensive title of Peter Henderson & Co.'s Catalogue advertised in our columns. It is a handsome book of 140 pages, illustrated by three colored plates, containing hundreds of illustrations of flowers, fruits and vegetables, improved implements, etc. The "instructions for culture" are written by Peter Henderson, the well-known authority on everything pertaining to garden work. This book, "Everything for the Garden," is mailed on receipt of 25 cents, which is about half its cost, on the understanding, however, that parties ordering will say in what paper it was seen advertised.

Gabilan Rancho.

Containing 7665 acres, situated near Salinas City, Monterey County, is offered for sale. For particulars address J. C. HOAG, 312 Van Ness avenue, San Francisco, or TYLER BEACH, San Jose, Cal.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,
T. A. SLOCUM, M. C., 181 Pearl St., New York.

Buena Vista Rancho.

This fertile tract of land, containing 7725 acres, has been platted into 60 farms suitable for mixed farming and fruit growing. It is four miles from Salinas City, Monterey County, and will be sold at low prices and on liberal terms. Address J. C. Hoag, 312 Van Ness avenue, San Francisco, or Tyler Beach, San Jose, Cal.

100,000 Fruit Trees for Sale

At reduced prices, consisting of Apple, Pear, Peach, Apricot, French Prune, Walnut and other trees. Palms, Greivias, Monterey Cypress, etc. Trees are guaranteed to be absolutely free from scale or other insects. MILTON THOMAS, P. O. Box 304, Los Angeles, Cal.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., Room 3.



CELEBRATED FASHION CATALOGUE

For Spring and Summer, 1888. Will be ready for Delivery, March 10, 1888.

No lady can afford to be without it, because: It is the largest and most complete shopping guide to be found in this country; it illustrates and lists everything for Ladies', Gents', Children's and Infants' Wear, House-keeping Goods, etc., etc. at prices lower than those of any other house in the United States.

Every article guaranteed as represented, or will be exchanged or money refunded.

Goods delivered FREE OF CHARGE (under certain conditions) at any express office in the United States.

Applications for Catalogue, inclosing Six Cents for Postage, should be sent in At Once, as this edition is limited.

Sixth Ave., and 20th St., New York.



"DISEASES OF THE DOG" is the title of a new volume of nearly 300 pages by John Henry Steele of Bombay, the distinguished professor of veterinary science. The work has been carefully prepared to meet the want of a modern systematic text-book of canine practice, is copiously illustrated, elaborately indexed and handsomely printed by Jno. Wiley & Sons of New York. The price is \$3.50. For sale by Payot, Upham & Co., S. F.

Injurious Insects of the Orchard, Vineyard Field, Garden, Conservatory, Household, Storehouse, Domestic Animals, etc., with Remedies for their Extermination,

By MATTHEW COOKE,

Late Chief Executive Horticultural Officer of California. Illustrated with over 750 wood-cuts and 25 pages of classified illustrations. This book is designed for the use of orchardists, vineyardists, farmers and others interested in the subjects treated. It is designed to convey practical information concerning some of the species of insects injurious to the industries of cultivators of the soil, and those interested in earth produce generally. Price \$4, postpaid. For sale by Dewey & Co., publishers, 220 Market St., San Francisco.

GORGEOUS in its coat of many colors—blue, green and orange, crimson and gold—comes the catalogue of J. O. Vaughan's great Chicago seed store; and its 80 quarto pages are not only illustrated by countless admirable engravings, but also embellished with several full-page chromo lithographs of choice melons, floral novelties and climbing plants.

"TESTED SEEDS."—Hiram Sibley & Co. of Rochester, N. Y., and Chicago, have sent us their illustrated annual for 1888. It includes vegetable and flower seeds, greenhouse plants, roses, small fruits and implements.

A RAILROAD from St. Paul, Minnesota, to Pekin, China, bridging Behring's Strait, is talked of seriously.

Dewey & Co.'s Scientific Patent Agency.

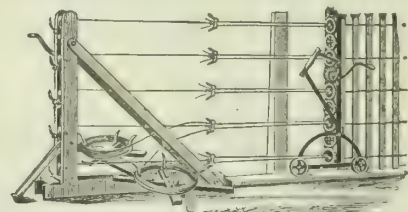


OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library, containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free.

DEWEY & CO., Patent Agents.

No. 220 Market St. Elevator 12 Front St S. F. Telephone No. 658.

A. T. DEWEY. W. B. EWER. GEO. H. STRONG.



The LITTLE GIANT.

The greatest fence loom on earth. Fully covered by patents. A sure impediment to the rabbit. Only weighs 30 pounds. Can be operated by a child as well as a man. You are not compelled to pull a cumbersome track over the rough ground. All that is needed is a or mmon board laid upon the ground. Estimates for material made when wanted. Correspondence solicited with hardware men generally. Price, \$40.

THOMAS D. POOLE,

1906 San Antonio Ave., Alameda, Cal.

DUTTON GRINDER



Can be carried into field and attached to Moving Machine Wheel. New Descriptive Catalogue free. HIGGANUM MANUFACTURING CORPORATION, Successors to R. H. ALLEN & CO., 189 Water St., N. Y. Main Office, Higganum, Conn.

HAND BOOK OF TULARE COUNTY

The Tulare Register has just issued a bound volume of 221 pages, chock full of historical, descriptive and statistical information regarding that great and growing county. It answers every question a home-seeker will want answered about the county, and answers correctly. Sent post-paid on receipt of \$1. Address

THE REGISTER, Tulare, Cal.

HEALD'S BUSINESS COLLEGE,

24 POST ST., S. F. FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Book-keeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the state. SEND FOR CIRCULAR. E. P. HEALD, President, C. S. HALEY, Secretary,

Engraving Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of this paper.

CHAS. E. WILSON, Attorney-at-Law, 420 CALIFORNIA ST., SAN FRANCISCO. Special attention to practice before the U. S. Land Office and Interior Department.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen-Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Geo. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

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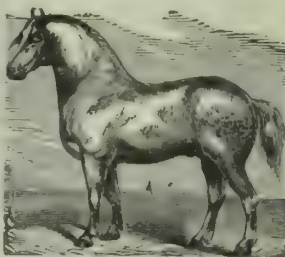
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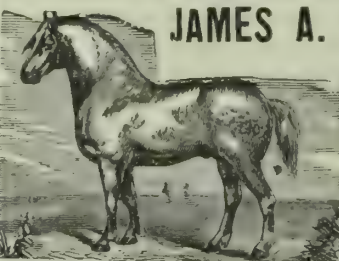
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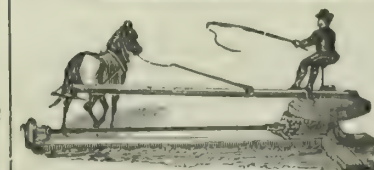
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and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made \$18 one day, \$76.50 one week. So can you. Proofs and catalogue free. J. E. SHEPARD & CO., Cincinnati, O.

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Send for Catalogue and Price List.

S. H. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 22, 1888.

The weather the past week was variable, with a higher temperature and in some of the districts accompanied by high warm winds. In farm products trading the past week was fairly active. Eastern and European advices the past week have been reporting from day to day, strong wheat markets, with higher bids at the close. As we go to press upon the 22d, a legal holiday, the latest cablegrams available are as follows:

LIVERPOOL, Feb. 21.—Spot wheat, steady. Nos. 1 and 2 wheat, Standard California, including Club wheat, highest price 5½¢, 5¼¢@6½¢; Red American spring, 6s 8d. Later—3:30 P. M.—Demand improving.

California Products in Chicago.

CHICAGO, Feb. 18.—Receipts of fruit from California increased somewhat the latter part of this week. Desirable fruit is wanted, while ordinary grades have slow sale. California Riverside oranges, \$3@3.75; other kinds, \$3@3.25; Navel, \$3.50@6.25.

California dried fruits continue steady. There is a moderate demand and in a small way there is a fair trade. Nectarines are dull, and they are the only description which is not readily placed. We quote: Peaches, sun-dried, in sacks, ½ lb, 10¢@12¢; do, evaporated, unpeeled, in sacks, ½ lb, 12¢@14¢; do, boxes, ½ lb, 13¢@15¢; do, peeled, in sacks, ½ lb, 17¢@22¢; do, in boxes, ½ lb, 22¢@25¢; apricots, sun-dried, in sacks, ½ lb, 10¢@11¢; do, evaporated, in sacks, ½ lb, 12¢@15¢; plums, pitted, in sacks, ½ lb, 12¢@13½¢; prunes, small, ½ lb, 8¢@10¢; do, fancy large, ½ lb, 13¢@14¢; nectarines, according to quality, in sacks, ½ lb, 5¢@12½¢; raisins, loose Muscates, two-crown, ½ box, \$1.50@1.60; do, three-crown, ½ box, \$1.75@1.80; do, London layers, ½ box, \$2.25@2.40.

Beans are quotably very firm. The offerings remain small and the consignment lots consist mainly of small parcels. There is a moderate demand, but owing to high prices the inquiry is restricted to providing for consumptive requirements. Fine navy beans, in particular, are scarce. Quotations for California, according to quality, \$2.60@2.90.

California strained honey, 7¢@8¢.

Hops are quiet and the demand is still light. Sales are only made in a small way. There were no new features or conditions in the market. Choice grades are scarce and steadily held, while common qualities are plenty and weak. Pacific Coast, choice, 12¢@14¢ ½ lb, common to prime, 10¢@12¢.

Wool.

NEW YORK, Feb. 20.—The demand is fair in the wool trade in the fine grades, with prices well supported. Liberal sales were made for New York in Texas and secured at about current prices, which means no profit to owners, considering the first cost. The following are quoted: 17,000 lbs scoured California, 40¢@50¢; 25,000 lbs Eastern Oregon, 20¢@22¢; 15,000 lbs fine Wyoming, 15¢@50,000 lbs Territory, 18¢@23¢; 10,000 lbs washed fleeces, 35¢@40¢; 8,000 lbs No. 1 washed, 35¢; 10,000 lbs quarter blood combed, 36¢; 12,000 lbs X and XX, 3¢@32¢; 25,000 lbs short extra pulled, 21¢@40¢; 40,000 lbs Texas fall, 18¢@23¢; 30,000 lbs Texas fall, 17¢; 10,000 lbs spring, 17¢; 5,000 lbs fine unwashed, 20¢; 10,000 lbs Australian, 64¢; 500 lbs Montevideo, 26½¢; 10,000 lbs Dinkoi combed, 27¢; 10,000 lbs Dinkoi combed, 24¢; 300 bags Texas and Territories, 47¢@48¢.

Boston sold 2,860,000 lbs domestic, including 134,000 lbs California and Oregon, and 759,200 lbs foreign, at fair prices.

Philadelphia reports a good attendance of buyers and sales of 678,000 lbs.

Miscellaneous.

NEW YORK, Feb. 20.—Considerable grain has been exported, but breadstuffs as a rule are not active. The reduced Chicago elevator rates are approved here.

The decline in bar silver has some significance in the wheat interest, because it may cheapen the Indian crop near market abroad.

Lima beans sold freely, and advanced to \$2.60 at close. White were quoted at from \$2.50@2.60.

Raisins are going out steadily in jobbing way, the under grades bringing good prices, extras being scarce.

Mustard seed is entirely nominal, at from 3¼¢@4½¢.

Honey has sold at 7½¢ for large cans, State and Florida small packages at from 6¢@8¢.

Hops move only in a peddling sort of way at old prices.

Hides are not materially changed, with sales of 6700 California.

Chicago Orange Market.

CHICAGO, Feb. 17.—The weather, which has been very cold for some time, has moderated considerably this week and there are hopes that there will be no more of it this year. Florida oranges are becoming scarce and the receipts are becoming smaller, while the receipts of fruit from California, though not large at present, are increasing and will become heavier as the weather gets warmer. Desirable fruit of all kinds are firmly held. Choice small oranges, which meet with good demand, are scarce. Ordinary grades, as a rule, are slow, still there is some sale for them. Following are the prices quoted today: California Riverside, \$3 and \$3.75; California Navel, \$5.50 and \$6.25; California, other kinds, \$3 and \$3.25.

Local Markets.

BAGS—The demand for Calcuttas is slack, due chiefly to more unfavorable crop weather. With warm rains soon, it is claimed that the inquiry will improve. Standard size June-July delivery are held at 7½¢@8¢.

BARLEY—The market has been steadily gaining in strength with a very strong closing on yesterday. Trading on Call in futures was more active at advancing prices. Sales on Call yesterday were as follows:

Morning Session: Buyer season—200 tons No. 1 feed, 86½¢; 100, 86½¢; 200, 86½¢; 100, 86½¢; 1500, 86½¢; 100, 86½¢; 200, 86½¢; 100, 86½¢; 200, 86½¢; 500, 86½¢; 1000, 86½¢; 200, 86½¢.

600, 86½¢. Buyer 1888—100 tons No. 1 feed, 92½¢; 200, 92½¢; 100, 92½¢; 500, 92½¢ ½ ctl. Afternoon Session: Buyer season—100 tons No. 1 feed, 86½¢; 500, 86½¢; 1000, 86½¢. Buyer 1888—100 tons No. 1 feed, 93¢ ½ ctl.

BUTTER—The market is easier under heavier supplies of both Eastern and Californian. The demand the past few days was slower, owing to warmer weather. Some sales had to be made at less than quoted so as to clean up consignments.

CHEESE—Choice mild is very firm at full prices with another advance obtainable. The demand is exceedingly good.

EGGS—The lower market is causing a larger consumption, but as the weather is warmer consignments have to be worked off quickly so as to prevent their spoiling. The market appears steadier at the decline.

FLOUR—The market is steadier for Californian, but easier for Oregon and Washington.

WHEAT—The market has been gradually strengthening the past week in a quiet way. Buyers are operating cautiously so as not to cause prices to go up too suddenly. On Call trading the past week was more active, and at advancing prices. Yesterday's sales were as follows:

Morning Session: Buyer season—100 tons No. 1 white, \$1.39 ½; 100, \$1.39 ½; 100, \$1.39 ½ ½ ctl. Afternoon Session: Buyer season—100 tons No. 1 white, \$1.39 ½ ½ ctl.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to Feb. 19, '87.	July 1 '87 to Feb. 18, '88.
Flour, qr. sks.	3,100,290	2,341,150
Wheat, cts.	10,095,023	6,227,841
Barley, cts.	1,874,719	1,761,201
Oats, cts.	113,028	138,982
Potatoes, sks.	657,162	824,181
Corn, sks.	69,502	157,073
Rye, sks.	18,954	15,605
Buckwheat, sks.	5,253	2,732
Beans, sks.	378,276	350,682
Bran, sks.	323,575	337,867
Hay, tons.	68,354	81,833
Salt, tons.	15,773	11,160
Wool, bls.	45,164	39,700
Hides, No.	71,289	67,132
Raisins, 20-lb boxes.	132,685	103,218
Quicksilver, flasks.	11,307	19,887
Hops, bls.	12,618	14,664

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to Feb. 19, '87.	July 1 '87 to Feb. 18, '88.
Flour, sks.	96,853	175,051
Wheat, cts.	402,651	695,875
Barley, cts.	4,977	75
Oats, cts.	274,660	160,835
Corn, cts.	76,315	12,590
Wool, bales.	9,060	7,331
Bran, sks.	27,918	46,648
Hops, bales.	754	373
Hides, No.	21,994	22,889
Rye, cts.	757	757
Potatoes, sks.	59,978	27,306

Cereals.

J. E. Beerbohm's London Evening Corn Trade List of Jan. 27, in its weekly review, says: Some additional official reports regarding the Indian wheat crop have been published this week, which give the following results: In the Central Provinces the general prospects were very favorable, both as regards the area sown and the condition of the crop; area last year, 4,267,949 acres. In the Northwest Provinces and Oudh the prospects on the whole were fairly promising, the area sown being much the same as last year, viz., 4,962,942 acres. In the Punjab the want of rain appears to have caused a smaller area to be sown than in the previous year, when 5,943,400 acres were under wheat, and although the outlook at the end of December was fairly good, rain was required. In the Bombay Presidency the area sown was larger in some but smaller in other districts, the result on the whole being a slight decrease compared with the previous crop, which was produced from 2,860,454 acres; the condition, however, was on the whole good. The above-named Provinces produce two-thirds of the total wheat crop in India, and it will be seen that on the whole the outlook was good, but not by any means brilliant; the area sown appears to be about the same as in the previous year. Last week the shipments of wheat from India were only 6000 qrs. against 97,000 qrs. in the corresponding week last year; and according to last postal advices from Bombay and Calcutta there was a continued scarcity of cargo, and consequently a very dull freight market, the tonnage supply being quite in excess of the demand.

The Russian wheat crop of 1887 is now officially reported at 223,600,000 bu., not including Russian Poland, which had in 1886 a wheat crop of 30,141,000 bu.

The United Kingdom's supplies of wheat and flour from Sept. 1, 1887, to Feb. 5, 1888, have been equal to 96,722,220 bu. of wheat, comprised in 34,626,587 bu. of wheat of her own production and 62,195,632 bu. of foreign, including 19,658,024 bu., or about 30 per cent, in the form of flour, and 42,537,608 bu., 70 per cent, in wheat in the berry. The wheat crop of the United Kingdom in 1887 is probably about 76,490,576 bu., from 2,387,518 acres area, or 32 bu. per acre. The quantity already delivered to February 5th is probably about one-half that grown in 1887 that is available for food. The quantity on passage to February 1st for the United Kingdom was 11,296,000 bu. The consumption of the United Kingdom, with its 37,500,000 of population, at 5½ bu. per capita, is about 206,250,000 bu. for bread, and for feeding 2,387,518 acres, at 2½ bu., 5,371,915 bu., or about 211,621,915 bu. total annual requirements.

Eastern advices do not report any material change in the condition of crop prospects. The visible sup-

ply of wheat is being steadily reduced, that reported on Saturday last being slightly over 29,500,000 bushels, against about 61,000,000 bushels at the like time in 1887. The export movement is light, but the home consumption is very heavy. It now looks as if the supply on August 1st of this year will be less than for years, which necessarily will have a favorable effect on prices.

Oregon advices report a free movement of wheat up to Saturday, when under an improving market abroad holders were firmer in their views and not disposed to sell. The shipments to this port are very heavy in both wheat and flour. The export movements are of large proportion. Crop prospects in both Oregon and Washington Territory are reported to be good.

In this State wheat is growing quite scarce under a continued free export movement and large home demand. Choice grades of both milling and shipping are hard to get; the bulk being poor to fair with at times some parcels of good; the better grades being bought for export. The crop prospects are not so good in many sections owing to strong winds having sapped much of the moisture out of the ground. Rains even now are wanted in nearly all sections. In the local market, trading the past week was more or less restricted by the light obtainable supply of the better grades. That called choice is only good, while that called good is only fair.

In barley the market showed more activity the past week for the better grades of chevalier and brewing, under a good shipping demand. The East is drawing quite freely of bright brewing, which is getting scarce. Choice feed is doing better, and as for that, all grades show an appreciation in values. The consumption of both brewing and feed in this State is reported to be large. A large proportion of the barley for feed was either rolled or ground, for cattle and fattening hogs. The crop prospects are not as good as they were a few days ago.

Corn weakened off for fair to good, but held strong for choice. Receipts continue fair, as does the call.

Choice milling oats are scarce, but other grades are in liberal supply, with an easy tone reported. Parcels, to save expenses, can be had on wharf for less money than quoted. The consumption is reported to be good considering how cheap barley is in comparison.

Rye and buckwheat hold steady, with only a fair demand reported.

Feedstuff.

The market for ground feed shows very few changes. Bran and middlings are steady, while barley is firmer. Feedmeal is fairly steady.

Hay rules very strong. Short pasture continues in seller's favor. The supply of choice is about exhausted, while even good grades are quite scarce. Poor to fair grades constitute the bulk offering. Straw is in good demand. It is taken for chop feed purposes.

Fruits.

Choice apples are reported to be growing scarce, which strengthens other kinds.

Oranges are coming to hand more freely. The quality is improving. Poor oranges are slow and sold chiefly to peddlers. Good to choice oranges meet with a quick market for local consumption and shipping up North. Heavy shipments by rail to the East are reported. Only the best selected are being sent by several of the largest shippers.

Limes and lemons are meeting with a freer call, owing to warmer weather, but as the supply is large, prices are not quoted higher.

In dried fruits, there is a good coast demand for apples. Peaches and apricots are in good request, with prices tending up. Sales of some choice, bright peach are reported as high as 11¢ against 10¢ four weeks ago. Apricots are scarce. Plums are in good supply, but prunes are scarce, as are nectarines.

Some Turkish prunes in large hogheads have come to hand, but owing to irregular quality and general unattractive appearance, sell slow even at the low price of 5¢ per lb., Californian being taken in preference at a much higher price.

Liver raisins are about out of market. Choice loose Muscates are getting scarce. The stock of all kinds is very light, not enough to meet the home trade.

Live-Stock.

The market is strong at full prices for stall-fed bullocks and extra choice grass-fed, but weak for poor to fair and also for bullocks called good. The consumption is lighter. The supply coming in is chiefly from distant points; even Oregon is sending us both bullocks and sheep. Sheep are not quite so firm, owing to the lessened consumption and a slightly increased supply offering on the market. Veal and spring lambs are scarce and fetch good prices. Packers are out of the market for hogs, owing to the extreme high prices being against them. Several packing firms are buying, but they sell the meat to Chinamen and butchers. For this purpose large hogs are not wanted, only block hogs are required. There is a good call for stock hogs, the price being governed by the kind or breed. In milch cows, there is a good call, with fair prices paid for those in good condition and good milkers. In horses there are no changes to note; common workhorses are slow and hard to sell. The following are wanted and fetch full prices: General utility, single-footers and matched teams.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed, and one-half from the price of grass-fed, that is animals running at large).

BEEF—Stall-fed, 8½¢@9¢ per lb.; grass-fed, extra, 7½¢@8¢ per lb.; first quality, 7¢@ — per lb.; second quality, 6½¢@7¢ per lb.; third quality, 5½¢@6½¢ per lb.

VEAL—Choice, 12½¢@15¢ per lb.; fair to good, 8¢@10¢ per lb.

MUTTON—Wethers, 9¢@10¢ per lb.; ewes, 9¢@9½¢ per lb.; lamb-spring, 15¢@17½¢ per lb.

HOGS—On foot, grain-fed, 6½¢@6¾¢ per lb.; dressed 9¢@10¢ per lb.; soft, 5½¢@6¢ per lb.; dressed, 7¢@10¢ per lb. Stock hogs, 3½¢@5½¢ per lb.

Vegetables.

Receipts of potatoes continue free, causing buyers to bid down, so as to have their wants met. Although prices are shaded, yet a lower range is almost certain unless receipts fall off. Oregon is sending us liberal supplies, considerably in excess of last year at this time.

Heavy receipts of onions caused the market to shade off, with a weak feeling at the close. The

more choice good keepers are taken to fill distant orders.

Mushrooms are in free receipt. Asparagus and tomatoes come in sparingly. It is claimed that the warm belt will begin to ship quite freely next month of early vegetables. Cabbages are taken for distant shipments. The market holds firm. In root vegetables, there is nothing new to report.

Miscellaneous.

Owing to the light supply of disengaged tonnage in port, charters rule firm at last week's advance.

Shipments of dressed turkeys, geese and chickens continue to come to hand from the West. Turkeys are lower as are geese, but large, well-conditioned hens and roosters are steady; ducks are firm.

In hops there has been more inquiry for choice grades, which are hard to get. Only poor to fair are said to be obtainable. Eastern mail advices report choice being in demand.

In wools there is nothing much doing, owing to light stocks and very poor assortments. Clips of medium fine to fine in good condition, healthy, lively and clean, will sell well this year.

Bradstreet's, a leading authority at the East, gives a long table of the average rate per cent of duty on dutiable imports entered into this country for consumption, from which the following are taken:

	1880.	1881.	1882.	1883.
Hops	18.84	34.26	24.26	10.62
Clothing wool	54.79	54.72	55.64	56.28
Combing wool	46.92	46.07	46.92	51.22
Carpet wool	26.99	27.75	27.95	27.82
Total wool	44.38	41.30	37.14	36.92
Hops	18.84	1885.	1886.	1887.
Clothing wool	18.38	39.11	49.52	42.52
Combing wool	44.92	45.32	56.10	55.20
Carpet wool	42.65	42.87	44.38	42.91
Total wool	32.88	33.69	36.67	35.10

From the above, which are taken from the United States official record at Washington, it does not show that the grade of wool clothing, grown chiefly in this State, has suffered very much by the change in duty on March 3, 1883. Had prices of wool at the East and abroad ruled as high as in the first 3 years given above, the ad valorem duty would have shown a much larger increase for the last 3 years than given above.

Beans are strong at full prices, with choice to extra choice of all kinds wanted to fill Eastern orders. The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way	301,346	189,829
In port, disengaged	59,101	116,323
In port, engaged	45,234	18,103

Totals, 405,681 324,255
To obtain the carrying capacity, add 60 per cent to the tonnage.

San Francisco, Feb. 22, 1888.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Feb. 22, 1888.

BEANS AND PEAS		Paper shell.....	15 @	—
Bayo, cti.....	2 25 @ 2 50	Brazil.....	11 @	12
Butter.....	@ —	Peanos.....	10 @	16
Pea.....	3 75 @ 4 25	Peanuts.....	4 @	6
Red.....	2 40 @ 2 75	Pilberts.....	10 @	12
Pink.....	2 31 @ 2 70	Hickory.....	5 @	6

Large White....	3 50 @ 4 25	POTATOES	
Small White....	4 00 @ 4 25	Burbank.....	1 00 @ 1 25
Lima.....	3 25 @ 3 85	Early Rose.....	1 00 @ 1 15

lima.....	3 25	@	3 85	Early Rose.....	1 00	@	1 15
Fl'd Peas, blk eye	2 00	@	2 10	Cuffey Cove.....	80	@	1 00
do green.....	2 00	@	—	Petaluma.....	80	@	1 00
do Niles.....	2 10	@	—				

do Niles.....	2 10 @	—	Tomales.....	1 00 @	1 15
BROOM CORN.			River reds.....	70 @	85
South'n perton..	50 10 @	75 00	Jersey Blues....	1 00 @	1 25

South'n per ton...50 00 @ 75 00	Jersey Blues.... 1 00 @ 1 25
North'n per ton...50 00 @ 75 00	Humboldt..... — @ —
CHEESE	do Kidney.... — @ —
California..... 6 @ 7	Powderlows..... 95 @ 1 15

California.....	6 @	7	Peachblows. ...	95 @	1 15
German.....	7 @	8	Chile, for seed..	1 10 @	1 25
DAIRY PRODUCE, ETC.			do Oregon...	80 @	1 00

BUTTER		Peerless	90 @ 1 00
Cal. fresh roll, lb.	33 3/4 @ 35	Salt Lake	— @ —
do Fancy brands	36 1/4 @ 37 1/4	Sweet	1 50 @ 2 00

do Fancy or new	36 1/4 @	3 1/2 Sweet	1 50 @ 2 00
Pickle roll	— @	POULTRY AND GAME	
Firkin, new	— @	Hens, doz	6 00 @ 8 00
Eastern	25 1/2 @	Roosters	7 00 @ 8 00

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Feb. 22, 1888

Apples, bx com..	1 00 @ 1 50	Figs, loose.....	@ 6
do choice.....	2 00 @ 2 50	Nectarines.....	8 @ 11
Apricots, lb.....	@ 12	do evaporated	12 @ 13
Bananas, bunch.	2 50 @ 5 00	Peaches.....	8 @ 10
Blackberries, ch.	@ 20	do pared.....	@ 25
Cantaloupes, ch.	@ 4	do evaporated	20 @ 25
Cherries white bx	@ 4	Pears, sliced....	4 @ 5
do black bx.....	@ 4	do qtd.....	4 @ 5
do Royal Ann....	@ 10	do evaporated	10 @ 11
Cherry plums....	@ 10	Plums, evapo'd	10 @ 11
Crabapples.....	@ 3	do unpitted....	3 @ 5
Cranberries.....	10 00 @ 12 00	Prunes.....	7 @ 10
Currants ch.....	@ 8	do French.....	8 @ 11
Gooseberries lb.	@ 8	Zante Currants..	8 @ 11
Figs, black bx....	@ 4		
do white bx.....	@ 4		
Grapes, white....	@ 2		
do black.....	@ 2		
do Rose Peru....	@ 2		
do Muscat.....	@ 2		
do Tokays.....	@ 2		
Isabel.....	@ 2		
Wine, Zinfandel	@ 2		
do Mission.....	@ 2		
Limes, Mex.....	@ 2		
do Cal. box....	@ 2		
Lemons, Cal. bx	1 75 @ 3 00		
do Sicily, box..	4 00 @ 5 00		
do Australian..	@ 4		
Nectarines, box.	@ 2		
Oranges, Com bx	1 50 @ 2 00		
do Choice.....	2 00 @ 2 50		
do Navels.....	3 50 @ 4 00		
do Com.....	2 50 @ 3 00		
do Panama.....	@ 2		
Peaches, bx.....	@ 15		
Crawfords, bx	@ 15		
do choice.....	@ 15		
Pears bx.....	@ 10		
do choice.....	@ 10		
do Bartlett, bx	@ 10		
Persimmons.....	@ 10		
Jap. bx.....	@ 10		
Pineapples, doz.	2 00 @ 4 50		
Plums lb.....	@ 15		
Pomegranates, b	@ 15		
Prunes lb.....	@ 15		
Quinces bx.....	@ 15		
Raspberries ch.	@ 15		
Strawberries ch.	@ 15		
Watermelons, 100	@ 15		

Artichokes, doz.	@ 20	Asparagus, doz.	@ 30
do choice.....	@ 20	do extra choice	@ 30
Okra, dry, lb....	@ 15	do green bx....	@ 15
Parsnips, ch....	1 25 @ 1 75	Peppers, dry lb.	@ 10
do green, box..	@ 10	Pumpkins pr ton	@ 10
Squash, Marrow	@ 10	fat, ton.....	10 00 @ 13 00
do Summer bx	@ 10	String beans lb.	@ 10
Tomatoes box...	1 50 @ 2 00	do choice.....	@ 10
do choice.....	@ 10	Turnips ctl....	1 00 @ 1 50
Beets, sk.....	@ 10	Cabbage, 100 lbs.	1 00 @ 1 25
Carrots, sk....	@ 10	do 40 lb.....	@ 10
Eggplant, 7 lb.	@ 10	Garlic, lb.....	@ 10
Green Corn, cr.	@ 10	do sweet cr....	@ 10
do large box...	@ 10	Green Peas, lb.	15 @ 20
Sweet Peas lb...	@ 15	Lettuce, doz....	@ 10
Lima Beans lb...	@ 10	Mushrooms, lb.	10 @ 20
Rhubarb bx....	@ 10		



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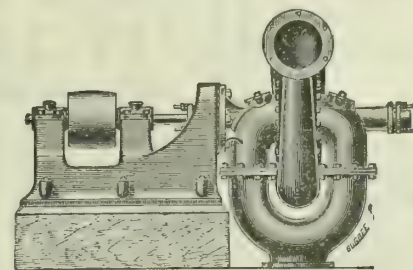
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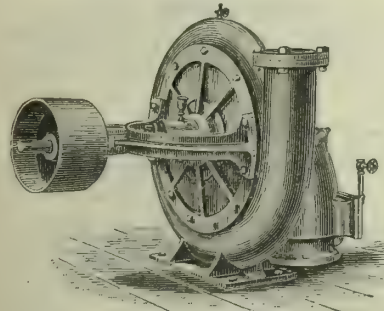
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BILLS OF EXCHANGE of the Atlantic States bought and sold.
ALBERT MONTEPELLIER,
Cashier and Manager.
San Francisco, Jan. 1, 1888.



FINE CARPETINGS,
RICH FURNITURE,
ELEGANT UPHOLSTERIES.
CHAS. M. PLUM & CO.,
UPHOLSTERING COMPANY,
1301 to 1307 Market St., cor. 9th, S. F

WAKELEE'S
THE BEST
IS THE
CHEAPEST.
DON'T BUY
AN
Inferior Article
BECAUSE IT IS
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SQUIRREL AND GOPHER EXTERMINATOR!
IN 1-LB. AND 5-LB. CANS.

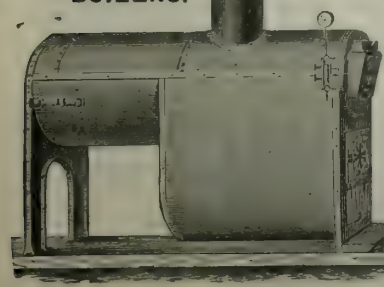


Jackson Centrifugal Pumps.

JACKSON
Automatic
Expansion
SELF-OILING ENGINES.

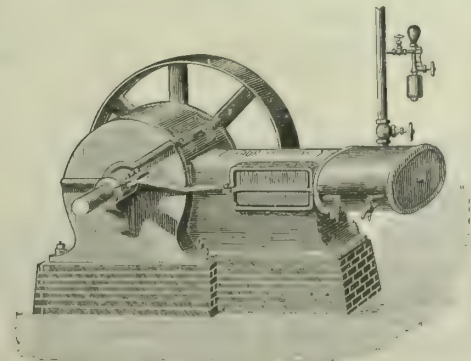
Made in ten sizes, from two to sixty-horse power, and carried in stock for prompt delivery.

"ECONOMY"
PORTABLE
BOILERS.



BYRON JACKSON,
625 Sixth St., San Francisco, Cal.

For quantities of water not less than 100 gallons per minute, and for lifts not exceeding 100 feet, there is no better pump than that illustrated in the annexed engraving. It is very simple, durable, and economical. I make them in sizes from 2-inch, 100 gallons per minute, to 24-inch, with a capacity of 14,000 gallons per minute, and am prepared to build larger sizes to order. They must be set within 20 feet of the water; will draw it that far and force it up 90 feet. They are very satisfactory in wells not over 100 feet deep.



COMPLETE
Power and Pumping
PLANTS
A SPECIALTY.

ADDRESS:
BYRON JACKSON, 25 SIXTH ST
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Seeds, Plants, Etc.

Orange Growers, Look Here!

J. VILLINGER'S
Covina Nursery:
150,000 ORANGE TREES

One year old from the seed. Absolutely the finest plant in Southern California. Will be carefully budded from the world's most famous varieties.
For particulars apply to

J. VILLINGER,
Covina, Cal.

RANCHO CHICO NURSERY.

Large and Select Stock of

Fruit, Shade & Ornamental
TREES,

Grown Without Irrigation, Clean, Well-Rooted and Free from Insect Pests.

Full Line of Choice Grapevines.

Stock of French Prunes and Apricots exhausted.

Catalogue and price list sent on application.

JOHN BIDWELL, Proprietor,
Chico, Cal.

ORANGE TREES

AT HALF PRICE.

I am now prepared to furnish fine, large, first-class Orange Trees for the season of 1888, at the following prices:

	Per 100 trees.
Washington Navels, June buds.....	\$ 80
Washington Navels, 2-year-old buds.....	100
Mediterranean Sweeties, 2-year-old buds.....	75
Sour Stock Seedlings, 4 years old.....	80
Indian River Sweeties, " ".....	50
Unshu of Japan, 2-year-old buds, smaller trees.....	50

And other varieties cheap. Send for circulars.

ALSO, FIRST-CLASS

ORANGE AND VINEYARD LANDS,

From \$150 to \$300 an Acre,
With First-Class Water Rights.

Reference, Riverside Banking Company.
J. H. FOUNTAIN.

Riverside, Dec., 1887.

NAPA VALLEY NURSERIES.

ESTABLISHED 1878.

Fruit Trees, Grapevines, Resistant Grape-vine Stock.

And everything to be found in a first-class Nursery; also the following new fruits, obtainable only at these Nurseries:

Clyman—Earliest and finest shipping Plum.
Ulatie—Earliest and finest shipping Peach.
California Advance—Earliest and best Cherry.
Purity—Most beautiful, white, canning Cherry.
Black Mastodon—Largest black Cherry known.
Centennial—The finest keeping and shipping, light-colored Cherry. (This variety is now cultivated throughout the State; to be safe, however, it is best to procure it from headquarters.)

Commercial—The largest Almond.
Send for catalogue and price list. All stock unirrigated and free from disease. LEONARD COATES, Napa City, Cal. For County Rights for a new and valuable Fruit Drier, address as above.

100,000

BARTLETT PEAR TREES.

The best kind for Shipping and Canning.

General assortment of all kinds of

FRUIT and ORNAMENTAL TREES,

Including

ORANGE and LEMON TREES.

Also, a large stock of imported Fruit Tree Seedlings, Apple Pear, Myrobalan Plum and Mazzard Cherry.

Send for prices. Address,

J. T. BOGUE,
Marysville, Cal.

Formerly of Martinez, Cal.

PEPPER'S NURSERIES.

Established 1858.

A general assortment of healthy FRUIT TREES, VINES and SMALL FRUITS, grown without irrigation, free from Scale Bug and warranted true to name.

Apple Trees in assortment, Crawford's Early, Orange Cling, Salway and other kinds; Royal and Blenheim Apricots or Myrobalan stocks; Bartlett, Beurre Hardy, Beurre Clairgeau, Howell, Winter Nells and Easter Beurre Pears, Coe's Golden Drop or Silver Prune and other Plums and Prunes in assortment. Rockport, Black Tartarian, Napoleon and Centennial Cherries; Nut-bearing Trees; Grapevines, etc.

Prices furnished on application. Address,

W. H. PEPPER,
Petaluma, Cal.

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Fresno, Cal.,

OFFERS THIS SEASON FOR SALE A FINE ASSORTMENT OF

FRUIT & ORNAMENTAL TREES.

SPECIALTIES:

WHITE ADRIATIC FIG, SAN PEDRO FINEST TABLE FIG, JAPANESE FRUITS, OLIVES, POMEGRANATES, MULBERRIES, TEXAS UMBRELLA TREES and also a fine collection of PALMS, YUCCAS, ROSES, and OLEANDERS.

Send 10 cents in stamps for a sample of the dried and cured Adriatic Fig. Fall catalogue now ready. Address all letters to
F. ROEDING, Fresno, Cal.

460 ACRES.

INCORPORATED 1884.

CALIFORNIA NURSERY COMPANY

TREES FRUIT & SEMI-TROPICAL.
GRAPEVINES, SMALL FRUITS, ETC.
Largest Stock on the Pacific Coast!

SPECIALTIES:

PLUMS, PRUNES AND APRICOTS, ON MYROBALAN STOCKS.

Facilities for Packing and Shipping to Distant Points are unsurpassed.

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CALIFORNIA NURSERY CO., Niles, Cal.

JOHN ROCK, Manager.

160 ACRES NURSERY!

1,500,000 TREES AND VINES!

W. M. WILLIAMS & CO.'S

SEMI-TROPICAL AND GENERAL

NURSERIES

Fresno, Cal.

We would respectfully call the attention of the public to our very complete list of Nursery Stock for the ensuing season, consisting of a full line of all the Standard Varieties of

APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, NECTARINE, Etc., Etc.,

BESIDES A LARGE STOCK OF THE GENUINE

WHITE ADRIATIC FIG,

Guaranteed, and the NEW LYONS CLING PEACH. We have an immense stock of ROOTED VINES, comprising 86 varieties. We carry also a full line of CITRUS FRUITS, well grown and warranted free from all pests and true to label.

Send for Catalogue and address all correspondence to FRESNO, CAL., Box 175.

GRASS, CLOVER, VEGETABLE,
TREE AND FLOWER

SEEDS

FRESH STOCK. LOW PRICES. IN LOTS TO SUIT.

CATALOGUES ON APPLICATION.

TRUMBULL & BEEBE,

419 & 421 Sansome Street, SAN FRANCISCO.

STOCKTON NURSERY,

Established 1853.

ADRIATIC and SAN PEDRO FIGS.

French Walnuts, Home-grown Oranges and Rooted Grapevines.

Illustrated Catalogue and Price List for the season of 1887-88 free to all sending for them. All Trees, Vines, etc., guaranteed free from scale and other injurious pests. A certificate of inspection furnished to all.
A full line of Fruit and Ornamental Trees, Shrubs, Vines and Hothouse Plants.

E. C. CLOWES, Proprietor

(Successor to W. B. WEST).

Stockton, Cal.



Warranted Seed.

I have founded my business on the belief that the public are anxious to get their seed directly from the grower. Raising a large proportion of my seed enables me to warrant its freshness and purity, as see my Vegetable and Flower Seed Catalogue for 1888, FREE for every son and daughter of Adam. It is liberally illustrated with engravings made directly from photographs of vegetables grown on my seed farms. Besides an immense variety of standard seed, you will find in it some valuable new vegetables not found in any other catalogue. As the original introducer of the Eclipse Beet, Burbank and Early Ohio Potatoes, Hubbard Squash, Deephead Cabbage, Cory Corn, and a score of other valuable vegetables, I invite the patronage of the public.
JAMES J. H. GREGORY, Marblehead, Mass.

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ALFALFA,
ONION SETS,
GRASS,
CLOVER,
VEGETABLE and
FLOWER SEEDS.

Large Illustrated Descriptive and Priced Seed Catalogue, containing valuable information for the Gardener, Farmer, and Family, mailed FREE to all applicants.

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Orange and Lemon Trees,

SHADE TREES,

Evergreen Shrubs, Roses,

FLOWERING PLANTS, Etc.

SEND FOR CATALOGUE.

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FRESH and RELIABLE

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It will be to your advantage before ordering Seeds to send for our NEW CATALOGUE, BEAUTIFULLY ILLUSTRATED, the best ever published on the Pacific Coast; it contains two beautiful COLORED PLATES, and all the leading and most popular sorts of VEGETABLE, FARM and FLOWER SEEDS, besides all the desirable novelties. Sent free on application. Address

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Baker & Lombard Sts., San Francisco

F. LUDEMANN, Proprietor,

Offers Fruit and Ornamental Trees, Flowering Shrubs in well-cultivated plants and selected varieties.

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Splendid collection of Teas and Everblooming sorts; also Tree Roses from 3 to 4 feet high of the best sorts. Camellias, Rhododendrons, Azaleas Indica, Arancarias, Variegated Hollies, Laurustum and New Laurus in select varieties.

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Picholine, Mission, Manzanilla, Larrayeanli Nevardillo and other sorts.
Blackberries and other sorts of berries in good varieties.

Rancho Chico Nursery.

Write for special bargains on the following trees:

5,000 Winter Nells Pears,

8,000 Assorted Plums,

10,000 Eastern and California Black Walnuts.

JOHN BIDWELL,
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Of the following varieties FOR SALE:

Cabernet Sauvignon, Cabernet Frank, Teinturier, Carignan, (Riparia, for Resistant), Mataro, Grenache, Trousseau.

Also Trees and Cuttings of the true White Adriatic Fig.

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NEWCASTLE EARLY APRICOT,

Earliest in Cultivation.

HANDSOME AND GOOD FREESTONE.

Good Shipper and Productive.

All kind of Fruit Trees and Small Fruit Plants. Send for Catalogue.

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Seeds, Plants, Etc.

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Fruit Trees and Vines for Sale

—AT—

L. F. Moulton's Colusa Nursery.

15,000 French, 1000 Robt de Sergent, and 2 00 Hungarian Prunes, all on Myrobalan root.
4000 Black Tartarian. 2000 Napoleon Bigarreau, 1000 Gove nor Wood on Mazzard root; also 2000, same root, dormant bud of Centennial Cherry.

7000 Bartlett, 1000 Winter Nelis, 1000 Beurre Clairgeau Pear on French seedling roots.
10,000 California Wild Grape Roots; 75,000 Muscat Raisin Grape Roots.

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L. F. MOULTON, Proprietor, Colusa, Cal.

Fine Small Fruits a Specialty.

CUTHBERT RASPBERRY.



BEST MARKET BERRY KNOWN! Large. Firm and Luscious, stands travel finely, bears immensely, and has two crops a year; 75 cents per dozen; \$3 per 100. Also Strawberries, Blackberries, Gooseberries, Currants, etc., of finest imported varieties. Prices on application.

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FOR SALE.

Grapevines and Cuttings,

OLIVE TREES and CUTTINGS.

RIPARIA SEED.

Apply to CLARENCE J. WETMORE, 204 Montgomery St., S. F.

VITIS CALIFORNICA SEEDS.

Five pounds and over, \$1 per pound; less than five pounds, \$1.50 per pound.

Vitis Californica Seedlings, Phylloxera Proof.

\$10 per 1000.

C. MOTTIER.

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SURPLUS STOCK.

PEARS:

Bartlett, Beurre Clairgeau, Beurre d'Anjou, Beurre Hardy, Howell, White Doyenne or Fall Butter, Onondaga.

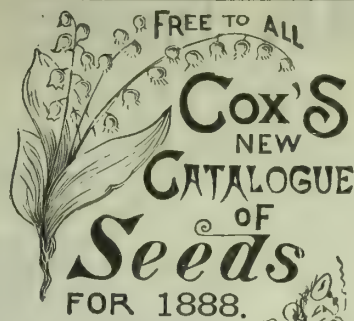
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Bartlett Pear Stock for Sale.

5000 Bartlett Pear Trees, one and two years old, for sale at bed-rock prices; special rates to dealers.

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SEEDS GIVEN AWAY! A package Mixed Flower Seeds (500 kinds), with PARK'S FLORAL GUIDE, all for 2 stamps. New flowers, new engraving; teens with floral hints. Everybody delighted. Tell all your friends. Send now. G. W. PARK, Fannettsburg, Pa.



Our New Catalogue for 1888, mailed free on application, contains description and price of Vegetable, Flower, Grass, Clover, Tree and Field Seeds; Australian Tree and Shrub Seeds; native California Tree and Flower Seeds, Fruit Trees, and many new novelties introduced in Europe and the United States.

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Monterey Cypress transplanted, 6 to 10 inches high, of 100 trees per box at \$2 per box or \$19 per 1000 (in larger spaces); 8 to 12 inches, of 70 trees per box, at \$2 per box or \$25 per 1000; or 12 to 15 inches, of 50 per box, at \$2 per box or \$35 per 1000. Seedlings 2 to 4 inches, slow grown, at \$4 per 1000, or transplanted thick, 4 to 6 inches, at \$9 per 1000.

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Plant Trees Grown in Your Own Section. They do much better than others brought from a distance.

THE ALOHA NURSERIES,

Penryn, Placer Co., California,

Offers a large home-grown stock of Orange Trees, California Fan Palms and Pepper Trees, Limes, Dates, etc., at prices to suit the times.

FRED. C. MILES, Manager.

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ROSES

ALL VARIETIES, SIZES AND PRICES
FINE EVER-BLOOMING PERPETUAL,
CLIMBING AND MOSS ROSES.

NEW AND RARE FLOWER SEEDS.

HARDY PLANTS, New Moon Flower, Clematis, Spring Bulbs, JAPAN LILIES, New Chrysanthemums, and our Wonderful ORNAMENTAL VEGETABLES. Everything sent safely by mail or express to all points. We offer Choice NEW THINGS and STERILIZED NOVELTIES in all departments. Our NEW GUIDE, 101 pp., elegantly illustrated, describes over 1500 NEWEST and CHOICEST Varieties of ROSES, SEEDS, PLANTS and BULBS, and tells how to grow them free. If you wish to plant anything, send for it. 20 Years Established. Over 60 Large Greenhouses. THE DINGEE & CONARD CO. ROSE GROWERS, WEST GROVE, Chester Co., Pa.



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2000 Tragedy Prunes and other choice varieties.
5000 Celebrated Early Apricots. For price address

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KY BLUE AND SEEDS
P. CARROLL, LEXINGTON, KY.

ORANGE AND LEMON TREES

In Large or Small Lots, both Wholesale and Retail,

Cheaper than Ever Before Offered on this Coast,

—AT THE—

CAPITAL NURSERIES,
SACRAMENTO, CAL.

These Trees are all budded with the very best known varieties and are true to name and free from insect pests. We also have an immense stock of all kinds of Fruit, Shade and Ornamental Trees, Vines, Plants, etc. In fact everything in the nursery line at lowest market rates. Also a complete assortment and large stock of Field, Garden and Flower Seeds at lowest market rates, either wholesale or retail. Our Seeds are all tested before sending out.

Send for Seed and Tree Catalogue. Call, if possible, and see our stock. Special rates (very low) given on large orders. Correspondence solicited. Address all communications to

W. R. STRONG & CO., Sacramento, Cal.

SURPLUS STOCK.

CHERRIES—5000 Royal Ann and Black Tartarian.

5000 Bartlett Pears.

5000 Plums, Coe's Golden Drop, Kelsey's Japan,

Washington and other good sorts.

Also some Apricots, Peaches and Apples.

1000 Camellias in pots and open grounds. 25,000 Cypress transplanted in boxes. 1000 Cypress 2 years old. 10,000 Gums, Blue and Red, in boxes. 2000 Laurus Tinus. 2000 Palms, 1 year old in pots. 1500 Pines, 2 year old. 2000 Peppers, pot grown. 25,000 Roses. Also an immense assortment of Pot Plants and Flowering Shrubbery at bedrock prices. Address

GILL'S NURSERIES,

Twenty-eighth Street, near San Pablo Avenue,

OAKLAND, CAL.

Send for Catalogue and Price List.

ORANGE TREES.

This is our Fourth Season of Importations of the

SEEDLESS OONSHIU.

See PACIFIC RURAL PRESS of January 21, 1888, page 53.

For circulars and particulars of other kinds of Japanese Trees and Plants, address

JAPANESE TREE IMPORTING CO.,

120 Sutter Street,

San Francisco, Cal.

DUANE WESTCOTT.

CATALOGUES FOR 1888 NOW READY.

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Westcott Brothers,

SEED MERCHANTS.

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HARDY NORTHERN-GROWN SEEDS,

FROM MINNEAPOLIS, MINN.,

Will be a Special Brand of Seeds Guaranteed by us as Good and Reliable.

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Correspondence solicited from Merchants, Farmers and others. All kinds of Seeds, Lawn Grass, Plants and Bulbs always in Stock.

FRUIT TREES.

ESTABLISHED 1863.

FRUIT TREES.

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CALIFORNIA NURSERY COMPANY.

NOW OFFERS THE LARGEST STOCK OF

FRUIT TREES, GRAPEVINES, OLIVES, SMALL FRUITS, Etc.,

Ever offered on the Pacific Coast at very low rates. Samples on hand at below address.

SEEDS.

SEEDS.

SEEDS.

We also offer at lowest rates a large and fresh stock of

GRASS, CLOVER, VEGETABLE, FLOWER, and TREE SEEDS,

All of which are thoroughly tested before being sent out. Large stock of Ornamental Trees and Plants, Bulbs, Roses, Magnolias, Palms, etc., constantly on hand.

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Priced catalogues mailed free on application.

Agent for California Nursery Co. in San Francisco.

JAPANESE UNSHIU ORANGE TREES

Having arrived a little late, on account of smallpox on the Chinese Steamers, we offer special inducements to Nurseries and Orchardists, who will contract for late shipments.

ORIENTAL IMPORTING COMPANY,

520 Front St., San Francisco.

CHOICE ALFALFA SEED

In Lots to Suit.

Grangers' Business Association,

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SPECIAL OFFER.—I will ship, in localities where, as yet, I have no agent, one sample Improved "New Becker" Washer at wholesale prices. Deaf five pamphlets free. E. W. Melvin Prop. Office, 806 J St., Sacramento, Cal.

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A position as Manager or Foreman of a Nursery or Fruit Farm by a party with a long experience in the East and on this Coast, who also has a good knowledge of general agriculture and live stock. Address, A. B., P. O. Box. 225, Santa Barbara, Cal.

JAPANESE and CHINESE FRUIT TREES,
PERSIMMONS, CHESTNUTS, AND PLUMS.

We are in receipt of a new, superior

CHINESE PEACH,

Color of flesh blood-red, flavor delicious, skin smooth. Further information on application. A fine lot of rare Japanese Seeds and Bulbs. Our stock of Vegetable and Garden Seeds is offered very low. Send for Catalogue.

H. H. BERGER & CO., (Established 1873)
Proprietors GEO. F. SILVESTER SEED HOUSE, 315 and 317 Washington St., San Francisco Cal.

OUR MANUAL OF EVERYTHING FOR THE GARDEN



is this season the grandest ever issued, containing three colored plates and superb illustrations of everything that is new, useful and rare in Seeds and Plants, together with plain directions of "How to grow them," by PETER HENDERSON. This Manual, which is a book of 140 pages, we mail to any address on receipt of 25 cents (in stamps). To all so remitting 25 cents for the Manual, we will, at the same time, send free by mail, in addition, their choice of any one of the following novelties, the price of either of which is 25 cents: One packet of the new Green and Gold Watermelon, or one packet of new Succession Cabbage, or one packet of new Zebra Zinnia, or one packet of Butterfly Pansy (see illustration), or one packet of new Mammoth Verbena, or one plant of the beautiful Moonflower, on the distinct understanding, however, that those ordering will state in what paper they saw this advertisement.

2 Natural Size.

PETER HENDERSON & CO. 35 & 37 Cortlandt St., NEW YORK.

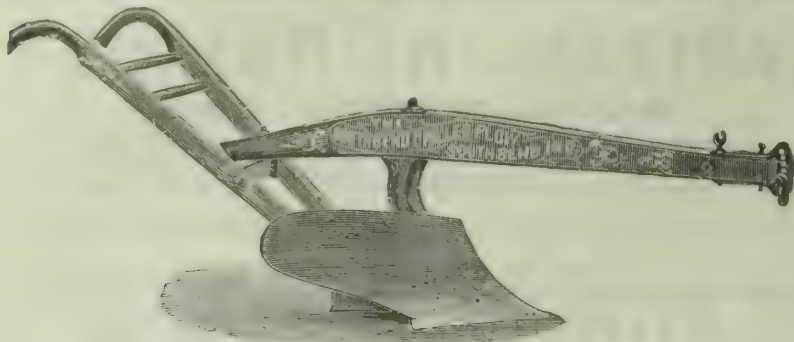
Our "SOUTH BEND" Chilled Plows JOHN DEERE MOLINE PLOWS

CANNOT BE EQUALED FOR

Lightness of Craft, Quality of Work, Ease of Handling and Adjustment, and General Construction.

WARRANTED TO GIVE PERFECT SATISFACTION.

Look for the Name, "South Bend Chilled Plow," on the Beam, and take no other.



THIS CUT REPRESENTS OUR Nos. 1 and 1 B ONE-HORSE PLOW.



THE LEADING PLOWS ON THE PACIFIC COAST.

We take pleasure in calling special attention to our recent improvements in the construction of Plows, which consists of a brace crossing and WELDED SOLIDLY TO THE STANDARD, extending down and bolted to the land side, affording a firm brace to the standard and giving much greater strength than will be found in any other set-up handle plow. It also extends up and bolts to the handle with two T bolts, producing the best braced and finest plow made.

KEYSTONE 2-LEVER DISC HARROW.

THE KEYSTONE DISC HARROW has met with wonderful favor ever since its introduction. It is made with two levers to set the cutters at different angles while the machine is in motion, and to relieve it from clogging by throwing either gang back. It is the only Harrow made with flexible frame so the cutters can adapt themselves to the uneven surface of the ground. The discs are made of steel. The boxes are chilled-hardened to prevent cutting on the axle. It has revolving scrapers, which not only keep themselves clean, but clean the discs.

We have had a Special Size made for Orchard and Vineyard Work (viz., 5 feet), which suits the purpose for which it is intended better than any implement of its kind in the market.

PRICES:

5 FEET, 16 INCH DISCS.....	EACH, \$55 00
6 " 16 " ".....	" 60 00
8 " 16 " ".....	" 75 00
10 " 16 " ".....	" 90 00

SEND FOR SPECIAL CIRCULAR.



HAWLEY BROTHERS HARDWARE CO.

SAN FRANCISCO, SOLE AGENTS FOR PACIFIC COAST.

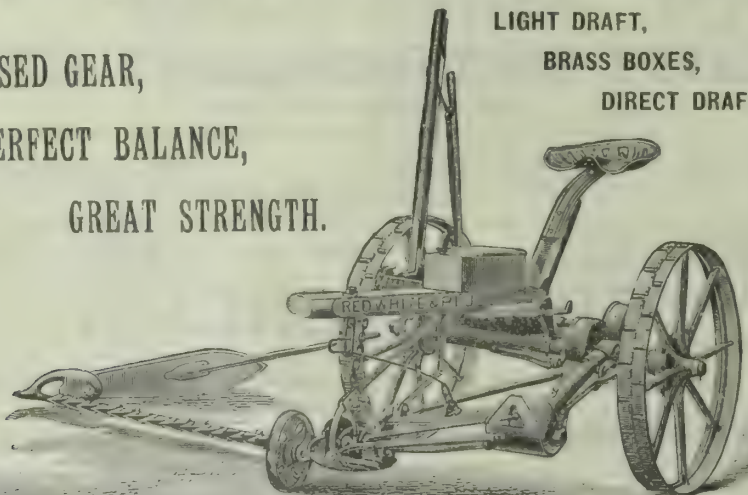
RED, WHITE, AND BLUE MOWER!

ENCLOSED GEAR,

PERFECT BALANCE,

GREAT STRENGTH.

LIGHT DRAFT,
BRASS BOXES,
DIRECT DRAFT.



Rocking Cutting Bar.

Latest Improvements.

BE SURE AND EXAMINE IT CAREFULLY.

Floating and Rocking Bar.

No Weight on Horses' Necks.

No Right or Left Hand Ratchets or Wheels—All Fit Either Side.

THE BEST MOWER IN THE WORLD.

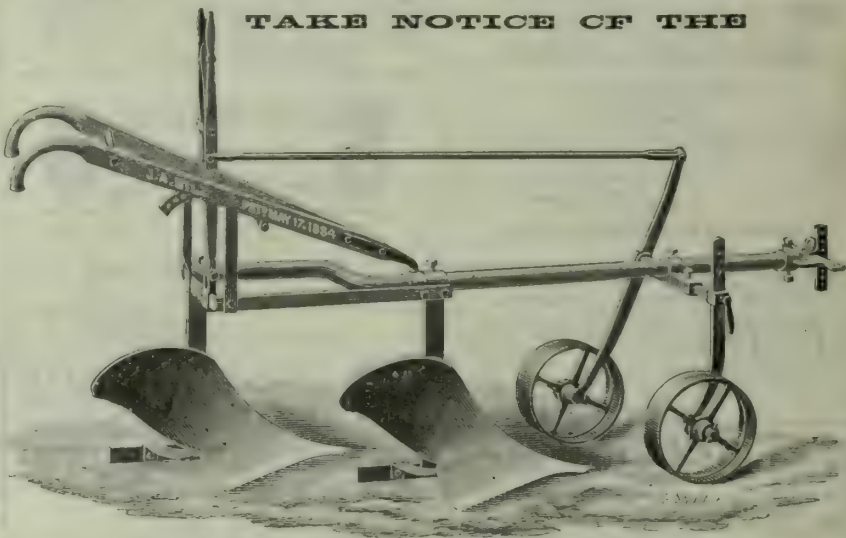
Bull & Grant Farm Implement Co.

14 & 16 Main St., San Francisco.
211, 213 and 215 J ST., SACRAMENTO.

Write for our new Catalogue of Machinery and Wagons—just issued.

Vineyardists, Orchardists & Farmers,

TAKE NOTICE OF THE



J.A. BILZ 2-Horse Gang & 1-Horse Plow

Which the Cuts Represent. Patented October 19, 1886.

First Premium Awarded at Mechanics' Fair, 1887.



These Plows have been in market for the past two seasons, and those that use them would not do without them at any price. All claim to save from \$2 to \$2.50 per day over any other plow. Not only for orchards and vineyards, but also for field plowing, where a two-horse single plow is used.

The Plow cuts 18 inches, weighs 160 pounds, and two horses will pull it as easily as a 12-inch plow, and does better work than a single plow. No trees are barked and sticks in vineyards pulled over where my Patent Double-trees and Singletrees are used. For Extra Shares send to me.

I ALSO MANUFACTURE ALL STYLES OF

CARTS, BUGGIES, SPRING WAGONS, CARRIAGES

AND ALL KINDS OF

VINEYARD AND AGRICULTURAL IMPLEMENTS.

Send for Testimonials and Circulars. Address

J. A. BILZ, Pleasanton, Cal.

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TRUMAN, HOOKER & CO., 427 Market Street, San Francisco, Cal.

M. KIRSCH, Walnut Creek, Contra Costa Co., Ca.



TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 9.

SAN FRANCISCO, SATURDAY, MARCH 3, 1888.

\$3 a Year, in Advance
SINGLE COPIES, 10 CTS.

Distinguished Horticulturists.

As a souvenir of the recent meeting of the American Horticultural Society in this State, we give on this page portraits of the president and secretary of the organization from photographs taken during the session at San Jose. These two gentlemen, from the prominent part they took in the meetings and excursions, be-

deep and systematic thinker. His extempore addresses are easy and pleasing. He is pre-eminently a ready man, one who can shape and mold circumstances and conditions, and is excellently adapted to the important public work which is placed upon him by his horticultural friends. These qualities won for him the chiefship of the horticultural departments of the New Orleans Exposition and showed him to be

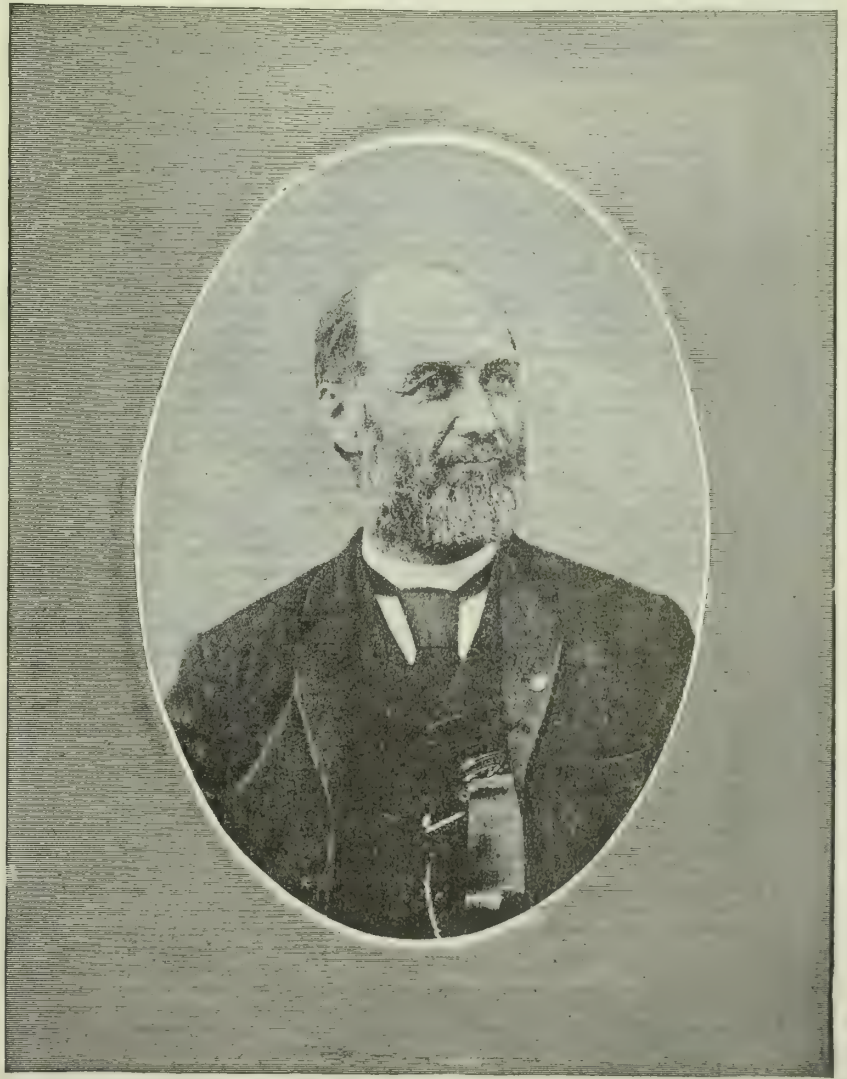
he has chosen that he has won honors and positions not by seeking them but by having them seek him. He is professor of horticulture and superintendent of parks at De Pauw University, Greencastle, Indiana, and from what we know of his method of instruction we are sure that young men who enjoy his teaching are fortunate. His secretaryship was inherited by the American Society from its prede-

Mules for Australia.

We have alluded to the mule as a neglected resource of California. We have a certain number of good jacks and grow some good mules—probably as fine as can be found anywhere, but there is a chance to greatly increase the mule product of the State. We have hitherto had special reference to mules for home



PARKER EARLE, President.



PROF. W. H. RAGAN, Secretary.

OFFICERS OF THE AMERICAN HORTICULTURAL SOCIETY.

came known to thousands of our citizens, and our presentation of their portraits will introduce them to thousands more. To those who know them only by the sight of their features, however, we would say that their acquaintance is but slight, for both gentlemen are so well informed and so able and pleasing in conversation that any favorable impression made by sight is immeasurably deepened by personal converse with them.

Parker Earle, president of the American Horticultural Society, is a resident of Cobden, Illinois. He is a practical horticulturist and largely interested in the growth and shipment to distant markets of small fruits and vegetables. He has had the advantage of a thorough education and is richly endowed with natural talent. His formal addresses are models of style and are marked by breadth of view and grasp of essentials which show him to be a

the man to lead the American Horticultural Society, which was organized at that exposition as a superstructure upon the excellent foundation known as the Mississippi Valley Horticultural Society, which had led a flourishing existence for several years. Mr. Earle is a man of middle life, full of force and vigor, and earnestly devoted to the elevation of the horticultural interest, commercially, intellectually, and (considering his ringing utterances on honesty in fruit-packing in the San Jose address which we published) we may also say morally.

Prof. W. H. Ragan, the secretary of the American Society, is also a man exceedingly well qualified for his work and almost heroic in the zeal and assiduity with which he discharges it. He is a self-made man, as the saying goes, and, without early advantages, has so educated himself in the lines of thought and effort which

cessor, the Mississippi Valley Society, so that, for a number of years, he has been known in the capacity in which he appeared in California. We have long admired the perseverance and tact which he has devoted to the building up of the organization, and extending its membership and usefulness. His labors are appreciated, as can be learned from the expressions of speakers at the meetings, and as was also signified by the presentation of a well filled purse at the close of the Riverside meeting. Prof. Ragan is a constant student of horticulture as well as a practical worker therein, and his published papers are notably excellent.

Our esteemed visitors, the American horticulturists, have nearly all returned to their homes. The next meeting of the Society will be held in Texas, and it is hoped that many of the California members may attend.

use, because for certain kinds of work they are exceedingly desirable, and prices for good mules have been high. It now appears that the mule as an item of export to various Pacific ports may amount to considerable. The China steamer took out in one lot last week 70 most carefully selected mules, the lot being described by horsemen who saw them as the finest mules ever seen in one band in this State. They were selected by Henry Washburn of this city for F. L. Brady, the agent sent to this State by the Continental Railway Company of Australia. The 70 mules were picked up here and there in the sections visited by Mr. Washburn, and his selection is said to have been very close. They weigh on an average 1250 pounds and range in age from four to six years. They are from 16 to 17 hands high, with short backs and large shoulders, and especially adapted to the work required.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Green Valley, Sonoma County.

EDITORS PRESS:—This is indeed the poorest time of the year for agricultural items. No one has large pumpkins, potatoes, or other productions to report, except an occasional ten-foot sucker on a plum or peach tree, which the real estate agents exhibit as a proof of the wonderful fertility of our soil and climate.

Pruning is the principal occupation at present. Some grape-growers think it is injurious for grapevines to be pruned before frosty weather is over for the season; others have their pruning finished. There is a great demand for hired help around here, especially the kind that might be called skilled labor.

Skilled farm labor may be an unknown quantity to many, yet it is a fact that it takes a man longer to learn how to handle horses, farm implements and machinery, how to prune vines and fruit trees, pack fruit and do chores, than learn any other trade, and many men who could learn to be good mechanics in a few years cannot learn to be good farm hands in a lifetime.

A great many fruit trees were planted this year; one man is reported as having set out a hundred acres to peaches, but most planting is done in small quantities. Clings were in more demand than any other variety and soonest sold out.

Some farmers when contemplating the little bundle of fruit trees a hundred dollars would buy, and then remembered what amount of produce they sold and work they expended to raise the produce for a hundred dollars, came to the conclusion that some crops pay better than others.

During the warm, moist weather of the last month the grass has made a rapid growth. Early-sown grain looks well and stock is thriving. The few cases here and in the rest of the county where sheep and lambs were reported to be dying during the cold spell can all be traced to flocks which were half starved during the preceding summer. Sheep and other domestic animals which are in good order at the approach of winter have no trouble to tide over the little inclement weather and short feed of a California winter. While the owners of thousands of sheep in Sonoma county "which could not be sold at a dollar apiece this winter," were going around howling for protection to their industry; while Sonoma county butchers were buying dressed muttons in San Francisco for six or seven dollars apiece, and paying half a dollar freight on them besides, the barns of Sonoma county farmers were filled with hay for which there was no sale. Sonoma county wheat was being shipped to Europe and sold for less than cost, and Sonoma county flock-masters were feeding themselves and their hired help on Chicago corned beef at the rate of 12½ cents per pound, and such beef! If they could but see a Chicago steer before canning time, they would sooner eat one of their own poor starving sheep, and that is putting it pretty strong.

Some orchardists around here claim that in nature the shedding leaves and other causes slowly form a slight elevation of the soil around a growing tree, while in an orchard plowing and the washing away by rains tend to work the soil away from the tree and expose the roots. To obviate this they only plow toward the tree and then try to level the soil as much as possible with cultivators. One point in favor of this plan is that it affords a much better drainage for heavy late spring rains which are said to be the cause of blight, curled leaf, dropping fruit, etc.

A young friend of mine has been investigating the history of early fruit-tree introduction in Green valley with the following results. The first trees were planted here in 1851 and were seedlings. In '52 or '53 four or five of the old settlers got small lots of grafted trees for which they paid \$1.50 and \$2 each, but most of the old orchards were planted in '54 with trees brought from Oregon.

In the orchard of C. Winkler he was shown a large, healthy peach tree planted in '53, an apple tree measured 57 inches in circumference, and Mr. Winkler said he had often picked over a ton of apples from a single tree. J. Purrington said he had counted 40 boxes of apples put in the bin from one tree, while the ground was covered with bruised ones. Major Sullivan said he had the largest tree in the valley and had shipped 40 boxes of first-class apples from it to San Francisco one season. There is a prevailing idea that trees in California are short-lived and do not grow as stately as in other countries. Major Sullivan has a black walnut planted from the seed 23 years ago this spring. The main trunk of this tree runs straight up till almost the very top, which overtops some very tall eucalyptus trees, and is twice as high as the old black oaks on the place. The trunk of the tree is over two feet in diameter, without a side branch, and nearly the same thickness some 20 feet from the ground. It produces many sacks of nuts yearly. The crown has an immense spread, and it is as beautiful and majestic a tree as any Eastern-State man ever saw.

A GRANGER.

Feb. 19, '88.

Crops and Cultures on Bouldin Island.

EDITORS PRESS:—Never having read any extended description of this (to me) interesting part of the country, I will attempt to give your readers a faint glimpse of the wonders and strange sights of this land of the mosquito and Chinaman, better known as the "tule" regions of Sacramento and San Joaquin counties.

This immense tract of swamp land extends from Stockton on the south down both banks of the San Joaquin river to its junction with the Sacramento, thence up the last-named stream to a point far above the capital city, and contains within its limits several million acres of the most fertile soil on the Pacific Coast.

Up to the present time, however, but a very small portion of this tule land has been reclaimed and brought under cultivation, but the time will come when every acre will be occupied, and all this dreary waste become the home of many thousands of thrifty people, where now are seen scarce anything but broad lagoons and waving cat-tail rushes as far as eye can reach.

Going ashore at Bouldin island from the steamer City of Stockton at 10 o'clock P. M. one dark night in July last, I was met and warmly received by a large and enthusiastic delegation of the aboriginal settlers of this small but enterprising port, who for genuine hospitality and strict attention to business can be successfully pitted against "skeeters" from any part of the known world.

One of my fellow-passengers of the thin-skinned genus made the attempt to go ashore to take a brief view of the town by lamp-light, but before reaching the end of the gangplank came rushing back crying out that he wouldn't "stop off" there for the best ranch on the island.

However, with more faith in the toughness of my "hide" and a strong desire to explore the interior of this mysterious land, I concluded to spend the night here and see what might be revealed by the light of day.

The next morning, bright and early, I chartered a horse and what the owner called a "jerk cart" (I found out before night why it was so named), and with copious directions went forth on my journey around, across and over this great garden-patch called Bouldin island, in honor of the Bouldin brothers, pioneers of Western San Joaquin county.

I found the island completely encircled by a very substantial-looking levee, from 10 to 20 feet high and extending in curved and zigzag lines for a distance of 28 miles, thus forming a secure and lasting barrier against the raging waters of the two great rivers, the San Joaquin and the Mokelumne, whose channels, with the aid of what is called "Potato slough," form the boundaries of this valuable tract.

The island contains nearly 30,000 acres of the richest land on the coast, and almost the entire surface of it is under the highest cultivation. As an illustration of what can be done on this reclaimed land in the line of vegetables, I was shown one place where the owner measured off one acre in a field of 200, and on digging the crop found he had 240 sacks of choice Early Rose potatoes, but this was on new ground and was above the average of the island at large.

The greater portion of Bouldin is devoted to the production of potatoes, beans and onions, although there are several large hay ranches where great quantities of barley and alfalfa hay are grown; five crops of alfalfa and clover are quite common here in one season. Other portions are planted to small fruits, blackberries, strawberries, currants and the like, all of which thrive well and bear heavily here.

There is one feature about this part of the country that surprised me more than any other, and that was that irrigation has not only been found profitable but practicable here. The reader must bear in mind that this whole island, prior to reclamation, was almost a dead level, covered at high tide to a depth of two to four feet by the ever-changing waters of the surrounding rivers.

Now, it seems that as soon as this overflow is shut off by the levees this tule land will dry out as quickly as what we call the upland away back in the interior away from the water. Taking advantage of the rising tide, the farmers put in sluices or waterways through the levees at low-water mark, and, fitting tide-gates to them, they have perfect control over the water and can irrigate their crops at pleasure.

They mostly depend upon irrigation, by seepage from small ditches out in all directions through their fields, as it has been demonstrated that flooding the land while the crops are growing is almost sure to kill the vegetation, due principally to the hot sun scalding the plant and baking the ground.

To any one accustomed to the small farms of the Eastern States, or even to those who have followed wheat-raising exclusively in California, it seems almost miraculous to see the immense number of acres planted to vegetables and fruit in some parts of this wonderful country.

Here can be found many fields of potatoes from 100 to 200 acres each, and beans and onions almost in the same ratio. Indeed, unless a man has at least 100 acres of "garden truck," he is hardly counted in as one of the farmers of Bouldin island.

Nearly all of the labor here is done by Chi-

nese. In many cases they rent the land from the white owners, who mostly live in San Francisco or Stockton. In looking across these vast fields, hundreds of Chinamen can be seen, working in gangs of 25 or 30, reminding one of the pictures I have seen of the slaves in the cotton-fields of the Southern States in antebellum days.

I hear but little said about driving out these coolies who work on the tule land. I have a very decided opinion that if some of the most blatant Chinese haters could be compelled to take the places of these Chinamen here for just one week, they, "the howlers," would be content to let the "Johns" fight the mosquitoes and take the pay, which is poor enough at best.

But I have spun this article out far beyond the limits I intended, and will postpone a notice of some other equally interesting points near by to another article. W. W.

Napa County Notes.

EDITORS PRESS:—The opening season is, for the whole of Napa county, one of promise, not only to the farmer, but to the merchant and artisan as well. The cold snap in January was followed by warm and gentle rains that caused vegetation of all kinds to rapidly forge ahead. Our total rainfall at Napa City, for the season, is 12 inches. Very little has run off in the ditches or larger water-courses. Early-sown grain is looking very fine indeed, and the later sown is doing well. Some farmers finished seeding a week or two ago. Many are busy at work, hoping to have their grain crops all in by the end of next week. But every year the acreage devoted to wheat and other grain decreases, and fruit trees and vines are planted instead.

Vineyard and Orchard.

Our vineyardists have been busy for some time pruning and preparing to plow their extensive yards. This season many yards will come into bearing, new ones will be planted and old ones enlarged. Large quantities of wine are now being shipped from various points in Napa valley to San Francisco and other cities and towns in this State and those east of the Rockies. Several of our wine-makers obtained diplomas for their products at the last Mechanics' Fair in San Francisco, and that has greatly stimulated our producers. A finer quality of wine than that made in this valley cannot be procured.

The number of fruit trees of all varieties grown in this section of the State that have been sold here this season exceeds by far that of any former year. Very early in the fall it was evident that the stock of French prunes would soon be exhausted, and long since the trees were at a premium.

Peaches, pears and apples, cherries and apricots do so well with us, we are so near market, and prices last season were so satisfactory, the business of fruit-growing has received great impetus, and the prophecy that as the upper portion of Napa valley is almost entirely devoted to grape-growing, so the lower part will be given up to fruit-producing, is being fulfilled. As regards shipping our fruit, we have facilities surpassed by those of no other locality.

Small Fruits.

Berries of various kinds, which are raised in Napa valley to some considerable extent, and the larger fruits, can be placed on board our river steamboats at night, and early the next morning, fresh as when first gathered, are placed on the San Francisco market.

Only a few years since it was thought the small fruits could not be raised here successfully unless they were irrigated. It has been found that strawberries, raspberries and blackberries grow to perfection, and gradually the area devoted to them is enlarging. Certain it is the first two berries mentioned are among the most profitable fruits grown here, for they are always in good demand at good prices. Currants and gooseberries are grown to some extent, and are sold in the local markets or are shipped to San Francisco.

Canning.

Our well-equipped cannery stands all ready for some man who understands the business to open it at once. It can be bought for a small figure, or could probably be rented on easy terms. Excellent fruit in great variety can be procured in the valley. We annually ship large quantities to Oakland and San Jose canneries. Napa valley fruit has obtained a wide and merited reputation. Our cannery is situated near the bank of Napa river, and directly in front of it runs the track of the S. P. R. R.

Various Matters.

Olive culture is, in time, to be one of the prominent industries of our county. A large number of the trees have been planted this season. They grow well in any portion of the county, as has been proved by experiments in the past. Orchards three and four years old have made a very fine growth.

It is reported that a large addition to the force of men for some time employed on the San Francisco & Clear Lake railroad will be made at an early date and the work of grading vigorously prosecuted. Several miles have already been graded. The completion of this road means much for this county and more for Lake. Our own resources are but partially developed, while those of our sister county,

varied and large, are realized by but few persons.

In Napa City a war has been declared upon acacia trees, as it was found that, as elsewhere in the State, they were breeders of the cottony cushion scale. Locust trees were also attacked and of late many of these trees, that have attained quite a large growth, have been purchased by San Francisco parties for shipbuilding purposes, the price paid being at the rate of \$30 per ton; about three cords to the ton. This demand comes in good time. In the place of these trees removed others of greater attractiveness will be planted. Eucalyptus trees, popular with the masses a decade ago, were some time since condemned on account of their robbing the soil of so much nutriment. Now locust trees must go. Elms and maples are growing in popularity. An effort is making to plant both sides of the main county road, from Napa City up the entire length of this valley, with shade trees; the road will be nicely graded and macadamized. This plan fully carried out, we shall have one of the finest and longest drives in the State. So you see our county is forging ahead in the way of improvements and general prosperity. New-comers arrive frequently and purchase farms of greater or less extent, and more are expected once the weather becomes settled. The real estate firms of Napa City are to send a man East in a day or two to present our advantages to the people of States not blessed with so lovely a climate as we enjoy, for we are as anxious to have our population increase as all other sections of our favored State. Our lands are held at reasonable figures and will certainly never be lower. A. W. R.

Napa, Feb. 20, 1888.

SWINE YARD.

A Large Packing Enterprise.

All efforts to increase home production of meat products to supplant importations are interesting to local stock-growers. The Oakland Enquirer gives the following account of an enterprise to be established on the east side of the Bay of San Francisco:

The plans of the Chicago Packing & Provision Company are being matured very rapidly, and the contract has been already let for the erection of the company's main building on the ten-acre tract, between Butchertown and Posen station, which was bought of George W. Grayson. Some of the brick has arrived and the foundation is being laid. The building will be built entirely of brick, the difference between the cost of lumber and brick being now so small that the directors have decided to use brick. It will be an imposing building, four stories high and 250 feet long by 171 feet deep. It will stand on the east side of the railroad.

In arrangement the building will be like the model packing-houses of Chicago. There will be an inclined plane up which the pigs will be driven into the third story. From this floor they are snatched up, one by one, to the fourth floor, where they are slaughtered, soured into the scalding tanks, run through the scraper and their entrails removed. They are dropped down to the floor where the chilling-room is situated, cut up, and, finally, when they reach the cellar, the porkers are barreled ready for export.

The establishment will have a capacity for killing 2000 hogs a day, but as it is anticipated that it will at first be difficult to obtain that many pigs, the attention of the company will be largely devoted at first to beef-packing and beef-canning. Most of the machinery will be manufactured in San Francisco by Hinckley, Spiers & Hayes, but the wonderful scraping machine, which denudes a big porker of all his bristles in a twinkling, will have to be bought in Chicago, as it is a patented invention. Mr. Boyer, who came out to superintend the erection of the building, is now in Chicago making this purchase. All the machinery when set up will cost at least \$30,000. A force of 500 men will be employed when the establishment is in full blast.

The authorized capital of the company is \$500,000, of which \$200,000 has been subscribed. The plant which is to be erected will cost \$110,000. Mr. J. P. McElroy, from whom this information is obtained, states that it is not true, as reported, that Senator Jones is a large stockholder in the company. Mr. W. Selover invests \$50,000, and among the Oakland stockholders are G. W. Grayson, H. D. Blaisdell, J. S. Emery, Pierce & Co., F. M. Smith, J. P. McElroy, D. R. Burns, A. J. Snyder, J. M. Foy, Lannigan Brothers, W. W. Camron, J. H. Joyce, D. D. Hayes, A. S. McDonald, Hinckley, Spiers & Hayes, M. B. Curtis and E. A. Bushnell. In San Francisco, Strauss & Derby and S. Solman & Co. are among the stockholders.

The calculation of the company is that by the employment of labor-saving machinery and improved processes as much as 25 per cent can be saved on the methods of pork-packing in use on this coast.

A question which the company has considered long and anxiously is that of the supply of hogs. It is admitted that the supply is limited, but it is believed that it will become equal to the demand when farmers are assured of a good market all the year round. The price of

hogs sometimes drops here to two and one-half cents a pound, whereas, in Chicago, it is from four to five cents at all times. Eastern hogs are generally fed on corn, and it has been asserted that good corn cannot be raised here because so little corn is grown. This the company does not believe. It holds that hogs can be raised on alfalfa and put in condition on barley. Moreover, in the coast valleys good crops of corn can be raised if a market is assured.

HORTICULTURE.

Rare Fruits in Santa Barbara.

The following article by Prof. H. C. Ford of Santa Barbara was read at the recent meeting of the American Horticultural Society at Riverside by Mr. H. K. Bradbury:

That portion of Santa Barbara county lying between the Santa Ynez range of mountains and the Santa Barbara channel, with an east and west trend of the shoreline, having a southern exposure, with protections on land from the north winds in a mountain-wall from 3000 to 4000 feet in height, and on the other a chain of outlying islands that breaks the force of the summer trades, together with the close proximity of a body of water which maintains a uniform temperature of 62 degrees, renders this district fitted for the production of certain fruits, some of which are not generally supposed to thrive without protection within the limits of the United States. The temperature of this region seldom falls below 40 degrees or rises above 90 degrees, with an average rainfall of 17 inches. The cherimoyer, white sapote, avocado, date, banana and guava will not thrive where there is much frost, while Japan persimmons, pomegranates and loquats will bear a greater degree of cold, and consequently will find a wider range of growth in our country.

The cherimoyer (*Anona cherimolia*) is a native of Peru, and Humboldt, on his visit there, denominated it as one of the most delicious fruits of the earth. It was introduced into this region about 25 years ago. The parent tree, now standing on the grounds of A. Packard, Esq., has attained its full height of 16 feet, and has produced abundant fruit for many years in such perfection that the seeds have readily germinated, and trees thus propagated have been in successful bearing in several Santa Barbara gardens. The leaves are oval and pointed at both ends; flowers solitary, very fragrant and having a greenish color. Good specimens of the fruit are three or four inches in diameter, often heart-shaped, brown or nearly black when fully ripe. The flesh, in which 30 or 40 brown seeds are found, is soft, sweet and pleasant to the taste, being highly esteemed in its own land both by natives and foreigners. Like many other tropical fruits, it is most palatable when near decay. By many persons in this locality it is pronounced excellent, while others speak of it with indifference. Apparently it has no particular season for ripening in this neighborhood, yet the best specimens seem to be found at the April and May exhibitions of fruit.

In the grounds once occupied by the Mission gardens is a tree about two feet in diameter, with sturdy, upright branches forming a beautiful head of dark-green leaves. This is the white sapote (*Casimiroa Edulis*) and planted about 90 years ago by one of the Mission fathers; as near as can be ascertained, there is another tree of the same species growing in a garden in the lower part of the city of Santa Barbara, that came from seed received from Mexico planted about 45 years ago. It is growing both wild and cultivated in the States of Sinaloa and Durango, and elsewhere in Mexico, and is known there as the Zapote blanco. It belongs to the Rutaceæ and is more nearly allied to the orange than any other American plant. Its leaves are palmate, three to four parted with glistening upper surface; flowers small, greenish-yellow, growing in clusters with short peduncles on the old wood. Here the tree is usually in flower during January, often earlier, the fruit maturing in March or April. It varies from half an inch to an inch in diameter, pale yellow in color, and is not agreeable to the taste until in a soft state. It has a rich sub-acid flavor, our native Californians being exceedingly fond of the fruit. The older tree is about 25 feet high and has about the same spread of branches, while the younger is nearly as large, both forming fine heads of dense evergreen foliage, making it desirable as an ornamental tree for street or other planting, and would no doubt bear the climatic conditions of many other localities.

A tree of the tropical species, Alligator Pear, or Avocado (*Laurus persea*), is flourishing on the grounds of Mrs. F. Sawyer of Montecito. It was planted by Mr. S. L. Bond, 16 years ago, and has borne fruit for the past three years, which has appeared at our horticultural exhibitions. This tree is almost 20 feet in height, and appears in a thriving condition; the bark is smooth; leaves, oblong, with prominent veins; flowers, yellowish-green; fruit, purple in color, with the dimensions of a medium-sized pear, but more oval in shape. It contains a kernel inclosed in a soft rind, and yellowish pulp. The latter has the delicate, rich flavor of the peach, yet to me it tastes much more gratifying. In the West Indies, the inhabitants, on account of its richness, apply some spices, or acid, such as lime juice mixed with sugar. Of the three varieties

there grown, red, purple and green, the latter seems to be the favorite. In its native habitat it is eaten with avidity, not alone by man, but by birds and quadrupeds. The seeds of the fruit raised here are sufficiently perfected as to possess the germinating property. A small tree that has not yet borne fruit is flourishing in the garden of Judge Ord, in the city of Santa Barbara.

The date palm (*Phoenix dactylifera*) has perfected its fruit on the estate of the late W. W. Hollister for the past three years, fine branches of dates from this plantation having been exhibited at New Orleans at the late exposition, at the State Fair at Sacramento, at Los Angeles, and at the local exhibitions of the Santa Barbara Horticultural Society. These palms are now about 16 years old. They are carefully cultivated and irrigated several times during the drier portions of the year. The suckers that spring from the base of the trunk in the earlier years of the palm are annually removed. This palm being dioecious, it is necessary to hang the staminate flowers over the pistillate blooms in order to insure proper fructification, when the male and female trees are not planted in close proximity. Palms of this species have fruited in a few other localities in the State, but the product has not been as satisfactory as at the place under consideration. That the raising of dates for market will ever be a profitable industry in this special district or any other locality in California, is a problem for horticulturists to solve, but the results already obtained certainly render further experimentation desirable.

Among the tropical fruits that find here suitable conditions is the guava (*Psidium pyrifera*), examples of which are found in numerous Santa Barbara gardens. In its wild state in the West Indies it is a large shrub, but in cultivation it attains the dimensions of a tree five or six inches in diameter of trunk. The wood is exceedingly hard and tough, the leaves are about three inches long in pairs opposite each other, the flowers white with an agreeable perfume. The fruit is from one to three inches in diameter, having a smooth skin and a peculiar musky odor that is disagreeable to most persons. The seeds are contained in a flesh-colored pulp that is sweet, aromatic and very palatable, the pleasant taste lingering some time after eating it. It is used as a dessert fruit, and is preserved with sugar. The jelly made from this fruit has long been universally esteemed. Excellent products from home-grown fruit have been prepared by Santa Barbara housewives. To insure success in the preparation of the jelly, partially ripened fruit should be used.

The strawberry guava (*Psidium cattleianum*) is a variety that is now being planted quite extensively, being a more hardy species. It is a smaller fruit than the preceding, being less than an inch long, purple in color and of a rich flavor, somewhat resembling strawberries. This tree attains the height of 20 feet at full maturity.

The banana (*Musa Sapientum*) has been planted in almost every garden in our neighborhood, and fine branches of fruit have been perfected. It is not claimed that the fruit reaches so high a degree of perfection as in the tropics, but certainly excellent, well-ripened and flavored specimens are not uncommon, and it is believed that with more care as to situations, and by planting in large groups with high fertilization and proper irrigation, much better results may be attained. One grower in Montecito asserted that on every day of the 365 his family was supplied with ripe fruit from his plantation, principally from the *Musa Cavendishii*, the dwarf species.

The noble Abyssinian banana, *Musa Ensete*, is being quite widely planted for its superb tropical appearance in the landscape, but its fruit is pulpy and of no value.

Of other fruits drawn from sub-tropical regions, the Granadilla, *Passiflora Edulis* Water lemon, purple when fully ripe and pleasing to many tastes; the Tuna, *Opuntia tuna*, a refreshing fruit introduced by the Franciscan fathers and much esteemed by the native Californians, and the Eugenia, *Eugenia Myrtifolia*, from Australia, a highly ornamental tree with bright green foliage and a pleasant flavored fruit about the size of a cherry, may be mentioned in this list.

The Loquat, *Eriobotrya Japonica*, which Rhind in his "Vegetable Kingdom" ranks as a tropical fruit, is produced here at as great perfection as in its home climate. Being a native of Japan, it also thrives in a region of our Southern States bordering the Gulf of Mexico, as well as throughout Central and Southern California. It is in blossom in the early winter months, and by March and April the fruit is to be obtained in our markets, where it finds ready purchasers. Ripening at a time when other fruits are comparatively scarce, with its delightful and refreshing flavor, it promises to become still more popular. Efforts are being made to introduce a new variety from Japan that is said to be much larger in size than now planted, having more pulp, with smaller seeds. Belonging to the Pomaceæ, it may be grafted on any species of this genus. The long, dark green and rigid leaves, the deliciously fragrant flowers and the golden clusters of fruit, render it a favorite in our ornamental planting. The fruit will bear shipping and would no doubt find favor in our Eastern markets.

The pomegranate (*Punica granatum*) seems to have been first introduced by the Mission fathers to this region, and there are still living a number of trees of great age in the Mission

gardens. The tree at maturity is from 15 to 20 feet in height, having numerous slender branches often armed with thorns. The leaves are opposite, about three inches long and of a beautiful green. The flowers are produced at the end of the branches on the new shoots; the calyx is very thick and fruity, and of a fine red color, the petals being crimped and scarlet. The beauty of the tree, not taking the fruit into account, has caused it to be planted in many of our gardens. The fruit is a large berry, covered with a hard, leathery coat and crowned with the tube of the calyx, contributing to its singular and beautiful appearance. A large number of seeds are contained in the crimson-colored pulp, which has a slightly sub-acid flavor, agreeable and refreshing, although it requires some dexterity to separate it from its leathery covering without getting some of the juice or flavor of the latter in the mouth, which, owing to this skin being very rich in tannin, is quite astringent and bitter. It is ripened here in October, but if not then gathered will remain on the tree for several months in good condition. To bring the fruit to its greatest perfection, careful cultivation is required; in fact, a neglect of this will be paid in a penalty of barren trees. Fine specimens are always shown at our autumn exhibitions, and it is occasionally found in our markets. With proper attention it might be profitably grown.

I will briefly refer to the Japan persimmon (*Diospyros Kaki*), which is raised in this district with the most satisfactory development. This fruit is rapidly and justly growing in popular favor. Natives of the Southern States, who have been accustomed to our native persimmon, are enthusiastic when they taste the Japan fruit. Its astringent quality entirely disappears when the pulp becomes soft. It is easily transported when picked at the proper stage, and doubtless it could be shipped to advantage to Eastern markets, where its splendid color would certainly make a unique adornment for the table. It is now sold in our markets at five cents per pound, but often commands a higher rate. This fruit can be grown in any portion of the United States where the temperature does not fall below 14 degrees above zero.

The Lichi of China, *Hovenia dulcis* of Japan, and *Carica papaya* of Peru have been introduced, but the trees are not yet old enough to produce fruit. It need not be stated that the conditions favorable to the growth of such fruits as we have under consideration are also congenial to the whole citrus family as well as the fig and the olive. Add to these the whole range of temperate climate fruits. Where is the land that can furnish a greater variety of such productions grown in the open air than California?

SHEEP AND WOOL.

Manure Factories on Waste Land.

EDITORS PRESS:—"Feed the land and it will feed you." But how to make the land furnish the feed is the enigma. To buy fertilizers is a move forward that our California farmers are slow to make. To follow the Eastern practice of sowing some heavy-growing grass and plowing it under is not practicable save on moist lands or those lying under the line of the ditch. In the course of an evening's conversation with that veteran Angora goat-breeder, N. Gilmore of El Dorado, El Dorado Co., he gave me a solution of this question, which, as his modesty and want of time prevent his writing it up for the readers of the RURAL, I will try and give it instead.

In England the farmers hire sheep and turn them on to their fields to eat what would otherwise be waste and convert it into a prime fertilizer. Our California ranchers do better. The header clips but the top off of the grain; then the sheep are turned in at so much a head to fatten on the stubble, and the rancher goes on year after year cutting grain from the same fields, crediting his large and continuous yields to the original fertility of the soil, though a moment's thought will show him it is the returning to the soil of the stubble in the form of an exceedingly rich and concentrated fertilizer that keeps his soil up to its virgin strength. Now all ranches do not grow wheat, but almost all mountain ranches have more or less waste land that is thickly covered with brush; much of this land is comparatively new and consequently poor. To fertilize this land from the brush growing on it, and at the same time secure on the ranch a supply of manure equal to guano for the better land, requires but a small outlay of money and gives larger returns for the amount invested than can be realized from a like amount placed in any other way. Fence in the waste land with a six-strand barbed-wire fence, which, if properly built, will effectually keep out dogs and coyotes. Stock the inclosure with as many goats and no more than it will sustain. In the center of the inclosure build a shed with movable slat floors. The droppings will fall through the slats and thus keep the goats clean. The floor can be raised at any time and a bonanza in fertilizing material removed. If you doubt its value you can go to any successful Italian gardener, see how, when his onion-bed is all ready for the onion sets, he rakes into the surface a light dressing of goat manure and watch

the results. The profit, however, is not confined to the manure. The goats in themselves pay well under the circumstances. What they eat costs nothing, so that all that is realized from them over the original cost is clear profit. The best Angora goats can be bought for \$25; common, 75 cents to \$1.50. A thoroughbred Angora will yield:

Value of carcass.....	\$1 50
Value of mohair.....	1 00
Value of skin mat.....	5 00—\$7 50

Cost of preparing skin for mat.....2 00

Gives as profit on each goat.....	\$5 50
While the manure is worth.....	5 00

Or for a two-year-old goat.....\$10 50

How can you do better on land that at present is returning less than nothing? If you say "goat meat is only eaten by foreigners," I would call your attention to the fact that for a year past "a kid dinner" is the dinner in New York's best families. To eat it is to love it. Would the foothill mountain rancher but try the goat, keeping just what his land will carry in good condition, and his fields will soon return him ten-fold for his labor.

E. H. SCHAEFFLE.

Murphys, Cal., Feb. 15, 1888.

POULTRY YARD.

Different Breeds for Different Uses.

EDITORS PRESS:—Have you ever known an intelligent and honest breeder of Herefords claim that in butter-making qualities they were equal to the Jerseys? I think not, and yet we are constantly told that the table varieties of poultry under the same treatment lay equally well or better than the egg-laying strains of fowls. I have been raising fowls for 20 years, and so far I have found no one whose experience under the same circumstances varies from my own. When I want eggs I take the Brown Leghorn, not your scrub Leghorn of untraceable parentage, but a few of the cream of the Leghorns that will all score over 90 points and then I find them unlike the table varieties. They refuse to put on fat, but shell out the eggs in such quantities as to convince the most skeptical. If I desire a larger egg and am not particular about so continuous a layer, the Minorca fills the bill. When I want a fowl for my table I take one of my 12-pound Buff Cochins or the game-flavored Langshan, though the Cochin is preferred, as he has no dark pinfeathers to mar the skin. Many prefer the bright yellow-skinned Leghorns for the table, but the quantity is not there any more than the eggs are in the Buff Cochin. All fowls are good in their places, none the best all places.

E. H. SCHAEFFLE.

Murphys, Cal., Feb. 15, 1888.

EGGS BY WEIGHT.—With regard to the oft-mooted question of selling eggs by count or by weight, the *Rural Messenger* remarks: All forms of meat are sold by the pound. But when we come to eggs, the richest and most concentrated form of meat, the universal custom is to sell by the dozen, regardless of the fact that there is something more than a pound difference in the weight, and the quality of matter varies in a dozen eggs of different breeds. Of Guinea-hens and Bantam eggs about 16 are required to the pound, but the eggs of the pure Brahmas, Cochins and other large breeds weigh over two pounds to the dozen, or six eggs to the pound. Here is a difference of about ten eggs, or say 90 cents, in favor of the breeder of small varieties of fowls, and a loss of more than a pound of the best form of meat to the purchaser of the small eggs when he buys by the dozen. It is clear enough that this is not quite fair for the breeder of large eggs nor the consumer of small ones. The only equitable way would be to sell by weight, giving the purchaser his choice between large and small eggs. As it is now, the breeders of large sorts of fowls are placed at a disadvantage in order to compete with those who handle smaller breeds.

PERILS OF THE CHICKEN ROOST.—Among the many difficulties and disadvantages attending the raising of poultry, the losses by predatory animals in some cases enters as a factor of no mean proportions. In exposed situations, a thieving skunk or wildcat will clean out the entire establishment by regularly repeated raids, if not killed or effectually barred out. Mr. J. J. Jones of the Alhambra Poultry Yards is perhaps as carefully protected by wire fences as one would consider necessary, yet a weak place was found through which a wildcat contrived to squeeze, a few nights ago, and select, as they generally do, one of the finest and most valuable fowls in the inclosure, which he transferred to some more convenient spot for final disposition. Then Mr. Jones went for that animal with traps judiciously spread around where he would be most likely to make their acquaintance. In the morning he found several of them had been interviewed and sprung, and in one, locked in vigorous embrace, was the neatly amputated toe of the wildcat, the balance of his anatomy having escaped. Worse luck for him next time.—*Martinez Gazette*.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Sonoma County Granges.

Members of the Order in Sonoma county are alive to the work that is to be done. From Sebastopol Grange we have words of progress and improvement. Saturday next, March 3d, they will confer the third and fourth degrees on a class of eight new members. The usual and necessary Harvest Feast will be spread and enjoyed. Report has it that the Worthy Overseer of the State Grange, Brother E. W. Davis, will be present.

Bennett Valley Grange is also having a boom. Another class of eight members are now ready to obtain the mysteries of the Order as taught therein.

Santa Rosa Grange is also growing in membership. The first and second degrees will be conferred at the next meeting. The section-work and discussions in Santa Rosa Grange are drawing well. The attendance is largely increased, and a new interest seems manifest.

Brother L. J. Hawkins, the Assistant Steward of Santa Rosa Grange, met an untimely death February 14th, by a pistol-shot from his own hands, whether accidental or suicidal is unknown, as he was alone when shot. He was buried by the Odd Fellows, but the members of Santa Rosa Grange were in attendance in large numbers.

Brother Hawkins was an enthusiastic Patron, and his death leaves a vacancy in the ranks of the Order that will be difficult to fill. Bro. O. V. Ort, an enthusiastic and vigorous worker in the Grange cause, has been elected Assistant Steward of Santa Rosa Grange, to fill the vacancy caused by the death of Brother L. J. Hawkins.

From Two Rock Grange we hear but little, but all that we hear is of a favorable nature.

It is painful to report that in the flourishing city of Healdsburg there is no Subordinate Grange. There is not a more flourishing agricultural city in this State than Healdsburg. The farmers thereabout are thrifty, intelligent and progressive, and yet they have no Grange. What has been said of Healdsburg can as well and truthfully be said of Petaluma, Sonoma and Cloverdale. It is hoped that our new District Lecturer, S. T. Coulter, and our worthy Overseer, E. W. Davis, will not long allow these thrifty neighbors to be without the advantages of a Subordinate Grange in each locality named.

[Official Notice.]

Important Meeting of Officers.

The newly appointed Deputy Lecturers are requested to meet at the office of the Secretary of the State Grange, 220 Market street, S. F., at 10 A. M. Friday, April 6th, together with all officers and Past Masters of the State Grange and their wives who are Matrons. This meeting is for a conference concerning matters relating to the Good of the Order, and to devise plans for the future work and progress of the Grange.

Among other subjects to be presented is that of arranging the time of holding picnics in different parts of the State, in such order as to make it convenient for State officers and other speakers and Patrons to visit the same in rotation.

It is hoped that every officer will respond promptly and come prepared with suggestions for the Good of the Order and fully prepared for effective work.

W. L. OVERHISER, Master.

A. T. DEWEY, Secretary.

San Francisco, Feb. 28, 1888.

Grange Election.

CERES GRANGE.—V. E. Bangs, M.; M. J. Hall, O.; Mrs. H. M. Whitmore, L.; P. P. Siles, S.; H. W. Brouse, A. S.; Mrs. E. Carner, Chap.; M. M. Williams, Treas.; Mrs. A. Chapin, Sec.; Mrs. Annie Whitmore, G. K.; Miss Nettie Brouse, Pomona; Miss Susie Bangs, Flora; Mrs. M. J. Hall, Ceres; Miss Sarah Carner, L. A. S.; Mrs. R. M. Williams, Organist.

NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

SELECT DEPUTY LECTURERS.—Different counties have recommended the names of those they prefer the Master of the State Grange should appoint as Deputy Lecturers. But quite a number of counties are yet to be heard from. This is an important matter, Patrons. The Masters of every county should see to it that the recommendations are no longer delayed.

MEMORIAL RESOLUTIONS on the death of Sister Margaret Coates were passed by San Jose Grange at its meeting on the 18th ult.

The Worthy Master's Squirrel-Smoker.

If Bro. Overhiser shows as much zeal in keeping the Grange alive as he does in exterminating squirrels he will prove a grand success. It is well known that this brother never does anything by halves. He has the biggest smoker in the land, and he does not care what the tariff is on tobacco; he proposes to smoke all the same, and to the destruction of every squirrel in his section. He has a sheet-iron cylinder, six feet long and one foot in diameter, attached to the hind end of a spring wagon. There is a rubber hose, one and a half inches in diameter and twelve feet long, one end coupled to the cylinder, within eighteen inches of the bottom, and the other end attached to a pair of bellows fastened in front of the wagon. The sides and front end of the wagon are boarded up four feet high to hold the fuel which consists of straw and barn-yard litter, to which is added sulphur or crude brimstone. I told the brother there would be no loss in this experiment for if the thing did not kill squirrels it could be easily converted into a telescope or a huge sausage-filler.

It was taken into the field, where there was a regular nest or village of squirrels, and inserted into one of the holes and the fire and blower started. Within fifteen minutes smoke was seen issuing from 25 to 30 holes which were filled with dirt. One of these holes, by measurement, was found to be 60 feet from the machine. Such pressure was put upon the smoke that it could be seen issuing from the ground where there was no sign of a hole.

I heard the brother offer to take contracts by the acre from his neighbors, to exterminate every living thing that burrows in the ground. I cannot imagine how this thing ever entered his fertile brain, unless he had been dreaming of the rabbit drives and tomale picnics they have had lately in Tulare county.—D. F. in Patron.

San Joaquin Pomona Grange.

Bro. Flint, W. L. S. G., chanced to be near Lodi on business February 23d, and learning that the Pomona Grange was in session, made them a visit. A part of his report is as follows:

"I found a goodly number of the substantial Patrons of this section present. I was much pleased to see so many take an active part in the proceedings, and especially the sisters, who showed a readiness in debate and aptness to supply or suggest words to motions or resolutions that relieved them of their harshness and caused them to read much more smoothly.

"The principal thing discussed was the constitutionality of raising the dues to the State Grange, which was changed at the last State Grange from ten cents per quarter to twenty cents. One member, who made a vigorous speech in opposition to the raise, has a fine farm, elegant house and attractive surroundings. When the Master of the State Grange asked him if he did not belong to an Order to which he paid \$12 dues per year, he vanished as would the tallow-dip in the presence of the god of day.

"With the efficient assistance of Bro. Pixley, I proceeded to install the officers of San Joaquin Pomona Grange, No. 3. Bro. Overhiser welcomed the new Master, Bro. Elliott, to his chair, and as each one was installed and introduced, he or she made a neat and appropriate speech."

Their next meeting will be held at Stockton, the third Saturday in March at 10 A. M., and in the afternoon they will pay a fraternal visit to Stockton Grange.

A SPECIAL MEETING of the Executive Committee of the California State Grange is hereby called to meet at the office of the Secretary, 220 Market street, San Francisco, at one P. M. on Wednesday, the 4th day of April, for the transaction of such business as may be brought before it relating to the interests of the Order. The regular semi-annual meeting will be held on Friday, April 6, 1888.

THE PICNIC SEASON.—The picnics held by the P. of H. are not to be excelled by any other gatherings of the kind. Everybody likes them. They are almost invariably pleasant and beneficial to the Order and the community in which they are given. Let us hear from every Grange on this subject. Announce your time and place early.

BUTTE MOUNTAIN POMONA GRANGE starts very auspiciously, with 58 charter members from Sutter and Yuba counties. It was organized in November last, but the roll has only just been closed.

The Word Granger.

The word "granger" is by no means a new one, although the significance as adopted by the Order is somewhat changed. In an old work called Henry Best's Farming Book, published in England in 1641, occurs the following sentence: "His tenants, the graingers are tyed to come themselves and winde the wool; they have a fatte weather and a fatte lambe killed, and a dinner provided for their paines."

Old English names like Roger de la Grange, or Geoffrey de la Grange, or John le Granger, remind us that *grange* was also commonly used at one time for a farmstead, it being in reality nothing more than our *granary*.

Piers Plowman portrays the Good Samaritan thus:

"His wounds he washed,
Embawmed hym, and bound his head,
And led hym forth on 'Lyard'
To 'lex Christi' a graunge
Wel Sixe mile or sevene
Beside the newe market."

Fronting the "Trust" Bandits.

The Sutter Farmer speaks a stirring and timely word as to dealing with the "trust" robbers—as follows:

There is scarcely a commodity, especially if it approaches within hailing distance of a necessity, that has not been driven into a "corner" by combination or monopoly which sails under the new name of "trust." As a rose by any other name smells just as sweet, so a heartless monopoly by any other name grinds just as fine and bears just as hard as if sailing under its appropriate colors. This trust business has assumed such prodigious proportions as to engage the attention of the leading press of the country and of Congress, and we are forcibly reminded of the first years that succeeded the closing of the late war, when the business of the country was run in the interest of cliques and rings that had fastened themselves like leeches upon the Government and its industries. There was but one remedy, and the people were not long in finding it; organization had to be met with organization. It called into existence the Grange movement and the numberless organizations for economic purposes, among the farmers and the great middle classes. The onslaught was fierce and costly, but the result was never in doubt and ended in teaching the monopoly combinations that the people, when fairly aroused, were irresistible.

Congress may pass laws and send out investigating committees, but the remedy will be slow and uncertain unless the great industrial classes come together and combine their strength. The people must meet trust with trust, organization with organization, and agree to abstain from using an article that has been cornered, no matter what it is. Such resolutions promulgated and well observed will have more terrors for the monopolists than all the proposed legislation, for, be it remembered, that the millions made in these trusts have their influence on Congress and Legislatures. While the subject 25 years ago was new and the common people uneducated in such things and inexperienced in fighting organized capital and numbers, it educated them for the future, until they are quite capable to detect the wolf, though dressed in sheep's clothing or called by another name. The lion is not yet chained, and, knowing his strength, will refuse to be bound by monopoly fetters. Organization and a union of effort is the remedy, and we know of no other, but economy and self-denial are powerful aids.

Burial of Judge Russell.

The funeral of Joel Russell took place at Haywards on Thursday of last week. Flags at half-mast and heavily bordered with crape told of the people's sorrow, and the Congregational church was not large enough to accommodate those who gathered from near and far to testify their respect and affection for the departed.

The remains were taken to the church about 2 o'clock. The exercises were opened by Rev. W. W. Madge. Mr. Henderson, who had spent with Judge Russell the last day of his life, followed. Then came Rev. Mr. Morris of San Francisco, and finally Dr. R. H. McDonald. There was fine singing by Mmes. Kelsey and Hathaway, Misses Baxter, Cherry and Linekin, and Messrs. Baxter and Eby.

Among the many and beautiful floral tributes were a pillow, on which was inscribed "Rest," from Eden Grange, and a heart of white flowers, imbedded in violets, from the W. C. T. U. The funeral was in charge of Eucalyptus Lodge of Masons, of which the deceased was a member, and all appeared in their regalia. The pall-bearers were C. Winton, O. Deonis, H. W. Rice, H. Smyth, Mr. Henderson, Dr. R. H. McDonald, Rev. Mr. Morris, S. D. Warren—the first four Masons and the others Prohibitionists.

At the conclusion of the exercises, the long procession made its way to Lone Tree cemetery, a lovely burial-ground overlooking the valley, where the Worshipful Master, H. W. Meek, assisted by the officers and members of his Lodge, impressively performed the beautiful Masonic burial service.

The Canning Industry and Tin Plate.

A fortnight since we printed the petition, telegraphed by leading canners to the Congressmen from the Pacific Coast, that the latter use their best endeavors to have the duty on tin plate removed. Regarding this matter, the *Oregonian* well says: The tariff on tin plate (one and four-tenths cents per pound, equal to about 30 per cent) is one of many cases where the protective principle is applied where there is nothing to protect, and the result in reality is a limitation upon manufacture. There is no tin-plate industry worthy of the name in the United States, so the effect of the revenue is to add 30 per cent to the cost of tin, without any corresponding benefit whatever. The aggregate of this 30 per-cent increase is shown by the customs' reports to be about \$4,500,000 per year.

The magnitude of the tin-plate importation is due largely to the necessity American farmers, fruit-growers, fishermen, etc., are under of preserving their products. The canning industry provides a means whereby many articles perishable under ordinary methods of packing may be preserved permanently. It provides a means whereby producers of perishable products can reach distant markets and have the demand for the commodities that they have for sale extended through the 12 months of the year. This great canning industry, one of the most important in the country, affecting a wide range of dependent industries, is, in the aggregate, taxed to the extent of the tin-plate tariff to "protect" an industry which has no existence in fact, and only a poor chance of existence in the future. * * * It is hardly necessary to say that the millions which the Government annually derives from this source of revenue are altogether needless, since the Government has more money than it knows what to do with.

Congress ought, by all means, to put tin on the free list. By so doing it would cut \$4,500,000 from the revenue at a single stroke, save the consumers of the country a corresponding amount, and promote an industry whose benefits are universal.

WHOLESALE NEIGHBORS.—Did you ever notice, asks the *Pittsburg Stockman*, what a wonderful influence one good farmer in a township or valley has upon all the other farmers in the vicinity? Take, for example, a section where the land is naturally a little thin, where one generation after another have eked out a scanty living from the time of the first settlement, and let a good, systematic, energetic farmer settle on an average piece of land and begin stirring things up—first treating the soil as it should be treated, enriching it with fertilizers and rotation of crops—and see the effect. How naturally everybody falls into line, and at least imitates the example of the new-comer. Such a farmer is worth more to a neighborhood than all the old fogies that can be gotten together. It would not be a bad idea for those who have charge of the agricultural interests of the different States to place exemplary farmers in districts where the people are slow to make improvements, or to make the best of the advantages which naturally surround them. Such a scheme would certainly "rattle the dry bones" that are standing in the way of progress in many a community.

UNJUST DISCRIMINATION BY RAILROADS.—On the 23d of February the Inter-State Commerce Commission promulgated an elaborate opinion in the case of George H. Rice of Marietta, O., vs. several railroads, charging them, among other things, with discrimination in favor of the Standard Oil Company. The case of each defendant was considered separately, and in that of the Louisville & Nashville railroad an order was entered that the defendants cease unjust discrimination; that they cease to make tank-rates when tanks differ in capacity, and that they conform the charges on tank cars and barrel shipments to the rule that the tank is to be considered a part of the car itself, and for whatever is carried in it the charge ought to be the same by the hundred pounds as is made on the transportation of barrels of oil in carload lots in other cars. In the case of the Iron Mountain road the finding is that the defendant made excessive rates on barrel shipments, and an order was entered that its charges be made to conform to the rule.

New Freight Rates East.

The Transcontinental Association of Railways has issued its new schedule of rates. The rate on corn and beans to the Missouri river points is 60 cents per cental.

On live-stock rates the new tariff makes very material reduction in the carload schedule, though the rates on less than carload lots have been increased. The old rates to the Missouri river for horses and mules a carload was \$400; for cattle, \$300; hogs and sheep, \$280. The new rates are \$250, \$200, and \$170 respectively. Rates to the Mississippi river and Chicago common points are reduced in similar proportions.

Barley and malt, carloads, to Missouri river points, to St. Louis and common points, and Chicago and common points, all 60 cents per 100 pounds. The rate on canned goods, carloads, will be \$1 25 per 100 pounds to Missouri river, New York City, and all intermediates. Potatoes 80 cents per 100 pounds to Missouri river, St. Louis, and Chicago, continued, as is also rate on vegetables, carloads. Rate on wine in wood will be \$1 25 to all points.

Palm Valley—"The Land of the Afternoon."

Five miles south of the Southern Pacific railroad, and just east of Mt. San Jacinto, in San Diego county, lies one of the most remarkable valleys in California. The valley is quite limited in extent but almost unlimited in its productive capacity. It is really a "tropical valley" in which planting and harvesting can be carried on every month in the year. It is only within a few months that much attention has been drawn to this locality. It has been heretofore known chiefly by the small Indian reservation which has been for many years located upon it. The Indians have planted there several small patches of vines and a few fig trees and vegetables whose extraordinary growth and superior yield has brought to light the remarkable value of the soil which overlies this valley. The character of the climate is such as to bring forward all kinds of fruits and vegetables much earlier than they can be placed in the market from any other locality. This has been fully proven by the little that has already been done in that direction.

In regard to its soil, Prof. Hilgard of the State University writes as follows: "Commenting on the analysis made of your soil from Palm valley, I would say that the result is a surprise to me, as it is rare that a soil of so sandy a nature is so rich in the ingredients of plant food. In its contents of the primarily important mineral ingredients, it stands on a level with the best soils in the State, and if of sufficient depth it is hard to say what crop it would not be good for. It contains but an insignificant amount of alkali, and that of a bland nature; in so light a soil, moreover, even a larger amount would be of little consequence. Its moisture absorption is, however, quite light, so that if heavily cropped this soil will probably require plenty of water." Fortunately, the conditions of water are fully supplied, there being an abundance in the immediate vicinity obtainable from several sources—a plentiful supply for the present having already been brought upon the tract. The land requires but a trifling amount of labor to place it in perfect condition for convenient irrigation. The climate is all that could be expected for such a location. For fully eight months it is all that could be desired. During the balance of the year it is fully as agreeable as most of the notable health resorts in Southern California.

A strong company has been formed, with abundance of capital, which is under the management of liberal, intelligent and experienced men, to develop this locality. A large amount of land has already been sold to parties who are now making substantial improvements. The company itself is also engaged in improvements on a large scale. Arrangements have been made and the land is now being prepared to set out, in the immediate vicinity of the town-site, the largest orange orchard in the State, if not in the world. As already said, water has been brought to the tract in abundance. A railroad is now being constructed from the Southern Pacific, five miles distance directly through the center of the valley, by which travelers and visitors will soon have easy access. The company has already erected at Palm Springs station, at the junction of the branch with the main road, a building to accommodate persons going into the valley. Near the entrance to the valley there is a well-known medicinal spring which has long been used by the Indians, and which is now utilized by visitors, a very convenient hotel having been erected for that purpose by Dr. Massey. Religious services are also held here every Sabbath by a clergyman who has lately come into the valley on account of his health, and purchased a 30-acre tract of land.

At the upper end of the valley, where the canyon rises abruptly up the mountain-side, is found one of the most remarkable growths of fan and other palms known, perhaps, on the continent. The accompanying illustration has been made from a photograph taken in this grove. The entire grove numbers some five or six hundred trees, and it is said that nearly all the fan palms in other parts of the State originate from seed or otherwise from this growth of

fan palms. We shall have occasion hereafter to make further and more particular reference to the new and interesting locality of Palm Valley, which has been not inaptly styled "the land of the afternoon."

Fruit-Growers' Convention.

The Ninth State Convention of Fruit-Growers, to be held under the auspices of the State Board of Horticulture, will convene at Santa Barbara on Monday, April 9, 1888, and will continue in session four days. The Santa Barbara County Horticultural Society, the citizens of Santa Barbara and the members of the State Board cordially invite fruit-growers, and those interested in kindred pursuits, to be present at said convention and participate in its deliberations.

Every effort will be made to insure a large attendance, and it is to be hoped the meeting will be one of interest and profit to all.

An exhibition of fruits, etc., will be made by the people of Santa Barbara and vicinity. There will also be a grand flower show by the ladies of Santa Barbara, which will be free to all who will attend.

There will be an excursion to Ellwood, at which place will be conveyances to take the members to the head of "Ellwood canyon" and to the Beach Bluffs. They will also be shown the Cooper Olive-Oil Works, etc.

All those having new fruits, and inventions

In View of Fairs to Come.

As the stir of preparation for the district and county fairs of 1888 is already beginning to be heard, we throw out a few hints which have occurred to us from time to time as likely to promote the success of their management.

Referring to the awards at Marysville last autumn, the *Oroville Register* made some remarks which are worthy of serious consideration outside the 13th Agricultural District:

"The managers of the fair ought to revise their premium list and strike out about one-half of it another year. All those things that prove a good advertisement to the exhibitor, such as goods from stores, need no premium; a medal or a framed diploma would cost less, and prove of more lasting value than a small amount in coin. When a fair gives the same sum for an exhibit of silver-plated ware that it does for the best exhibit of citrus fruits, and when a larger premium is offered for an exhibit of boots and shoes than for the best exhibit of dried fruits, there is something wrong. Such things as citrus fruits, dried fruits, hams and bacon cured in the locality, etc., that are of interest to one-third the land-owners in the district and are certain to be of great and lasting value to many persons, should be fostered by large and valuable premiums, while those of little or no importance ought to be cut off without any. It

Meeting of the State Horticultural Society.

The regular February meeting was held at the rooms of the State Board of Horticulture, on Friday, the 24th. S. J. Stabler was called to the chair. There were present as visitors Prof. J. L. Budd of Iowa, Gen. Bidwell of Chico, Dr. C. C. Parry, the botanist, and others.

The Tariff on Fruits.

Letters from Pacific Coast representatives in Congress were read in response to copies of a memorial sent them by the secretary of the society. The memorial favored the maintenance of the present tariff on foreign fruits.

Congressman Morrow wrote: "I beg leave to say I am in favor of maintaining the present tariff, and if the opportunity presented I would even favor an increase on some of the articles. I believe in the principle of protection for the reason that it has proven to be beneficial to the best interests of the country. I will see that your resolutions are brought to the attention of Congress, and I am sure they will have some influence in showing the importance of the fruit industry in California."

Senator Dolph of Oregon wrote in response: "In any revision of the existing tariff laws, I shall endeavor, so far as possible, to protect all the important industries of the Pacific Coast; and shall be glad to co-operate with the California senators in the

matter referred to in the memorial."

Congressman Felton said he indorsed the resolutions heartily. "As you are aware," he continued, "I, being an old Californian, am somewhat conversant with the industries of our country, and consequently have my opinion as to what would be the effect of any change affecting their prices. As all of my interests, both material and personal, are centered in California and its people, it goes without saying that anything interesting to that State and people will have my earnest attention."

Congressman McKenna said that he favored all the politics urged. Senator Jones of Nevada said he was in thorough accord with the spirit and letter of this memorial, and promised his best efforts in favor of the California fruit-growers. Senator Stanford acknowledged the receipt of the memorial, and

promised to present it in the Senate. Senator Mitchell simply acknowledged receipt.

Discussion.

Work in the orchard being pressing at this season, the attendance at the meeting was small and the subject of fruit-shipping was postponed until the March shipping.

Prof. J. L. Budd, on invitation, gave an interesting talk on Russian fruit varieties and the possibility of some of them proving of much value in California. We expect to give the facts at another time. Prof. Budd's remarks led to a discussion, in which several took part.

Secretary Wickson announced with regret the death at his home, at Haywards, of Joel Russell, an old and honored member of the society. A committee, consisting of E. J. Wickson, Dr. E. Kimball and W. C. Blackwood, was appointed to take appropriate action in behalf of the society.

All members were urged to attend the next Fruit-growers' Convention, to begin at Santa Barbara April 9th.

ENOUGH TO FEED ALL BRITAIN.—Minnesota and Dakota, with 915,000 people in 1880, and, perhaps, 1,500,000 now, produced more wheat last year than Great Britain and Ireland with 35,000,000 people. The British islands comprise about 121,000 square miles, and devote to wheat growing only 2,400,000 acres, about one acre for 15 inhabitants. Minnesota and Dakota have about 6,000,000 acres of wheat, or about four acres for every inhabitant, and with a good yield could easily sell for export as much as Great Britain and Ireland produce. Yet the British crop this year is considered a good one, notwithstanding the hot drought, which reduced the yield to about 30 bushels to the acre. With thorough farming, the lands now cultivated for wheat in Dakota and Minnesota would supply nearly as much as the entire population of the British islands consume. —*London Economist*.



FAN PALM GROVE AT THE ENTRANCE TO PALM VALLEY, SAN DIEGO COUNTY.

of value to horticulturists, are requested to exhibit them at this meeting.

At the opening of the convention a committee will be appointed who will, just before adjournment of every day's session, report the business and program for the following day.

A great many very valuable papers on horticulture, etc., by the most prominent horticulturists of the State, will be presented, and it is expected that this meeting will be the largest and best ever held in the State.

ELLWOOD COOPER, President.

B. M. LELONG, Secretary.

Warts on Horses.

Mr. E. H. Rodman of Stockton, seeing the inquiry of D. T. Hall in regard to granulations in the ear of his mare, writes us that if it is only warts fresh laid will take them off. About two years ago a horse which he was taking care of for Geo. A. McKenzie had one wart on his neck, another on his side where the harness seemed to chafe it and make it bleed whenever the horse was used, and two more about the flank. The one on his side was about the size of a walnut. Mrs. McKenzie having seen in a paper that fresh lard would remove the warts, Mr. R. obtained some leaf lard, tried it out and used it on the warts but a short time before they disappeared, leaving a bare place on the side. These places, however, are now all covered with hair, and one could hardly tell where the warts had been.

THE USE OF VINEGAR.—Experiments have shown that even so small a quantity of vinegar as one part in 5000 appreciably diminishes the action of saliva upon starch. One part in 1000 renders it very slow, and twice the latter quantity arrests it altogether. From this it is evident, says our cotemporary, that vinegar pickles, salads and other preparations in which vinegar is used are unwholesome, especially when taken with farinaceous food, such as bread and other preparations.

would be a good plan, instead of giving everybody premiums, to make some real competition by giving premiums only to the most deserving."

Recognizing the committee's need of courage, and even sternness, in resisting the good-natured inclination to give all sorts of premiums and please everybody, we heartily indorse the above doctrine. To award \$5 for an embroidered quilt, \$2 50 for a juvenile "charm string," and merely "honorable mention" to a fine exhibit of raisins, does not tend to encourage important industries.

Again, a dozen substantial premiums accomplish more than a hundred trivial ones. Exhibitors are striving for the honor quite as much as for the money. If each one gets a premium, the foremost gains but little by his excellence. Cut down the number of prizes and increase their value—that will provoke competition.

We have in former years remarked upon the lack of judgment shown in offering such disproportionate sums in purses for fast horses to the neglect and belittling of the more legitimate agricultural interests.

The result of recent Eastern experiments in cutting down the appropriations for the speed-ring, and augmenting those for the premium-list proper, has only gone to strengthen our conviction that racing, not to say gambling, is not necessary to the successful conduct of agricultural fairs.

Add to these improvements the utter exclusion from the grounds of pool-sellers and whisky-venders, and comparative perfection would be at hand.

SHORTHORN SALE.—Offerings of cattle by auction continue. Our advertising columns contain another announcement by Killip & Co., of 50 head of purebred Shorthorns, bulls, cows and heifers of popular families, the property of Joseph Combs of Missouri. These cattle are described as superior, and the offering will no doubt attract much attention.



The Whisperer.

If we bid thee dwell apart,
Tending some ideal smart;
In a sick and coward heart;

In self-worship wrapped alone,
Dreaming thy poor griefs are grown
More than other men have known;

Dwelling in some cloudy sphere,
Though God's work is waiting here,
And God deigneth to be near;

If he bid thee bow before
Crowned mind, and nothing more,
The great idol men adore;

Though his words seem true and wise,
Soul, I say to thee, Arise,
He is a Demon in disguise!

—Adelaide A. Procter.

A Queer Race.

Our host was a genial, generous-hearted American, passionately fond of horses and all appertaining to them, attending most meetings during the season, and breeding a little in an amateur way at his country-house, where we were then located.

He had one fault which constantly drove his wife and pretty daughter to the verge of distraction; that was, he could not be an hour in any man's company who chanced to interest him on any subject whatever, without giving that individual a cordial invitation to his house for the annual house party in the fall. This naturally brought a discordant element into the circle at times.

Last fall the disturbing atom was a Colonel Ford—not a bad sort of fellow in himself, perhaps, but one decidedly out of place in the society that surrounded him just then.

No matter what the subject under discussion was, he always had an opinion upon it; a very decided, egotistical opinion, delivered in a blatant tone with a domineering air.

In course of time I discovered I had a firm friend and a kindred spirit in my dislike to the colonel, in my host's pretty daughter, Miss Jennie, a thorough American girl, full of fun and mischief, and quite capable of carrying out any scheme that might enter into her curly little head.

When Colonel Ford made his appearance at Valley House he was surprised to find a well-fitted training stable and all the paraphernalia pertaining to an expensive hobby carried out to the full by a wealthy man. The very first night he arrived the Colonel had telegraphed for his groom to bring along "Verdant," and from that time he never ceased boring us to death about his mare. The mare was certainly a fine piece of horseflesh and had performed very creditably in public; but surely that was no excuse for her owner forever badgering every one to make a match with him.

One day at dinner, to which I had the good fortune to escort Miss Jennie, the conversation turned upon a very fast colt belonging to a friend of mine living a few hundred miles north of Valley House. I had just concluded my remarks when Colonel Ford burst out:

"I tell you I'll back my bay mare 'Verdant' any distance under a mile and a half for \$1000 against any living quadruped in this State."

I looked across at him rather indignantly, not desiring any wager upon the matter, when Miss Jennie chirruped: "Is that so, Colonel? What about weights?"

"My dear young lady, catch weights, of course. Have you a match to propose? if so, I would be delighted!"

Miss Jennie laughed saucily, looked at me, and, giving me a slight tap with her foot under the table, said:

"I leave my case in your hands. I want to match my pig 'Peek-a-boo' against the Colonel's 'Verdant,' distance three hundred yards, to be run two weeks from to day."

Of course the table roared with merriment, the Colonel turned first crimson and then white with rage, tried to laugh, but could not, and finally said:

"Very funny, Miss Jennie, very funny indeed."

During the merriment Miss Jennie whispered a few words to me, and I said:

"I do not see anything funny, Colonel; you offered repeatedly to back 'Verdant' against anything in the State; Miss Jennie takes you up, and I am empowered by her to draw up articles of agreement and deposit the \$1000 in any one's hands you may suggest."

The Colonel was staggered for a moment, but recovered himself and said:

"Well, if it is serious let her go. I appoint Tom Carswell, here, for holder, and will increase it to \$5000 if you or any one want to go the limit."

Our host jumped into the pool: "I'll take \$1000."

Carswell said: "I guess my thousand is as good as another's."

George Hoyland took another, and I increased

mine to \$2000. Articles were drawn up, signed, and for the next few days every one was trying to find out what Miss Jennie and I were after with that pig.

Notwithstanding the rigid surveillance we were subjected to, we succeeded in keeping our secret, and every morning at daybreak a tap would come at my door, and, dressing quickly, I would find a cup of coffee and Miss Jennie awaiting me downstairs.

"Peek-a-boo" was one of those long, lank, hungry, scrub porkers that can run like the wind when they like. We fed him once a day on a bushel of corn; he was placed in a crate with a sliding-door of bars, he saw the corn dumped into a trough, and was then carted, hungry and squealing, to the 300-yard limit. Here the word "go" was shouted, the door opened, and piggy went down the homestretch like a flash of porcine lightning.

Even the first day he went straight along without an error; and after a spell of 12 days he was a phenomenon; say "go," open the door, and away he would start; commence pouring the corn into the trough as he came nearer, and he spurted in the last 50 yards like a professional pedestrian. Then he was taken back to his sty, and by the time the household awoke to the duties and pleasures of the day, Miss Jennie and I would be completing our toilettes a little later than the rest.

Greatly to the Colonel's annoyance, some one put a prominent advertisement of the race into the papers, and friends from far and near came round to see the fun. House and grounds were thrown open to the public, and the place was thronged with eager people to see Miss Jennie's roan porker "Peek-a-boo" meet the colonel's bay mare "Verdant."

At 6 o'clock P. M. the saddling bell rang out; ladies began to group on the grand stand specially erected for the occasion. Again the bell, and "Verdant" came out looking like a picture. She took a short canter past the stand, and then turning, passed it again, going to the starting-post. As she neared the post, "Peek-a-boo" was carried out in his pen, squealing lustily as usual, and I noticed the mare lay her ears back and kick somewhat viciously, as if the music did not suit her.

"Oh, ho!" I thought, "here's a new development."

The starter asked if we were ready. I looked up the course and saw the man with the corn in his arms at the trough. I took hold of the trap-door and nodded; the flag fell, "Go," I thundered. "Peek-a-boo" shot out with a demoniacal squeal, darted in among the mare's legs. "Verdant" reared, nearly falling backward, turned round once, and shot off like a rocket to find "Peek-a-boo" beat her on her merits, literally outrunning her, and was munching his corn contentedly when she came up.

The Colonel swore dreadfully. We offered to repeat the wager, but he was "froze out." We won the \$5000, and the Colonel made an excuse and left the Valley House two days later.

"Peek-a-boo" hereafter is to live in clover. He is to feed on the fat of the land and die a natural death, his placid porcine temperament never to be troubled by fear of butcher or shambles; for him the horrible knife and scalding-tub will hold no terrors. He will see his brothers led out to slaughter and will live along to a good old age, with the promise from his fair mistress that when he dies his head will be stuffed and mounted as the finest hog in Iowa.

Happy pig!

And Miss Jennie?

Ah! dear reader, it is a most prosaic ending. Miss Jennie was happily married this spring, and my share of the plunder went toward buying her wedding present. She had noticed the strange dislike "Verdant" had to pigs one day when the mare was leaving the stable for exercise, and on that knowledge took up the Colonel's bombastic wager by challenging him to run the mare in "a queer race."

THE PANTHER GAVE WAY.—In the mountains, about 30 miles southeast of San Jacinto, lives Quitman Reed. A little while ago all the household were down with measles except Miss Mamie Travis, an Ohio girl of 17 years, who had occasion, the *Register* says, to go about a mile from the house to where Mr. Reed had a horse staked out. When half-way there, at a bend in the trail, she came face to face with a mountain lion. The beast was as much surprised as she, and for a moment they stood gazing at each other. The girl, with her hair standing on end and her heart beating like a trip-hammer, was debating with herself whether to turn and fly for the house or try to climb a tree; but the latter seemed too difficult. They stood and glared at each other for a few seconds, which to the young lady seemed like hours, the lion crouching on the ground, his tail mopping the earth, and keeping up all the while a low growl that sounded like a freight-train in the distance. It was growing monotonous. The girl, never taking her eye off the lion, reached down, picked up a medium-sized stone, and, with all the strength she could muster, threw it at the beast. This was indeed a surprise to the animal, and, instead of springing forward as was expected, he gave a loud growl and disappeared in the brush. The brave young lady, instead of turning back to the house after the lion had disappeared, continued on her journey a half mile further to where the horse was picketed and returned with the animal to the house, where she related her thrilling experience with the wild beast.

The Other Side.

EDITORS PRESS:—I noticed in your paper of last week that some one had sent you Mrs. Corbin's letter to Senator Blair, with its remonstrance against woman suffrage.

I forward you by this mail the *Woman's Journal* for January 28th, containing an answer to this letter, believing it will be of interest to many of your readers, who like myself can see no reason why expressing our convictions, by dropping a slip of paper into a box, should be more hurtful to ourselves and the race in general than to stand by with aching hearts and helpless hands, while drunkards and quondam convicts vote to legalize the dramshop and dens of vice for the physical and moral death of our youth.

If we saw our sons burning to death in some terrible fire and made no effort to save, we would be called inhuman. But when we see them daily being drawn to their ruin and beg to have our hands untied that we may draw them from the fire, we are told to return to our homes to cook and sew—that these (and raising more sons for destruction) are women's sole duties in life. As one of many women, I thank you for what you are doing for the sex—aye! for the race. N. B. D.

Suisun, Feb. 21, 1888.

The following is the article from the *Woman's Journal* to which our correspondent alludes:

Mrs. Caroline F. Corbin of Chicago published a few years ago a pamphlet against equal rights for women. It was entitled "Letters from a Chimney Corner." The same lady has now issued an "Open Letter to Senator Blair," in which she takes him to task, not in the gentlest manner, for advocating the extension of suffrage to women.

Mrs. Corbin says that marriage is a partnership, and that "the question is whether each partner shall keep to that line of labor which nature has marked out." This is begging the question at the start. The precise point at issue is whether there is anything contrary to nature in a woman's dropping a slip of paper into a box, or any incompatibility between rearing a family properly and taking an intelligent interest in public questions. The advocates of woman suffrage believe that the two things could and should go together. The best wife and mother is the one who can be an intelligent companion to her husband and a broad-minded teacher to her children.

It has been said to be impossible to find any new argument for or against woman suffrage; but Mrs. Corbin has found one that is both new and extraordinary. She represents that since men cannot be the mothers or nurses of children, therefore, unless they are required to do all the voting to represent both themselves and the other half of the human race, men will be simply drones in the human hive. She says:

"If men are not capable of managing the affairs of the State according to the highest and best ideas of the race—that is, of both men and women—will you permit me respectfully to inquire what proper and adequate share of this world's work they can perform? What is their natural place in the order of society? Are they mere hewers of wood and drawers of water? They cannot bear citizens; they cannot care for them in infancy and rear them to manhood. If they cannot govern them with wisdom and justice when they are produced ready-made to their hands, what is their reason for being?"

And she adds somewhat tartly:

"When a man stands up in the United States Senate and makes such a statement as that in regard to the men of this Republic, it appears to me that he compromises his own self-respect and the respect due to the dignified and honorable body to which he has been elevated."

When men conduct business and commerce, are the bread-winners, as a rule, and do half the voting, they may reasonably be thought to take their share of the world's works, even though they cannot, as men alone, contribute to the Government "the highest and best ideas of both men and women." To say that they cannot do this is no more a slur upon their mental and moral capacity than it would be a slur upon their musical capacity to say that they cannot contribute to a chorus the soprano as well as the bass. As a well-known advocate of woman suffrage has said:

"The eternal and ineradicable distinction of sex is one principal reason why women, in a representative government, should be directly represented. If lawyers alone cannot safely be trusted to make laws for mechanics; if merchants alone cannot legislate for farmers; if white men alone cannot do justice to the negroes; if every well-defined class in society is entitled to its own authoritative expression through the ballot, surely women, who are the wives and sisters and mothers of men, should give expression to the domestic interests from the feminine point of view. If a blacksmith cannot fairly represent a physician, how much less can a man represent a woman!"

As a matter of experience, it is exactly these domestic interests, the interests of the home, that we find habitually neglected by purely masculine legislation.

Mrs. Corbin says that "if women vote they must hold office." She seems to imply that all women must hold office, whether they will or no; whereas not one voter in a hundred ever holds office, and no one is obliged to take office against his will. Mrs. Corbin points out that it would be inconvenient for the mother of a young family to go to Congress. Undoubtedly. The mother of a young family would not be likely to be asked to go to Congress, and would not be likely to consent if she were asked. But she might have a very definite idea as to the sort of a man she wanted to send to Congress

to represent her and her children, and there is no reason why her opinion should not be counted along with those of her husband, father and brother. Many men are occupied with engrossing business cares which would make it inconvenient for them to go to Congress, and they do not go; but they do not lose their votes on that account. House-mothers would simply belong in the same category.

Mrs. Corbin says that woman suffrage will increase the number of unmarried women. Yet in the Eastern States, where women cannot vote, spinsters abound; and in the Western Territories, where they have been voting for years, unmarried women are as rare as white blackbirds. Woman suffrage may not especially promote matrimony, but it plainly does not hinder it.

We are often assured that women have no natural taste for politics, and that the more sensible a woman is the more averse she is to taking any part in them. Yet Mrs. Corbin expresses the fear that "many, and those not of the weak and ignorant, but of the most gifted and intellectual, will be tempted to forego marriage and motherhood" for the sake of an unimpeded political career. Kilkenny arguments again! If women are naturally averse to politics, it is not likely that many will plunge into them to the exclusion of all other interests; and in any case, nature may be trusted to look out for herself. Girls who are in love would not generally refuse to marry because of the remote chance that one in a thousand of them might some day receive a nomination to Congress and be obliged to decline it on account of family cares.

Mrs. Corbin says:

"The direct tendency of woman suffrage would be to form such a class of women as held high court in Greece in the days preceding its downfall.... Are American men prepared to relegate the wives and mothers of this Republic to a secondary and subservient place, and share the political leadership of this great and free country with an oligarchy of Aspasias?"

It is the advocates of woman suffrage, by the way, who object to having the wives and mothers of the Republic "relegated to a secondary and subservient place," and classed politically with children, idiots and criminals. But, seriously, woman suffrage is the last thing that would conduce to a reign of Aspasias; and it is hard to see how any sensible person can entertain such an idea. The great majority of women are not bad, but good, and good women are not famous for liking bad ones. The idea that the mass of American wives and mothers would either elect bad women to office, or suffer them to be elected, is almost too absurd for serious discussion.

It must be remembered, also, that at the time when courtesans "held high court" at Athens, good women were strictly secluded and kept in ignorance. The only way in which a woman could gain any freedom or any education was by breaking entirely with the proprieties. It is a system like that, not the system of equal rights, that puts a premium on vice. In countries where women have most freedom and most education, they are generally most virtuous. Give a woman a legitimate means of influencing politics and she is the less likely to have recourse to an illegitimate one.

In closing her article, Mrs. Corbin says that "there are other and weightier arguments against woman suffrage" than those she has mentioned. They should be weightier ones, indeed, to justify the denial of suffrage. As Mary Stuart said when her rebel barons offered to pledge their word and honor for her safety, "These are too slight and unsolid; add at least a handful of thistledown to give them weight in the balance!" A. S. B.

Heroic Little Cripples.

The burning of the New York hospital for crippled children, terrible as it was and lamentable for the life lost, has furnished a chapter in the heroism of children which their elders may study with profit.

The spectacle of one little boy, wan and crippled by hip disease, taking a paralyzed companion in his arms and carrying him to safety, and of a little girl, who, after sounding the alarm of fire, went from safety back to the danger in which her bed-ridden mate lay helpless, and "joined hands" to meet death together, must inspire the dullest pulses to a keener and kindlier beat.

Great disasters and resulting panics are unfortunately not rare, but none has ever furnished, among adults, so many examples of presence of mind and unselfish thoughtfulness as others as that which suddenly summoned the exhibition of these qualities among the sick and crippled children in the burning hospital.

It would be a bad world that was not moved in all its ranks by the story. The little heroes have builded better than they knew, for they have drawn attention to the soldier that is in the souls sheltered by the distorted and paralyzed bodies of the little ones whom God has compensated for lack of physical symmetry, in abounding beauty of the spirit.

Henceforth no call will rouse the charitable to such good giving as that made in behalf of others who have with these little ones a common endowment of weakness and misfortune. And upon the lintel of every door behind which they are safely sheltered will be the ineffable inscription of God's blessing upon these weakest of His creatures who have wrought the mightiest for the forlorn and the stricken.—*ANA.*

Control Your Temper.

[Written for the RURAL PRESS by ENGLISH WOMAN.]

Some people say our tempers are not in our own power; we are made with different dispositions, and if mine is not amiable it is more my misfortune than my fault. This is wrong, for we all have the power to correct ourselves if we will. It is true we have got all equally happy dispositions, but virtue consists in cultivating every good inclination and correcting every evil. If you are born with a bad temper you can certainly improve it with education and reason, and if you have a good one while young do not suppose you will always be able to keep it without great care and attention. There are three kinds of temper—the passionate, peevish, and obstinate. Some people are even subject to all three by turns. With regard to the first, it is so odious, especially in a woman, that one would think shame alone would be enough to keep her from it; it is as bad as intoxication, and she ought to be as much ashamed of one as the other, for a woman in a passion is a disgusting sight. It is a fact that passionate people can control themselves, and do, when they are in the company of those they fear or wish to please, and they know it will not justify them to say they were in a passion, because it is an insolence to even speak when we are in a passion. Therefore, when you find your passion rising, either be silent or leave the room, for you are neither fit to reason nor listen to reason; use yourself to disappoint your anger, and you will soon find it will be so weak that you can manage it completely. Some one once said the only way to be angry and sin not is to be angry at nothing but sin; and sure it is, there is a noble and generous kind of anger, a proper and necessary part of our natures in which there is nothing degrading. Peevishness is still more degrading than passion, and will destroy more happiness, for it shows itself more frequently than passion and disgusts us more if possible, because it shows a low and little mind that indulges in self-love. Sullenness is perhaps the worst form of temper, for it may end in melancholy, revenge and even insanity. Some people believe it is the strongest minded in the house who gets her own way. I think it oftener requires a stronger will to give in, or at least the person who does so has a stronger power over her will and temper than she who gets her way. I think temper destroys more happiness than anything in the world, and it is as much a woman's duty to govern her temper as it is her house; in fact, she cannot govern the latter unless she has a perfect control over the former.

Reading for Rest.

Nothing is more restful to the mind than a wisely selected work of travels, description, or a judiciously chosen romance. The romances most common are too weak and their wit sinks too near to the line of silliness to offer much repose to a person familiar with the best writers, and the effect of such productions is to deprave the taste or to excite irritation. A restful book to a tired brain must produce in the mind of the reader a sense of satisfaction with moderate stimulus. A tame moral essay, a story in which all behave well, go to sleep every night at nine and rise every morning at five to listen to the birds sing, will not suffice; and, on the other hand, a narrative that requires the closest analysis and which appears to be constructed upon the principle of leaving the readers in doubt as to the character of the heroes, is but a piece of intellectual dissection in disguise, and would better be read for work than for rest.

Everything that relates to history, science, philosophy and the deeper studies of human nature should be handled as work. Yet nature rewards the worker by making in the end what at first was difficult a charm to him; so that the specialist must be upon his guard lest he neglect the work of reading what he knows he needs for the more congenial occupation of reading what to others would be work, but to him has become pleasure. The life of Charles Darwin, just published, shows that he brought on a practical "atrophy of the brain," utterly changed his tastes, and became the slave of lines of association to which he had surrendered himself wholly.

What is work for one person may be rest for another; and it is equally important to consider that what may be work for a person at one time may be rest at another. Newspapers require no work, and he who reads them exclusively will in a few years be unable to do intellectual work. Many books of a literary character require little or no work. Books made to sell belong generally to the class that can be read as fast as the eye can discern the letters. Every person should select his standard authors without regard to their popularity. It is rare that a really good book to be mastered by work has a large sale. Restful books from their very nature may become popular, except among those who make utility their god and restrict the definition of utility to what can be turned to practical use, or has a technical or commercial value, and those whose intellects are so small, and sensibilities so abnormally large, that they need exhausting excitement to hallucinate them into the belief that they are happy.—Rev. J. M. Buckley in the *Chautauquan*.

GERMAN MILLERS.—It is stated that 743,881 persons are employed in the food-producing industries of Germany, and of this number 118,000 are described as millers.

YOUNG FOLKS' COLUMN.

Aunt Susie's Piece-Box.

[Written for the RURAL PRESS.]

DEAR GIRLS OF THE RURAL:—Some of you surely must be old enough to do, or at least help with, the weekly mending which comes, "rain or shine," to every family, and I want to tell you about the piece-box I made for myself that saves me much time.

I was brought up to "have a place for everything, and everything in its place," and the love of order impressed upon me when a young girl has followed me through life, and when I was crowded for room to keep my pieces for mending, cut-out work, patterns, etc., I called my "woman's wit" to my aid and invented a "piece-box," which I will describe to you. I bought an empty cracker-box of my grocer for 20 cents, five yards of dark calico, and five yards of cretonne, dark ground with roses and leaves. I covered the inside of the box smoothly with calico on the bottom, then took a piece large and long enough for the sides and ends, and near the top of this I basted on a strip about nine inches wide which I had hemmed on the machine; this I made into pockets by putting a box-pleat for each one, so there would be room for it to give at the bottom where I stitched it. Then I put on a narrow band to divide the pockets—some are large, some small—and I measured so they would come right at the corners. This I fastened to the box with tacks and didn't pound my fingers once! The cover I lined inside with calico, and took a double piece, stitched together about two inches wide, and tacked it on with rather small tacks in loops, some larger than others. I made two rows of these loops. The outside of box and lid I covered with cretonne, put some straw on the cover first with a piece of strong cloth firmly tacked on to hold it in place; then I had leather hinges nailed on and put a box-pleating around the edge of cover. I put on a strap to open it by, and one on each side to lift it by on sweeping days. I cut my patterns over out of light-brown paper, folded them neatly, and marked each one and slipped them in the loops on the inside of cover, and also some small rolls of pieces; then sorted my buttons, tapes, etc., and soon had all the pockets full, and in the bottom of the box I keep larger rolls of pieces, garments to be mended, and cut-out work, and I can sit by this box and do a good deal of sewing in the time it would take to hunt through piece-bags, and go here and there for what I might need.

Now, girls, I am sure your mothers will let you have a box like this, and if you have a big brother get on the good side of him and then he will fix the hinges and straps for you, and perhaps even tack on the pleating. If a cracker-box is larger than you need, take a smaller one, and make it as gay and pretty as your taste and purse allow, and then see how much mending you can do, and so give your mothers a little extra time for rest or reading.

Mend neatly. Turn square corners to the patches, and see that they go the right way of the cloth. Sew the buttons on firmly and wind them well, then the boys won't be forever coming to get a button sewed on, and won't have a chance to say "girls can't do much, any way." You know boys think they belong to the "Lords of Creation," and are inclined to snub their sisters if a chance offers.

Have a wooden ball or china egg to mend the stockings on, and do it neatly, making basket work of your crossed threads till the "gaping wound" is filled in, and run the thin places, especially to the boys' stockings, as somehow their heels and toes have a most dreadful way of coming through.

I am sure you will take more comfort in sewing and accomplish more if you make a piece-box, and wishing you all success with it and with your sewing, believe me to be your loving

AUNT SUSIE.

Arctic Flora.

The polar flowers seldom have any perfume, and the few that exhibit this delightful quality, however feeble, are, I think, from that class that have crept over the cold border marked by the Arctic circle; or, in short, none of the 50 mentioned—Eskimo flowers, we might call them in a popular way—have any appreciable odor.

The colors of these boreal blossoms are generally of the cold tints, as if in harmony with the chilly surroundings, instead of the warm hues that would break in upon the desolation with double effect by sheer contrast where so few cheering sights are to be seen. White and light yellow predominate, and these color-seem associated with frosts and cold weather, for it appears that those flowers we call "everlastings," and which are the longest to defy the dippings of the coming winter weather, are mostly tinted like the northern snows and yellow northern lights.

It is in the depths of old ocean that we find some of the largest expressions of plant life in the polar zone. Here, within a short distance of shore, are colossal kelps and other life that grow throughout the year; of course, vegetating the most in the short summer months.

Land plants, as already stated, are pigmies compared with those of the sea, or even the corresponding class in lower latitudes, and this dwarfed condition, a naturalist tells us, is not

due so much to the intense cold in the Arctic winter as to the fact that they do not get enough warmth in summer to develop them perfectly. Dr. Joseph Hooker mentions it as a rare property of one of the graminæ (the grasses), *Trisetum Subspicatum*, that it is the only Polar species known which is equally an inhabitant of the Arctic and Antarctic regions.—From "Flowers of the Snow," by Fred'k Schwatka, in "Woman," January.

GOOD HEALTH.

Celery as Food and Medicine.

Numerous cures of rheumatism by the use of celery have recently been announced in English papers; but the following, more in detail, is given on the authority of the *New York Times*:—"New discoveries—or what claim to be discoveries—of the healing virtues of plants are continually being made. One of the latest is that celery is a cure for rheumatism; indeed it is asserted that the disease is impossible if the vegetable be cooked and freely eaten. The fact that it is always put on the table raw, prevents its therapeutic powers from being known. The celery should be cut into bits, boiled in water until soft, and the water drunk by the patient. Put new milk, with a little flour and nutmeg, into a saucepan with the boiled celery, serve it warm with pieces of toast, eat it with potatoes and the painful ailment will soon yield. Such is the declaration of a physician who has again and again tried the experiment, and with uniform success. He adds that cold or damp never produces but simply develops the disease, of which acid blood is the primary and sustaining cause, and that while the blood is alkaline there can be neither rheumatism nor gout. English statistics show that in one year (1876) 2640 persons died of rheumatism, and every case, it is claimed, might have been cured or prevented by adoption of the remedy mentioned. At least two-thirds of the cases named heart disease are ascribed to rheumatism and its agonizing ally, gout. Smallpox, so much dreaded, is not half so destructive as rheumatism, which, it is maintained by many physicians, can be prevented by obeying nature's laws in diet. But if you have incurred it, boiled celery is pronounced unhesitatingly to be a specific."

The proper way to eat celery is to have it cooked as a vegetable after the manner above described. The writer makes constant use of it in this way. Try it once and you would sooner do without any vegetable, with the single exception of the potato, rather than celery. Cooked celery is a delicious dish for the table, and the most conducive to health of any vegetable which can be mentioned.

A CIGARETTE VICTIM.—The *Fresno Republican* mentions a case of cigarette poisoning reported to that paper by a physician. The facts are vouched for as such, and names only are suppressed. The report is as follows: Some days ago the physician mentioned was called to the bedside of a young man about 17 years of age, who was apparently suffering from a disease that differed in all its symptoms from anything the doctor had ever met with in his practice. He learned, however, that the lad was an inveterate cigarette-smoker, and realizing that he was a victim of that habit, began at once to combat the results of the poison instilled into the system by cigarettes. Day by day the young man grew worse, and paralysis was plainly noticeable, as it attacked one set of nerves after another. His sufferings were horrible to witness, but all the physician's skill was unable to successfully cope with the poison with which his system was saturated. Finally he died, a splendid specimen of physical manhood, every organ healthy, killed by cigarettes. There was absolutely nothing else the matter with the boy, and ordinarily he should have lived to a good old age. This is a true statement of the case, and not overdrawn in any particular, and should be a warning to every young man. Cigarette-smoking means certain death if indulged in to any extent by young people.

RUSSIAN SANITATION.—There seems to be a great neglect of public health in Russia. In an aggregate population of 100,000,000, according to Dr. Bubnoff, there are only about 5000 medical men, while no working sanitary system can be said to exist in the empire. In some districts the death rate ranges from 60 to 80 per 1000, and in spite of a high birth rate the population of the country is increasing only at the rate of one per cent. That a frightful penalty in human lives is paid for neglect of public health is shown by the fact that of the total of some 2,800,000 yearly deaths, something like 1,000,000 may fairly be traced to preventable causes.

THE DYSPEPTIC'S IDEAL.—A medical man mentions that like his father and paternal grandfather, he always had the power of voluntarily ejecting food or fluid from the stomach at any time. When troubled with acidity or nausea, the stomach is emptied at will without the slightest difficulty, and may be washed out with several glasses of water. At college this faculty was used for gain, large doses of narcotic poisons being swallowed for wagers, and afterward immediately expelled. An investigation is suggested to determine the cause of this gift, or what voluntary muscles account for it.

DOMESTIC ECONOMY.

Orange Cake.

EDITORS PRESS:—In answer to Mrs. Bucknall's request I send the following recipes taken from the *Ladies' Home Journal*, and tested. Three cups sugar, three-quarters cup butter, one cup sweet milk, four cups flour, five eggs, juice and a little grated rind of one orange. Break the yolks of eggs in a large bowl, add the sugar, butter and orange juice and beat till light and creamy; then add the milk, the whites of the eggs beaten to a stiff froth, and the flour into which has been sifted one teaspoon of soda and two of cream of tartar. Bake in four deep jelly-cake tins. Going to go between the layers and on top: White of one egg, one cup of granulated sugar, juice of one orange. Put the sugar on the stove with just enough water to moisten it. (If you put too much the icing will be thin and run.) Let this boil till it is clear and will spin a thread. Have the white of egg beaten light; then let some one drip the sugar while you beat, and continue beating till it is thick and white; stir in the orange juice; if it thins too much, add pulverized sugar till it is thick enough. This makes a very large and delicious cake. I. H. Danville, Cal.

PUFF PASTE.—Put one pound of flour on your pastry slab, make a hole in the center, in which put the yolk of one egg and the juice of a lemon, with a pinch of salt; mix it with cold water (iced in summer if convenient) into a softish, flexible paste; with the right hand dry it off a little with flour until you have well cleared the paste from the slab, but do not work it more than you can possibly help; let remain two minutes upon the slab, then have a pound of fresh butter from which you have squeezed all the buttermilk out in a cloth, bringing it to the same consistency as the paste, upon which place it; press it out with the hand, then fold over the edges of the paste so as to hide the butter, and roll it with a rolling-pin to the thickness of a quarter of an inch, thus making it about two feet in length; fold over one-third, over which pass the rolling-pin; then fold over the other third, thus forming a square, place it with the ends top and bottom before you, shaking a little flour both under and over, and repeat the rolls and turns twice again as before; flour a baking-sheet, upon which lay it upon ice or in some cool place (in summer it would be almost impossible to make this paste well without ice) for half an hour. Then roll out twice more, turning it as before, place again upon the ice a quarter of an hour, give it two more rolls, making seven in all, and it is ready for use when required, rolling it whatever thickness according to what you intend making. Upward of a hundred different kinds of cakes may be made from this paste.

APPLE FRITTERS.—Mix one pound of flour with half a pint of milk or water, then half a pound of butter melted in a stewpan; mix well together with a wooden spoon very smooth. Thin it a little with water, whip the whites of three eggs very stiff, stir it gently; have six apples peeled, cut in slices about a quarter of an inch thick, the cores taken out with a cutter; dip each piece in the batter, and fry in hot lard about six minutes; to fry well, the fat should not be too hot at first, but get hotter as it proceeds. They should be crisp, and of a nice golden color. Serve on a napkin, and sift sugar over them.

SPANISH CREAM.—Take half a box of gelatine, over with water, and let stand about half an hour. Take one quart of milk and let it boil up once or twice. Beat five eggs very light, and add sufficient sugar to sweeten them, and mix well together. Add the melted gelatine to the boiling milk, and when perfectly dissolved pour it upon the sugar and eggs. Return it to the fire for a few minutes, stirring all the time. Season with vanilla and pour into molds. Serve with cream.

DOUGHNUTS.—One pint of milk, one-half cup shortening, half butter, half lard, two cups sugar, one-half cup potato yeast, two eggs, flour for a batter; mix at noon; after supper, or when light, stir in flour until the spoon will stand alone; in the morning turn out on the moldin' board, mold enough to cut in shape, and let rise again. Have the fat smoking hot, and the doughnuts light enough to stay on the top of the fat, not go to the bottom of kettle.

WHITE BEAN SOUP.—Soak one quart of beans over night, drain off the water, put the beans in a stock pot with one carrot, one onion, one tablespoonful of prepared seasoning, three quarts of water. Let them simmer four hours, then strain through a colander, stirring it over the stove, and remove the scum while boiling. When finished, add a pat of good butter, a little sugar and a little chopped parsley. Serve with fried crust of bread.

SHORT PASTE.—Pat a pound of best flour upon your pastry slab, make hole in center, in which put an ounce of salt, half a pound of fresh butter and sufficient water to form a stiff paste; mix well together and it is ready for use where directed.

JELLY ROLL.—Three cups of sugar, one cup of butter, five cups of flour, one cup of milk, five eggs, one teaspoon of soda, two teaspoons of cream tartar; bake in thin sheets, spread with currant jelly, and roll when cold.



A. T. DEWEY.

W. B. EWER.

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The Week.

Aside from the north wind, which still has raged at times, the week has been a succession of magnificent days, and they have been used to their utmost by our busy farmers. Every available team and hand has been at work, and the amount accomplished in plowing, sowing and harrowing, in orchard plowing and pruning, and in planting vines and trees, which still continues, has been enormous. Though the clear weather has facilitated this kind of work, a higher temperature and rather more rain would have pleased our stockmen who are waiting for grass to grow. It has been rather a hard winter for the stock-feeder, for he delights in "growing weather," warm and wet,

and his resources have been considerably taxed in securing high-priced hay and feed to hold out until the grass gets some body to it. The hope now is for heavy spring rains which will hold the feed late to make up for the early deficiencies. The general opinion is that this will be a year with such a springtime, arguing from the cold of the winter. There have been years with a vast amount of water in April.

Business activity continues. Real estate enterprises are progressing. Politics are just beginning to warm up. There promises to be plenty to keep the mind employed this year.

The Tariff Issue in Congress.

Probably before another issue of the PRESS is printed, the tariff question will take definite form in Congress. Mr. Mills, who heads the tariff reformers, who are supposed to be working on the line marked out in President Cleveland's message, has been long at work on a bill to accomplish the changes contemplated, and this bill is expected to come before the Ways and Means committee before the end of this week. It has been announced that the Mills bill will contain all the features which California producers have been working against; that is, it will mean free wool and free fruit and fruit products, etc. That such a clean sweep as that will be insisted on cannot, of course, be fully known until the bill leaves the hands of the builders now employed upon it. This reform bill will be met by another representing the protective idea which is now in preparation by Mr. Randall of Pennsylvania, and the telegraph announced that on Tuesday Mr. Randall was considering the articles which are specially produced in California, and which the Mills bill assails, such as almonds, walnuts, oranges, raisins, etc. Mr. Randall is reported to have asked Mr. Morrow whether any reduction could be made in these articles, in the estimation of the people of California. He was informed that the tariff on these articles was not too high, and that the horticulturists and viticulturists in California would not consent to any reductions. It is stated that Mr. Randall's bill will leave the tariff on these articles as it is now.

Thus it appears that the issue as it relates to our chief industries is to be squarely made; but it will be fought, not on its merits, but in view of all the contingencies of an approaching political campaign. This fact introduces many uncertain quantities, and there seems nothing to do but to wait and see what sort of a football game will be played by the politicians with the interests of our industries, which are now growing and promising.

Help to Handle the Fruit.

So far as we heard, the use of the help of the school children during the busy season of fruit canning and drying last summer, was a great aid to the employers and of considerable financial advantage to the children. We believe that children working under the care of their parents will prove of growing importance in this State. It is a vastly different proposition from taking a lot of street Arabs from San Francisco for use on the ranch. In towns in the interior where there are canneries and driers and in orchards near towns where the children can go home at night, there will be plenty of work for them in peeling, cutting and spreading fruit. The use of them can be still further extended by building cheap houses or hiring tents in which families from the towns can be housed during the picking and cutting season. To give the children a chance at this kind of work, the summer vacation of the schools should be lengthened. We are interested in seeing the announcement from Petaluma that: "The public schools will be closed for three months during the summer. This will give an opportunity for the pupils to assist the fruit-canning company during the season, and distribute the hundreds of dollars earned among the youthful workers."

ANIMAL PESTS.—The Ukiah Dispatch says that the Ukiah Scalp Association during the first year of its existence paid for 6 coyote scalps (\$20 each), 20 wildcat scalps (\$2 each), 15 fox scalps (\$1 each), and 2 eagle scalps (\$2 each), and now the ranges within its bounds are pretty well cleaned out of the sheep and lamb-devouring species.

A Proposed Railroad Trust.

It is said that Jay Gould has in contemplation a gigantic railroad consolidation which will embrace a system of roads extending from the city of New York to San Francisco. Mr. Gould's aim is to establish a continental line under his exclusive control. He sees that the California railroad magnates have built a line of their own from San Francisco to the Gulf of Mexico, and threaten the business of his southwestern system. The great operator also views with alarm the efforts of the Vanderbilts to control a line across the continent, operating the New York Central, Lake Shore & Michigan Southern, the Chicago & Northwestern and its extensions by the Fremont & Elkhorn and Missouri Valley railroad west of the Missouri river for more than 500 miles, their destination being fixed at San Francisco.

Another enterprise has for its object the concentration into a great trust, as far as possible, of all the railroads between Chicago and the Rocky mountains and between the British boundary and Indian Territory. The outline of the plan is to elect a chairman for the trust and a board of control, consisting of one representative from each of the members of the trust, this board of control to have entire supervision of the interests of the various roads. The rate-making power is to be lodged with this board of control, and all changes in rates and all questions pertaining to competition business are to be adjudicated by this committee. The capitalization of this trust, if it is carried out, will mount up to the total of fully \$2,500,000,000.

This project, if carried out, will constitute the most gigantic trust scheme which was ever undertaken in any country or in any age. It is thought by some, however, that so heavy an aggregation of capital and corporate interests could not be made to hold together, and even if it should succeed for a time, it would soon come in contact with the law and Interstate Commission. Others think that both law and commission would prove but broken reeds when antagonized by such gigantic moneyed and personal influences.

Whatever may be the outcome of this movement, the possibility of such a combination may well challenge the attention of the country and its lawmakers. Let us make no mistake as to the possibility of such a scheme in the present era of great "trusts" and mammoth combinations. As our laws now stand, the project is no doubt feasible, and by no means improbable, and the people may as well face the contingency and put themselves in position to meet it.

In the meantime it might be the part of wisdom to look around and see what can be done in the way of legislation to circumvent such combinations. Webster once said: "All things are possible with the American people." No matter what may be our wrongs or danger, no matter how impotent our present laws and constitutions may be to meet the threatened danger, the power lies with the people to right the wrong or remove the danger. The people have the power to change constitutions so that laws may be enacted to meet any possible danger to the great mass of the community.

The railroad systems of the United States have been and are of immense benefit to the country at large. By them vast territories have been opened up to industry and civilization, which would otherwise have remained comparatively unpeopled to the present day. But this is no reason why they should be allowed to dominate the general business interests of the country in which they have no other part nor lot than those of a common carrier; but it is a good argument against senseless abuse of them. Railroads are essential factors in carrying on the immense internal commerce of the country; but they are creatures of law. They exist only by the will of the people. The people gave and the people can take away. So long as they perform their legitimate functions in a lawful way their rights will be held sacred by the majority; but when they overstep their functions as common carriers and seek to put aside all competition and fix arbitrary rates, exercising a power which would destroy even a United States Congress, the people have an undoubted right to step in and interfere—so far, at least, as to secure fair competition.

Combinations such as those above alluded to would have more power in taxing the people than the United States Congress. True, the

power might not be used; but the history of the past makes it highly probable that it would be. The present danger of such a possibility renders it expedient that if our laws are not now adequate to deal with such threatened danger, no time should be lost in placing Congress in a position fully adequate to meet the possible contingency.

Bogus Olive Oil.

We have an idea that there is not a little bogus olive oil being put up in this city, the bottles being given brands which would lead one to think the oil the product of California olive trees. This is a bad fraud, not only on the people who really think they are getting a pure article because it has a home label, but, as this stuff goes East, it will deceive Eastern people, whom we expect to make good buyers of our legitimate products. If this thing goes far we shall have to secure an enactment in behalf of our olive-growers, which will put a stop to some of our "four-story-brick" olive orchards of San Francisco.

Incidental to the Senate investigation of the cotton-seed oil trust in Washington, the following, of interest to California, occurred, Trustee John Scott being the witness: "Is not some of this cotton-seed oil sold as olive oil?" "I understand that ubiquitous Frenchmen and versatile Italians put it on the market as such; we don't." "How much of this oil is exported, to come back to us as olive oil?" "About 27½ per cent of the product."

This statement is rather ambiguous. One can hardly tell whether the witness meant to say that more than a quarter of the cotton-seed oil exported came back to us as olive oil or whether more than a quarter of the importation of olive oil was bogus. It does not, however, matter very much, perhaps. It is clear that a large amount of bogus oil starts in Europe; and if this is so, who can tell how much more is put up in this country with imported or with bogus French labels? Probably vastly more than is shipped twice across the Atlantic. It is much the same as with bogus wine. It is far cheaper and easier to import branded corks and labels than to ship bogus wine here. These matters will have to receive the most careful and energetic consideration of Californians. There is a passion here now for the olive. It is possible it may cool down considerably unless a good system of protecting the genuine product is devised. As the product increases the need becomes more imperative. We hope the coming convention at Santa Barbara may start some action in this direction.

THE STATE BOARD OF TRADE continues to receive many callers at its rooms, which are becoming so crowded with exhibits that the committee is again looking for more spacious quarters. They are also still distributing great quantities of printed matter, both to visitors and to inquirers by mail. Among the latest contributions is a superb display of nuts and dried and preserved fruits, sent down by Gen. Bidwell from Rancho Chico, comprising Ne Plus Ultra almonds, I X L almonds, mammoth hard-shell almonds, Languedoc almonds, paper-shell almonds, nonpareil almonds, pecans, California black walnuts, English walnuts, Eastern black walnuts, peanuts, Hungarian prunes, French prunes, apricots, green-gage plums, purple Duane plums, evaporated apples, lye-peeled Muir peaches, cling-stone peaches and raisins.

POSTAGE RATES ON SEEDS.—It is announced by telegraph from Washington that the Senate Committee on Postoffices has been informed by the American Seedsmen's Association that the new Postal Convention with Canada is likely to throw the seed-growing business into the hands of Canadian growers almost entirely. The Postal Convention permits Canadians to mail seeds, plants and scions to any point in this country for four cents per pound, while the United States seedsmen must pay 16 cents per pound. The committee thinks that the complaint is well founded, and will suggest a reduction of domestic postal rates on such matters.

LIVERMORE STALLION SHOW.—This show, which is growing in size and interest year by year, will be held on March 10th. The area of competing country is extended. Stallions from Alameda, Contra Costa, San Joaquin and Santa Clara counties are now to be allowed to compete for the premiums.

The Rabbit-Drive.

The species of hare familiarly known as "jack-rabbit" has long been a troublesome neighbor and pensioner of the California farmer. Hound, gun and poison failed measurably to reduce the numbers of the prolific parasites that laid waste alfalfa-field, vineyard and orchard, and endeavoring to fance out their devouring hordes seemed much like trying to "dam the Nile with bulrushes." The problem was a serious one when the first organized attempt to thin the pests by corralling and clubbing them was made near Pixley, as described in the *RURAL PRESS* of Nov. 26, 1887.

The success of this experiment was so marked and the business of the hunt so exciting that the rabbit-drive at once bounded into popularity, and within the space of less than four months has become one of the institutions of the upper San Joaquin valley.

In our Tulare and Kern county notes we have noticed these round-ups repeatedly; and in our issues for January 14th and 28th gave somewhat extended accounts of the manner of conducting them. "The sport to be gotten out of a rabbit-drive," says the *Tulare Register*, "can never be understood by those who have not participated in one. The hopping, dodging, flying rabbits; the whirlwind of swinging clubs; the shouting of men and boys; the shrieking of the ladies when a jack, fleeing for his life, scoots between their feet; the 'shooting' of other ladies who are the sole occupants of the buggies; the sound of tramping horses and rattling vehicles—all these make a scene to be witnessed, not described. All professions and vocations were represented, doctors, ministers, teachers, merchants, lawyers, real estate men, butchers, newspaper men, etc., clear through from the farmer to the hod-carrier. Old men, whose limbs had long since lost their vigor, tottered along, with the fires of youth rekindled in their eyes, straining every nerve to keep up with the procession, while the nimble 'kid' plunged into the weeds and bearded the jack in his lair. Everything and everybody was on the run, and also on the yell. Wings a half mile each in length, made of wire screen, had been placed in the form of a V, with a circular corral at the apex. Into this corral the doomed rabbits were driven and the gates closed.

"And here, at least so far as the writer is concerned, the sport ended. It is true we got in and tapped a few maimed rabbits on the head, trying to console ourselves with the thought that it was a humane act, but there wasn't any fun in it.

"We really think that if the gate were locked when the rabbits have entered, and the crowd informed that the festivities were over, it would be a great improvement over the present method. The farm-hands could take care of the rabbits after they were corralled. It is a question whether the benefit derived from the destruction of these pests is not after all more than offset by the evil character-influences emanating from this arena of cruelty and destruction. During the drive the passions called into play are of a far different character to those aroused by the work in the corral. The former are the same as those that influence the hunter in quest of game. The rabbit is given a chance, however slim, for his liberty. But in the slaughter-pen, if there is any of the brute nature in the human make-up (and there seems to be some), it finds ample opportunity to display itself. It is not a pleasing sight, that of

boys and girls maiming, beating and clubbing to death defenseless animals, even though they be jack-rabbits. These pests must be killed, it is true, and we don't say that an anæsthetic should be administered before life is taken, but we do not believe that children should do the killing."

By the courtesy of Messrs. Pillsbury & Ellsworth (who kindly sent us the photograph from which our cut is made) we are to-day enabled to show our readers how things looked inside the corral at Dry Creek after 2500 of the nimble nuisances had been knocked in the head. The thick-strewn bodies of the slain, the motley throng of drivers, old and young, male and female, afoot, on horseback, and in vehicles, and the portable wire-woven fence, whose limits proved so fatal to the timid depredators, will in turn engage attention.

It appears that a practical method of dealing with the jack-rabbit has been devised at last, and a source of much anxiety and loss virtually disposed of. But it is desirable to keep before the mind of California that the drive would not be applicable were our "rabbits" very rabbits, instead of what they actually are, a species of hare. The drive would avail little in rabbit-ravaged Australia, because the coney is a burrower, and could no more be herded, penned



Photo by A. J. Jones, Tulare.

AFTER A RABBIT-DRIVE—IN THE CORRAL.

up and summarily dispatched than could our ground squirrels. "The rabbit," says the *Encyclopædia Britannica*, "is sharply separated from the hare by the fact that it brings forth its young naked, blind and helpless; to compensate for this it digs a deep burrow in the earth in which they are born and reared, while the young of the hare are born clothed with fur and able to take care of themselves in the mere shallow depression or 'form' in which they are born. * * * It breeds from four to eight times a year, bringing forth each time from three to eight young."

Let us look to it, then, that the Old-World, "sure-enough" rabbit is never turned loose on this Pacific Coast to honeycomb and plunder its fertile acres.

A CONTRACTOR for wood-cutting at Reno has been forced to give up his job, as he cannot find men to do the work, although the country is full of tramps begging for meals and spare dimes to spend in saloons.

A BAND of horses owned by Miss Kittie Wilkins of Idaho ran before the last blizzard for 200 miles, until they found a sheltered place. None were lost.

THE Texas umbrella tree is becoming a great favorite in Merced and is deemed about as nearly perfect as a deciduous tree can be for shade purposes.

It is claimed that the first sheep imported into the United States were brought to Jamestown, Va., in 1609, and to Massachusetts in 1633.

REDDING, by decision of the Supreme Court, is confirmed as county-seat of Shasta.

QUERIES AND REPLIES.

The Glanders.

EDITORS PRESS:—Having heard and read much recently regarding the spread of glanders, both in California and Nevada, I deem it one of the most important topics of the present day to discuss. Not being familiar with the disease, and believing the *RURAL PRESS* to be the best authority on the Pacific Coast on all subjects pertaining to stock, farming, etc., I beg leave to ask a few questions regarding it.

- 1st. Is the glanders a disease of itself, or is it the culmination of other diseases similar to dropsy?
- 2d. How long would it be, after a horse had become contaminated with the disease, before an ordinary person of good judgment could detect it? (One reason why I ask the last question is I have heard it said that "any fool can tell when a horse has the glanders by the smell.")
- 3d. How long would it be after one horse had taken the disease before another would be liable to take it, by associating with him or feeding in the same stall where he had been kept?
- 4th. Does the swelling commence low down under the jaw in the form of a lump and increase upward, or does it commence up next to the throat on both sides?
- 5th. Is there any danger of a horse becoming diseased by drinking at a tank where glandered horses are in the habit of drinking?
- 6th. Where the disease is known to exist in a community, is it not the duty of the county authorities to take some action to stop the spread of it and abate the nuisance?

SUBSCRIBER.

We have had so many statements from com-

called glanders if the seat of the disorder is in the nasal cavities, throat, lungs, etc., and farcy when it is in the skin, the tissues immediately under it (cellular) and the lymphatic vessels and glands (organs carrying a white fluid called lymph). In these instances it is known as *button farcy*. The disease may appear in two principal forms: the acute or the chronic. But to be more precise, it is better to have a separate description of the malady for each type, viz.: Acute glanders, chronic glanders, acute farcy and chronic farcy."

2. How may glanders be detected?—This question can best be answered by a description of the symptoms of the disease: First, there is an increase in temperature; the thermometer registering from 105 to 109, and there are sensations of cold manifested by rigors (shivering); a serious inflammation of the nasal cavities takes place, their mucous membranes become of a dark-copper color with red or dark spots, due to the effusion of blood, then they become purple, and the red spots or patches, by a gradual but rapid process, form "pit-like, ragged edged ulcers" (Williams), which may extend as far as the throat (inside). A discharge takes place from the nostrils at the beginning or a very few days after, and it is occasionally streaked with blood. In some cases there is hemorrhage from the same source. The glands under and beneath the jaw (the submaxillaries) swell and become hard; the lips, the wings of the nose and the anterior part of the head also occasionally swell, and we frequently see cord-like enlargements of the lymphatic vessels appear upon the cheeks.

There is often a short cough, and if the lungs become affected, as is often the case, the respiration becomes shorter and difficult. Acute glanders may appear primarily, but it generally follows the chronic form.

Farcy manifests itself by fever followed by swelling of the legs, and so far simulates dropsy that there is a disease called "water farcy." The disease which our correspondent has in his mind seems to be farcy, which is said sometimes to occur as a sequel to exhaustive disease. Glanders is, however, in itself an aggressive disease, and its characteristic mark is the peculiar ulcer in the nostril, and the other symptoms described above.

3. Progress of glanders.—Though the two forms of disease have been alluded to as somewhat distinct, they are but one disease, as is proved from the fact that you can inoculate with glanders virus and produce farcy and vice versa. The period of incubation, or time elapsing between the exposure to the disease and its attacks, is variable. By direct inoculation, it may be but a few days or a couple of weeks, and by an ordinary exposure it may last from one to seven weeks, and even two months or more. In addition to the symptoms given above, the following notes for popular use in the detection of the disease were recently given in the *RURAL* by Dr. Clausen of San Francisco:

The symptoms of fully developed glanders are: Discharges of yellowish-greenish secretions, a mixture of mucus and pus, sometimes intermixed with thin streaks of blood from one or both nostrils, more frequently from the left side. The nasal mucous membrane of the flowing side usually shows ulcers of different forms and sizes with torn edges. If the patient is strong and vigorous, some ulcers may heal and form star shaped, more pale-colored scars. The obduction shows often these ulcers on larynx and tracheæ and tubercles in the lungs. The submaxillary gland of the corresponding side is swollen and adheres to the jaw. A dull cough is sometimes observable.

We have to classify this disease into chronic and acute forms.

The first develops slowly. The afflicted animal may for a good while appear to be in good condition, be a good feeder, showing at times only a slight cough and slight discharge from the nose, etc. The owner generally overlooks these slight suspicious symptoms, lets the animal run or work with other stock and facilitates further infection.

The acute form develops with great force and rapidity. The patient shows high fever, great stupor and all symptoms of the chronic form in a high degree, and terminates in a short time with death. Mules or donkeys especially incline to this form.

Farcy symptoms are: Edematous swellings on some part of the body, mainly the legs,

petent veterinarians during the last few years concerning the inception and progress of the disease known as glanders and the ways in which it may be communicated, that we supposed the subject pretty well understood by our readers. However, the subject is of such importance that we attempt a compilation from authorities in good standing about in the line indicated by our subscriber in his questions.

1. Is glanders a disease? Paul Paquin, veterinarian at the Missouri Agricultural Col-

Fig. 1.

Fig. 2.

Fig. 3.



Fig. 4.



Manifestations of Glanders in Different Stages.

lege, writes: "Glanders is a constitutional, fatal disease, originating directly in the equine and asinine species (horse, mule and ass) and transmissible, especially by inoculation, to man, dogs, cats, sheep, goats, etc., and not to cattle nor pigs, nor fowls. It is due to an animal poison, which gains entrance into the animal system, or, as some very able authors claim, is generated within it. The disease is

forming small pustules, "farcy-buds," of the size of a ten-cent piece, which, after breaking, form ulcers, discharging a thin putrid secretion. The lymphatic vessels in the surroundings become swollen and painful and appear like a cord lying under the skin. The lymphatic glands in the neighborhood become also swollen and painful.

4. The swelling.—Concerning the swelling, in addition to what has been given, it may be added that Dr. Whittlesey of Los Angeles remarks that the swelling is a safer indication of the disease than the discharge from the nostril considered by itself. He says it is always on the same side as the discharge, always distinctly limited, hard, and varying in size from a peanut to a hen's egg. At first it is movable under the skin and painful to the touch, but in old-standing cases it becomes fast to the jaw and appears more like a bony tumor. It never forms pus nor breaks unless irritated by medical treatment.

5. Communication of the disease.—This disease is contagious but not infectious, i. e., it does not transmit itself by the virus being carried through the air from a diseased animal to a healthy one. However, as it is discovered that minute organized corpuscles or cells or bodies, which cannot be detected by the naked eye, float in the air, just as minute living bodies, perceptible with certain instruments only, float in the water, we may justly presume that at a short distance, and under other favorable circumstances, cells containing glandular virus might leave an affected subject and be taken into the respiratory organs by a healthy one in the act of respiration. It is at least certainly possible for the affection to reproduce itself by dry farcy or glanders matter rising in the form of dust from places where it has been deposited, and no doubt that a large number of the supposed spontaneous cases are due to this cause, for, under favorable circumstances, such virus, when moistened or diluted, has caused the disease, as experiments prove. The vitality of the poison is preserved weeks, months, and even sometimes a year. It may, however, be destroyed by boiling water, exposure to the weather, the cold, and even the light. No doubt whatever, public water-troughs and hitching-posts are the chief means for distributing the disease.

6. Duty.—It is the duty of the supervisors to stamp out the disease at any wise cost. It is against the law to have or to sell a glandered animal. The Penal Code makes it a misdemeanor to neglect or to refuse to kill such an animal by the owner or the person in charge.

To make some symptoms more easily detected we reproduce from Mayhew the engravings on this page.

Fig. 1 is the slight clear discharge which may occasion no particular alarm at first.

Fig. 2 is the discharge still clear, but becoming incrustated on the hair over which it flows. Subsequently threads of white mucus appear in the discharge.

Fig. 3 is the full stream of unwholesome pus. The clear fluid has disappeared. At this time it may be taken for nasal gleet, but the smell of glanders is peculiar, and in glanders the discharge is obviously impure, while that of nasal gleet is thick and creamy, and more pungent in its smell than that of glanders.

Fig. 4 is the final state of the discharge; discolored, carrying pieces of bone or membrane, clots of blood, etc.

Fig. 5 shows the way to examine the nostrils for the ulcers. Let the sunlight fall on the up-turned nostril. Keep out of the way of any ejection by snorting, for the disease is often fatal to men. Open the nostril as shown. Do not pay any attention to the part marked 1, but look for the appearances upon the membrane marked 2. If on this membrane any irregular or ragged patches are conspicuous, if these patches are darker toward their edges than in their centers, and if they, nevertheless, seem shallow, pallid, moist and sore, the animal may be rejected as glandered.

Stump-Pulling.

Will some reader please give us an article on stump-pulling on the lands next the foothills—the trees that have large tap-roots running into tough clay; also the cost of a stump-puller, the power necessary to work it and where it can be purchased? A SUBSCRIBER.

Pennington, Sutter Co.

AROUND Truckee, Nevada county, this State, the principal industries are the manufacture of lumber and articles made therefrom, the cutting of wood, etc. The condition of trade in these lines is flattering in the extreme. The mills have now large contracts ahead which will insure their running to their full capacity. The railroad company is letting contracts for wood to any one who will undertake to fill them.

FLOURING-MILLS IN WASHINGTON TERRITORY.—There are 64 flouring mills in Washington Territory, with an estimated capacity of 3885 barrels per day. To this number Walla Walla county contributes seven, with an aggregate capacity of 985 barrels per day. Five of these are located at Walla Walla City, one at Prescott, and one at Waitsburg.

A COLUSA COUNTY SUBSCRIBER, remitting for another year in advance, adds: "I have taken the PACIFIC RURAL PRESS for about 15 years, and it is getting larger, and has better reading matter in it every year."

Notes on Santa Clara Valley.

EDITORS PRESS:—Since my last communication the weather has been more favorable for buggy traveling, and I have embraced the opportunity of visiting many of your old patrons in the Santa Clara valley, as well as scores of our brethren who recently bade adieu to the vigorous climes east of the Rocky mountains, and have cast their lot in this favored land. I find, with remarkably few exceptions, that newcomers are gratified with the contrast that greets their entrance to this section. And while no excitement seems to pervade the real estate market, numerous transfers are daily reported at what a year or two ago would have been regarded as simply fabulous prices.

It is now a rare instance to hear of a tract of valley land barren of fruit trees or other improvements, within a radius of ten miles of either San Jose or Santa Clara, being sold short of \$200 per acre; while the same quality of lands planted to fruits and commencing to bear are rated on the average of \$500 per acre. It is not surprising that the "tenderfoot," as he superficially gazes over the situation, is somewhat perplexed to know how such prices can be regarded as legitimate. He knows that the same land in Illinois, Iowa or Missouri will not pay interest on a third of this sum, and are therefore worth corresponding prices. But a closer study and actual observation convince him that the lands, regardless of climatic considerations, are not so unreasonably high-priced after all. Having a regard for my reputation for truth and veracity, I will let the figures obtained from several of the famous fruit and vine growers of the valley speak for themselves. The 130-acre prune orchard of Messrs. Handy & Chrisman between Los Gatos and Saratoga is reported to have yielded last year a net return of 10 per cent on \$2500 per acre. Messrs. Capt. W. Warren, Farwell, Van Fleet and many others in the same neighborhood are prepared to furnish figures (that won't lie) which convince the most incredulous that with ruling markets, the certainty of crops and large average yield, land here is cheaper than it was 20 years ago without such advantages as exist at present.

If any doubt should still linger in the mind as to the wealth-producing power of lands in this valley, I think that a visit to the model vineyard and winery of J. B. J. Portal, Esq., three miles west of Santa Clara, will be effectual in dispelling the same. Your correspondent recently spent a very pleasant hour with Mr. Portal at his plantation, and takes the liberty of jotting down a few of the facts gathered, trusting they may prove of interest to others who are struggling up the hill of success in the path made by him; for let it be remembered, he is the acknowledged pioneer wine-maker (on a large scale) of Santa Clara valley. He began 20 years ago, and much is due him for the aid he has rendered science by the constant experiments he has made in the introduction of numerous varieties of the grape, and in the manufacture of wines. And so well has he succeeded that now he is able to report a demand in England and France for all his manufacture at most satisfactory prices. The vineyard consists of 200 acres and is one of the best cultivated I have seen. I was informed that his manufacture the last season aggregated 400,000 gallons, and that all has been engaged. The delivery at the railway depot commenced three months ago at the rate of two carloads per day, and will still require at the same rate two months more to empty his warehouse. Mr. Portal owns an elegant residence, which, together with the winery, storehouses, machinery, etc., entailed an outlay of about \$100,000, rather a large sum, yet no more than time has already demonstrated he was justified in expending on it, as he refused last year to convey his title to an English syndicate for the consideration of \$200,000. He has always been enthusiastic on the subject of vine-growing and wine-making in California, and advancing years seem not to have had the effect to diminish his ardor and public spirit, and accordingly he intends to visit Paris this year to perfect arrangements for the shipment of California wines. More of such men as Mr. Portal would soon put our State in the van of all competitors.

A call later at the winery of Mr. J. P. Pierce, Santa Clara, gave me an opportunity of inspection of a comparatively new but quite successful establishment, the capacity of which is 150,000 gallons. The manufacture of this year was 125,000 gallons wine and 3000 brandy. The product of the last two years, 275,000 gallons, is in storage at the winery and will be held for an advance. Mr. Pierce has a vineyard of 160 acres of first quality vines, and he is classed among the public-spirited men of Santa Clara.

Mr. A. Block, adjoining Mr. Pierce, is another of those men to whom California owes something for her advancement in horticulture. He owns a pear orchard of about 90 acres, and he is an authority on the propagation of fruits. Mr. Block's homestead, when formerly owned by L. A. Gould, furnished fruit for the first shipment east of the Rocky mountains from this State.

Near Campbell's Station I was shown a cherry tree on the farm of Mrs. McGlinchey that yielded last year about 1000 pounds of cherries which were sold for \$78. The expense of picking, etc., left a net income of \$70. The tree is estimated to be about 20 years old. At 100 such trees to the acre, figuring interest at

ten per cent, a single acre of land would represent a good yearly income.

This valley is becoming famous in another sense besides the production of its choice fruits, which is one of the chief attractions for all who seek a home here. In my travels I have found quite a number who have abandoned professional life and sought and found a more congenial pursuit in the culture of fruits. Among such I have met some whose ancestry figured conspicuously in our national history.

Near Saratoga live two daughters of John Brown of Harper's Ferry notoriety. The youngest, Mrs. Fablinger, whom I met, appears to be about 30 years of age, fair in appearance, and agreeable in conversation. Regarding the sons, I learned that one now resides at Mendocino, two in Los Angeles, and a fourth in Ohio.

Winchester, of rifle fame, has a descendant bearing his name, residing on a fruit farm in this valley, while the still more illustrious Grant is represented by a Dent, and this does not fill a tithe of the roll-call.

But why should any hesitate to engage in such pleasant and profitable occupation? Those of lesser fame, though perhaps of equal talent, number legion here. A few days since I was pleased with the meeting of S. H. Bigland, Esq., an English ex-journalist, located in the romantic region lying between Los Gatos and Saratoga, where he with his family has decided to end the balance of his days amid the perfumes of fruit blossoms and the enchantment of beautiful valley and mountain scenery.

It might appear a little remarkable that those whose thoughts have hitherto been directed in other and very different channels should so readily adapt themselves to horticulture in California. Without stopping to discuss the reason, I would state that in numerous instances I have noticed that the amateur who chooses fruit-growing from a love of it, no matter what may have been his former occupation, succeeds better, as a rule, than those who have been plodding along at the business for a lifetime, regarding their work more as a task than as an ever-varying pleasure. The place of the Ellsworth Bros., Saratoga, affords an example in question. Six years ago they took charge of a 60 acre tract of unimproved land with a limited capital and no experience in agricultural affairs. To-day they can point with pride to their accomplishment—a fine orchard and vineyard and 10,000 gallons of wine made from their own vines.

It may be of interest to note that the culture of fruits has fired the genius of inventors to the extent that numerous patent cultivators have appeared from time to time, some of which I had the pleasure of examining. Each has certain merits which the orchardist is better capable of passing judgment upon than the writer. Forbes & Son, Guberville, claim to have manufactured 50 and sold the same; W. H. Roberts, Meridian, reports having made 300, which have given high satisfaction to customers; while John Morgan, north of Santa Clara, claims to have brought something before the people that excels. I am sure all these gentlemen deserve the patronage of the community for their enterprise, and this they will doubtless receive.

I recently called on Mr. H. G. Keesling, the principal importer of the Langshan breed of poultry in the country. Some of his stock cost him \$10 each, the pure offspring of which he is selling at half that price, and a large number of American stock of Langshan descent he offers at \$2.

There is no surer index of the taste and culture of a community than the interest manifested in the buildings erected for educational purposes, and no section of the State can surpass this in the character of the schoolhouses of either town or country. As a rule, they are elegant and commodious. And now the people of Lincoln district, near Saratoga, point with just pride toward their building under construction, which will probably rank, when finished, as the finest outside any town in the country. The young people of this and the Collins districts have united on a proposition to erect a 30x60-foot hall for social purposes, which, together with an elegant church edifice in that neighborhood, is calculated to furnish attractions sufficient without too frequent resort to the towns, which do not always inculcate the highest code of morals.

Northwest of Santa Clara is found the finest garden soil in the valley. Upward of 1500 acres of land are annually devoted to vegetable seed production, and so successful has the experiment proved that fortunes are being derived from the business, and I am informed that the extensive seed gardens of Connecticut, by reason of inability to compete, are about to become a thing of the past. Berry culture is also engaged in to a great extent in this section, which is known as the artesian belt. Hon. I. A. Wilcox, whose fine farm is situated in the district, informs me the soil is specially adapted to prunes, of which he is planting largely. At the same time he has a large acreage of strawberries, of which fruit he ships tons annually. Mr. Wilcox's place is the pioneer berry farm, and was long known as the experimental gardens. This gentleman imported the first fruit trees into California, and was largely instrumental in instituting the American Horticultural Society, which has rendered such invaluable aid to science during the brief career of its existence.

In a future communication I will furnish the RURAL PRESS with some facts on olive culture, which I have gleaned from observation and from E. E. Goodrich, proprietor of the Quito

farm, and others engaged in this new California industry. The subject is awakening such widespread interest of late from the fact of California's special adaptability to its production, and excellent market which pure oil commands, that any light furnished on the subject cannot prove other than welcome to many.

Santa Clara, Feb. 18, 1888.

F. B. L.

Squirrel Poison.

The Salinas Index publishes the following recipe which is said to be the best squirrel poison in existence. D. Monroe, who sends it to Mr. Williams, has completely cleared the Peach Tree ranch of squirrels by the use of this compound, which he says is a "dead sure shot every time." After being prepared, a small quantity of the wheat is dropped into the holes and is eaten with avidity by the squirrels.

140 lbs. good wheat.
12 ozs. strychnine.
1 oz. cyanide of potassium.
1 oz. carbonate of baryta.
2 lbs. of flour.
6 lbs. of honey.
2 lbs. sugar (white).
3 gallons of lukewarm water.

Mixing.

1st. Powder the three poisons with pestle and mortar to flour and mix thoroughly with the flour.
2d. Dissolve the honey and sugar with the water thoroughly.

3d. Put the wheat in a tight box or tub and mix the liquid of water, sugar and honey thoroughly; then empty out on a piece of canvas for the purpose in the sun, and spread out in the thickness of two or three inches.

4th. Sprinkle the poison over the wheat thus spread out and stir thoroughly through and then let stand for an hour in the sun; then stir again until the wheat becomes thoroughly dry, when it is ready for use.

CAUTION: In pulverizing the poisons the operator should place a sponge over his mouth, as there might be danger of inhaling some while handling.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

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Is the comprehensive title of Peter Henderson & Co.'s Catalogue advertised in our columns. It is a handsomely bound book of 140 pages, illustrated by three colored plates, containing hundreds of illustrations of flowers, fruits and vegetables, improved implements, etc. The "instructions for culture" are written by Peter Henderson, the well-known authority on everything pertaining to garden work. This book, "Everything for the Garden," is mailed on receipt of 25 cents, which is about half its cost, on the understanding, however, that parties ordering will say in what paper it was seen advertised.

Gabilan Rancho.

Containing 7665 acres, situated near Salinas City, Monterey County, is offered for sale. For particulars address J. C. HOAG, 312 Van Ness avenue, San Francisco, or TYLER BEACH, San Jose, Cal.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,
T. A. SLOCUM, M. C., 181 Pearl St., New York.

GORGEOUS in its coat of many colors—blue, green and orange, crimson and gold—comes the catalogue of J. O. Vaughan's great Chicago seed store; and its 80 quarto pages are not only illustrated by countless admirable engravings, but also embellished with several full-page chromolithographs of choice melons, floral novelties and climbing plants.

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Improved and unimproved lands to any extent from 5 to 5000 acres with good, comfortable homes and all necessary conveniences, for sale on desirable terms. These lands require no irrigation, Railways convenient, ample supply of water, and the climate cannot be surpassed. Apply as above.

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Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil. TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

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FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES
At \$75 per Acre,

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. One hundred and seventy-five acres at Palermo are now being set out in the choicest varieties of Florida Orange Trees. Maps and further particulars of

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TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

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FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land? DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10 acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

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CONTINUED EXTRAORDINARY SUCCESS. 26,000 Acres sold in 17 months in subdivisions averaging about 80 acres, to over 300 families, and amounting to \$700,000. 38,000 acres to be closed out this year without any general advance in prices.

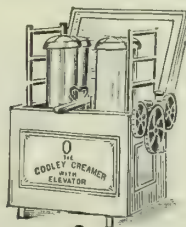
Location—San Luis Obispo County, at present terminus of the Southern Pacific Railway. A GRAND NATURAL PARK, and in climate, location, quality and price, far surpassing any other section of the State. Specially adapted to the production of wheat, oats, barley, olives, raisins, wine and all deciduous fruits.

RICH SOIL, NO WASTE, SUFFICIENT RAINFALL, NO IRRIGATION.

Average price \$25 an acre; terms five years, 6 per cent. These lands are selling rapidly, and parties interested in having a home in one of the finest sections of the State and on the through overland railway, should examine and select at once. Take S. P. Railway at San Francisco, to Templeton in 8 hours. Apply to or address

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Send for Catalogue and Maps.



The Largest Creamery in the United States

The Big Foot, Ill., Creamery is claimed to be the largest Creamery in this country or the world. THE PRODUCT OF 1887 WILL REACH

\$200,000.00.

The patrons are Paid 27 Cents for cream equal to a pound of butter. It is run on the Cooley System of Cream Gathering.

The Largest Creamery in New England is run by D. WHITING & SON, Wilton, N. H. Patrons receive 29 CENTS for Cooley Cream equal to a pound of butter

The Largest Creamery in Penn., is the TROY CREAMERY, patrons are now paid 28 CENTS Per Pound.

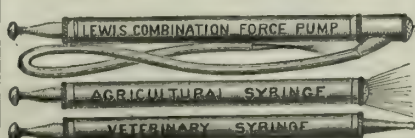
A full line of Butter Factory Supplies, including ENGINES, BOILERS, CREAM VATS, CHURNS, WORKERS &c. Send for illustrated circulars. Plans and Estimates furnished free to purchasers.

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Reliable Agents Started in Business Without Capital!

We are shipping large numbers to the Pacific Coast for destroying Worms on Fruit Trees. One party has had 20 dozen within a few weeks.

Write for Particulars. Our Agents are making \$5, \$10, \$15, \$20, \$25, \$30 per Day



Selling LEWIS' COMBINATION HAND FORCE PUMPS. It makes 3 complete machines. We have agents all over the United States who are making \$10 to \$30 per day selling these pumps. We give their names and addresses in catalogue. To introduce it we will send a Sample Pump, express paid, to any express station in the U. S. for \$5.50. Made of brass; will throw water from 50 to 60 feet, and retails for only \$6. Indispensable for spraying fruit trees. The Potato Bug Attachment is a wonderful invention. They sell rapidly.

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AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

SAN LORENZO PICK UPS.—Hayward *Journal*, Feb. 25: The Grangers here were never livelier than this week. The dry north wind frightened them somewhat and seed-sowers and harrows were in demand. All look for a shower to follow the gale. Almonds are in blossom, though they are two weeks late, probably caused by the cold snap. Apricot buds are bursting, and in another week will be in full bloom. Plows are going steadily in all the orchards, turning under a large crop of weeds that are growing fast.

Butte.

FIG-PLANTING.—Gridley *Herald*: Among the many ranchers of this vicinity who have very sensibly concluded to raise something besides wheat is George M. Lewis. He has set out 100 fig trees of the White Adriatic variety. It is said these trees will yield a profitable crop at the age of five years, and he set out yearlings.

CITRUS TREES.—Wm. Dunstone writes the Oroville *Register*, under date of Wyandotte, Feb. 13: During the cold weather of last month the thermometer was probably lower than at any time since January, 1884. I think the *Record-Union* is correct in referring to the last-named season as a precedent. I think my lime trees are killed to the ground. Lemon trees are injured; but I do not think that any serious damage has been done to my orange trees, although a portion of the fruit was rendered unmarketable. In examining the orange trees it appears to me that most vigorous trees are the least injured. Trees that have not been growing well are more injured. In all my experience with trees I think that no other trees show so readily nor in so great a degree the result of neglect as a citrus tree, and that no tree gives a better response to good treatment. It appears to follow that orange trees should have room, manure and cultivation. Some appear to think that in case of late growth the new wood is liable to be killed when winter sets in. I do not think so, because our coldest weather does not come until December or January, and by that time the young growth is mature enough to stand the cold without serious damage.

Calaveras.

GRAPES.—San Andreas *Citizen*: The finest grapes brought to this market last season were grown on the ranch of J. Zwinge, about three and one-half miles from this town. They were of the Black Hamburg and Black Alexandria varieties, and were very large and well flavored. Mr. Zwinge has a large number of rooted cuttings of the above kinds, besides a number of others of choice varieties.

El Dorado.

LATE SOWING.—Fairplay *Cor. Republican*, Feb. 18: We are having splendid weather for farming now, and although it seems late, a great many of the farmers are just sowing their grain. It is very probable that which is sowed now will look better in a few months than that which was sowed before the cold weather.

Lassen.

MOUNTAIN VALLEYS.—Cor. Susanville *Mail*: On the 4th day of February, 1888, I was riding along the stage-road from Reno to Susanville, and in passing the shores of Honey lake I saw 20 or more teams in the fields plowing, harrowing and drilling in grain. Our farmers were out in force putting in crops, seemingly unconscious of the fact that it was midwinter, and that we live away up here in the mountains, in a country so little known in the great world that the few who have heard of it imagine that we live such close neighbors to the eternal drifts of snow that our winter must last all the year. Who in the civilized world but has heard of these beautiful mountain valleys which lie snugly at the feet of the great Sierras, looking toward the broad deserts of the east? I looked up to the huge drifts of snow away up on the mountains to the left, then upon the busy farmers plowing and sowing in midwinter at their very feet, then out upon the broad valley to the right, where lay hundreds of thousands of acres of uncultivated public lands, which are to be the best agricultural lands in the world when properly irrigated, and, being farther from the snow-drifts, are warmer and more congenial for winter farming than the lands already under cultivation.

Los Angeles.

CANNERY FOR POMONA.—*Progress*, Feb. 23: There is cause for rejoicing among the deciduous fruit-growers in these parts, inasmuch as a home market for their products may now be had here. Last week J. H. Mertz, of Sedalia, Mo., arrived in Pomona, and, impressed with the fact that this is a first class location for a fruit-canning factory, at once wrote to C. C. Morse, a former fruit-canner at Windsor, Mo., who is now in Southern California, to come to Pomona. Messrs. Mertz and Morse immediately decided to build a cannery here, provided they had aid from the Pomona citizens. A subscription paper was started and in less than 30 hours a sum of money was subscribed sufficient for buying lots one and two in block 22, and presenting the same to the cannery company for the erection of the factory, evaporator, etc. The papers were signed by Messrs. Mertz and Morse and a committee of our business men yesterday.

CAPISTRANO MATTERS.—Cor. Santa Ana

Standard, Feb. 20: Small grain crops are all in and looking well, with a good prospect for an abundant yield. Orange-picking has commenced and we can boast of a heavy crop and as fine-flavored oranges as can be found in this State. Stockmen are happy and "treat" everybody they meet. The hills are covered with luxuriant grass and it fattens one to look at them. Lambing season is at hand. Thousands of the pretty little beasts are seen on every hand. Beemen from Trabuca and Mission Vieja report a good outlook for honey this season.

Napa.

THRIFTY VINES.—Napa *Register*, Feb. 24: L. W. Spielman, proprietor of the Tule ranch, a few miles west of Monticello, sends us three or four cuttings of Rose of Peru, one of which measured 19 feet in length, and all were over 18 feet. This is the growth of one season only, and speaks well for the soil of the hills bordering Berryessa valley for grape-growing. To show that his vines fruit well, and that the climate is favorable for fruit-drying, Mr. Spielman also forwards to us a box of as fine raisins as can be procured in the market of the Moscat of Alexandria; also samples of dried apples and prunes that cannot be excelled, all cured in the open air.

San Diego.

SAN JACINTO THRIVING.—Cor. Union, Feb. 14: The glorious weather of the past week, following the late rains, is carpeting the San Jacinto valley with green. Thousands of acres are covered with fresh filaree, bunch-grass and bur-clover; the cattle are glad, the horses not sad, and the song of the turtle is heard in the land. A trip along the principal avenues shows the farmers everywhere busy with teams and plows, planting all sorts of crops, putting out orchards and vineyards, preparing for hedges and building sites.

CHEAP FUEL is one of the blessings of San Jacinto. There is a broad belt of cottonwood timber skirting the valley on the north, the great trees standing thick on the ground. In the center stands a sawmill, gnashing its relentless teeth over the fallen giants. The people frequently get their fuel for nothing, by taking limbs, dead trees and bark. Excellent wood may be obtained for 50 cents per wagon-load. Many of the farmers have plenty of wood for their own use on their own land, as there are narrow tongues of the forest extending out in different directions into the level valley.

PEANUTS.—San Jacinto soil is an alluvial mold, with just the right admixture of sand, and seems expressly made for the peanut. The hot summer sun and dry atmosphere and the long seasons are exactly adapted to the production of the largest and best crop. One little patch about twelve yards square produced three barley sacks full of the largest, plumpest nuts I have ever seen—every one filled with solid kernels.

San Mateo.

PILARCITOS PRODUCTS.—Redwood *Times and Gazette*: Pilarcitos valley has become noted for its meats, butter, fruits and honey. Our beef is of excellent quality; S. F. butchers assert that the best beef they get comes from the hill lands of the coast. The luxuriant growth of bunch-grass and evergreen grasses and shrubs serve to keep our stock in good condition, while stock in the open valley lands have to depend entirely on the fodder they get from the barn. Consequently when spring opens the stock in the foothills are already beginning to fatten. Many kinds of fruit can be raised to perfection; the most prominent are the apple, pear, plum and cherry; among the smaller fruits are strawberries, blackberries, currants, gooseberries and raspberries. The leading orchards are those of H. M. Jewell and Mr. Gilchrist. That of J. Fillmore is a very thriving young orchard. Bee-culture is a promising industry in this locality. The honey raised in the foothills is superior to much of that so-called southern honey; the mild climate makes it unnecessary to give the bees any extra protection in winter, and as a general rule the apiaries yield a handsome interest on the capital invested. Among leading apiarists are M. Knopf, H. M. Jewell and M. Diggs.

Santa Barbara.

THE VISITING HORTICULTURISTS.—Santa Barbara *Press*: A party of members of the American Horticultural Society arrived on the local train Friday morning, and were dining at the Raffour restaurant, after which they spent the remainder of the day in riding around and visiting many of the places of interest in Santa Barbara. During the evening a reception was given them in the art-rooms of Prof. H. C. Ford, which was largely attended by prominent citizens. The visitors were domiciled at the Morris house. In order that they might have some idea of what can be raised here, Mr. Joseph Sexton on Saturday succeeded in getting together a small but attractive exhibit of fruits at his floral depot on State street, which attracted great attention. Among the fruits exhibited were loquats, olives, soft-shell walnuts, several varieties of winter apples, dried fruits of various kinds, cherimoyers, oranges and very fine Japanese persimmons, as well as samples of guava jelly, pickled walnuts, pickled olives, etc. H. C. Ford sent a fine sample of the sapote, and a branch of dates from the Hollister estate attracted the greatest admiration. Mrs. H. B. Brastow sent a basket of guavas grown in her garden in this city. Before the horticulturists left they met at the Morris house and passed the following resolutions:

Resolved, That the members of the American

Horticultural Society return grateful thanks to our associate, H. K. Bradbury, to the Board of Trade of Santa Barbara, and to the citizens generally, for the kind invitation to visit this land of roses, beautiful homes, sunshine and balmy breezes, and for their generous hospitality during our stay. That we enjoyed more than we can express the delightful drive given us over the city and surrounding country, in which we noted the luxuriant growth of all the semitropical fruits by the side of the deciduous fruits of the temperate zone, which was to us a matter of surprise and admiration; that we were greatly interested in the old Mission and its quaint, antique surroundings and in the decorated grounds and grand scenic effects in and around Montecito, and in the grand old grapevine; and much more of which we shall cherish pleasant memories in after years.

Resolved, That this society return sincere thanks to the citizens and to Prof. H. C. Ford and his estimable wife for the very enjoyable social and art entertainment given us at Prof. Ford's studio.

Santa Barbara, Feb. 20, 1888.

Santa Clara.

RANCH RETURNS.—Free *Lance*: Wm. Buck of San Felipe believes there is profit to be obtained from a ranch. From the few acres he cultivated last year he raised large quantities of vegetables, 300 tons of alfalfa, 1360 boxes of apples, 500 boxes of pears, and much other produce. He cut his alfalfa four times, it averaging 1½ tons to the acre each crop. This was worth \$10 a ton. Mr. Buck sees no reason why alfalfa hay is not about as good as wheat hay, which is worth \$15. His apples brought him 65 cents a box. Nearly all these were shipped to Australia, although some went to Colorado, Nebraska and Kansas. The pears brought \$1.55 a box and were shipped to the canneries at San Jose. They were principally Bartlett's.

Stanislaus.

PLANTING OLIVES.—Modesto *Herald*: The olive industry is attracting considerable attention in Oakdale. Mr. A. S. Emery has planted on a small tract of land he recently purchased in the eastern suburbs of Oakdale 3000 of these prolific trees, and others have engaged in the business on a small scale.

Tehama.

STONE FRUITS.—S. A. Stiles in *Sentinel*: Three years ago a few acres of peaches were set on Mrs. McCormick's place, six miles south of Red Bluff, on the river bottom. Last summer—although but little care had been taken of said orchard—I picked fine-flavored peaches which measured 12 inches in circumference. Fourteen months ago I put 23 acres into fruit—15 in apricots and 8 in peaches. Over 98 per cent of the trees lived and did well. They were cultivated eight or ten times during the season, and made a big growth—some of the longest branches having grown to the length of eight or ten feet. This winter I am putting out more fruit trees and also three or four acres of vineyard. One year from next summer we expect our first crop.

Tulare.

STALLIONS AND JACKS.—Delta: It is proposed to have a stallion show for all fine stock in Tulare county, at Hanford, on the first Saturday in March, and in Visalia on the second Saturday in the same month. Stallions of all breeds and ages, and jacks, will be admitted. The stock will be paraded on the main streets of the places named. This county has a large number of fine animals, and the exhibit will undoubtedly be an interesting one.

WAS IT MILKWEED SEED?—Visalia *Times*, Feb. 23: A number of horses belonging to farmers in the White River country have sickened and died in the last few weeks, from the effect of a disease supposed to have originated from milkweed seed with the hay. There is more or less milkweed found in all the hay raised in the country between Deer creek and White river. E. G. Burton of the latter section informs the *Times* that a veterinary surgeon, interviewed in reference to the matter, says that he had found more or less milkweed seed in the barley fed to stock, and he believed the disease to have arisen more from this cause than from the hay that was fed.

Ventura.

WILL WALNUTS PAY?—Free *Press*, Feb. 24: G. G. Sewell of Santa Paula gathered from one tree on his place, which is 15 years old, 240 pounds, for which he received 10 cents per pound, or \$24. At 30 trees to the acre, which is a moderate estimate, it would give \$720.

Yolo.

DAVISVILLE JOTTINGS.—Yolo *Democrat*, Feb. 21: The north gale of Monday morning brought down a cloud of ashes and cinders from the tule fires beyond Woodland, which for an hour or two almost obscured the sun. Grain is looking well and the crop prospect was never more promising. Ducks and geese are very destructive to the young grain in the vicinity of the tules. On the Chiles ranch a herder is employed with a Winchester rifle by day, and at night lighted lanterns are hung out. It is now known that the cold of January did but little more damage to the orange trees here than in the southern citrus belt. The older trees may lose their foliage, while a few of the younger ones may be killed.

Yuba.

CITRUS CULTURE.—Marysville dispatch, Feb. 25: A lot of young orange trees, grown in the open ground of a nursery here, were shipped to Red Bluff to-day in fine condition. This is evidence of how well the citrus trees here stood the weather last month—the coldest ever known. A lady who for years past has derived considerable income from an acre or two

of orange trees is increasing her orchard this spring as a matter of business.

A HORTICULTURAL SOCIETY for Sutter and Yuba counties was organized in Yuba City Feb. 24th. George Ohleyer was elected president and H. P. Stabler secretary. The meeting was enthusiastic.

NEVADA.

RANCHERS BESTIRRING THEMSELVES.—Nevada *Transcript*, Feb. 22: A gentleman who had occasion to visit some of the ranches in the lower part of the county last week says that the improvements that have been made during the past year are truly remarkable. The ranchers are just realizing that they have valuable properties and are cultivating more ground, putting up more fences, renovating their buildings and doing more work than they have at any time during the past 20 years.

ALFALFA FEED.—R. H. Reimers in *Enterprise*: Our two-year-old cattle, fed upon alfalfa, will weigh as much as three-year-old cattle of any other section of the world fed upon any other grass, and our three-year-old horses are just as good and as fully developed as other four-year-old horses. That's what alfalfa does for us, but it has this drawback: If cattle are turned too soon in the spring upon the young grass the first mouthfuls will bloat them, but if the grass is grown well there is no danger whatever. Pigs should not be fed upon alfalfa before they are six months old. After that if they have a little grain with the alfalfa and run in the stubble-fields their meat will be as firm as grain-fed pork, and the butchers can make all the bloody wurst they want with it. I have sold the Comstock butchers \$1000 worth of hogs this fall, and I am here arranging to sell them more, and also some beef cattle.

TRUFFLES.—Territorial *Enterprise*: Truffles of excellent flavor are said to be abundant in the foothills to the westward of Washoe valley. The Washoe Indians are about the only persons in that region who eat them. These Indians also devour the snow-plants with avidity. Both the snow-plant and the truffles are eaten raw.

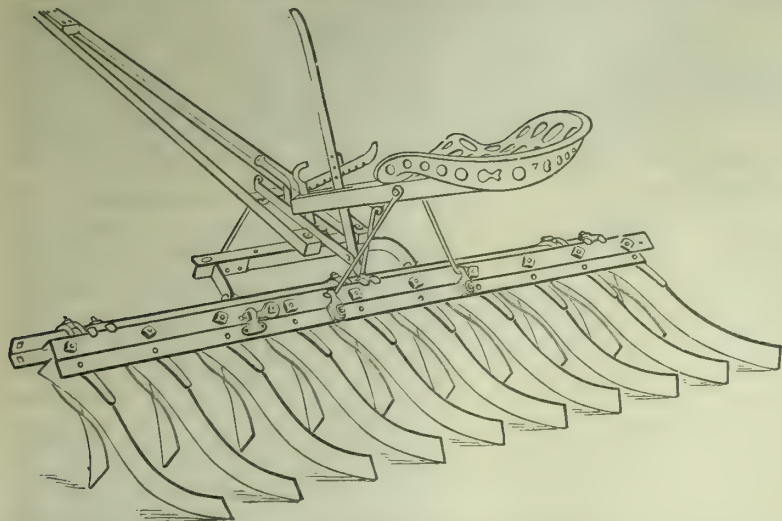
OREGON.

A MODEL FARMER.—Rogue River *Courier*: Daniel Sheehan is one of our representative men and a model farmer. He runs his place on a safe, economical, and it might be said, scientific basis. He diversifies—each spring and fall turning off a number of live hogs and cattle, aside from which he usually has a good deal of bacon and lard to dispose of at the very highest market price, simply because he gets around before the market is overdone. He does not farm extensively in cereals, though at one time this was his hobby. He pays more attention to butter making, poultry and stock, and is successful. He has resided in Josephine county for 31 years, and has a little farm of 280 acres, 125 of which are under plow. He is wide awake, keeps posted on events of the day, prosperous—made money and is in a position to do still better.

SWAN POULTRY.—Oregonian, Feb. 24: Three swans captured on Sauvie's island some time ago, and which have since been kept in a coop by Norwood L. Curry of East Portland, were shipped a day or two since to their owner, Mr. J. D. Canton of Ottawa, Ill., a wealthy citizen of that city, who will place them in a small lake on the extensive grounds surrounding his residence. They have become very tame, and their wounded wings were quite healed. The swan which flew under a shed on the island, and was captured unharmed a short time since, is now running at large, with its wings clipped, among a band of geese in McGuire & Co.'s poultry-yard, and is as tame as the geese themselves.

CROP PROSPECTS.—Oregonian, Feb. 24: Winter wheat on low land not protected by snowfall has been injured so much that it has been necessary to replant the damaged fields in many instances. The greatest injury has been in the case of summer-fallowed fields that were sown early and got a good start. White stubble land that had to be plowed before sowing, has generally escaped any injury at all. The reason for this is that the early-sown wheat came up and made a good growth, the roots spreading so that when the frost "spouted" the land, its icicles literally caught these wheat roots and threw them out on the surface. The very late wheat had only just put in its appearance and had no roots to be handled in this manner, so it escaped. The loss on French prairie and the north part of Marion county will be thousands of acres, but where not too low, it was in good part rectified last week. Farmers sowed it again and ran a cultivator over it to cover the wheat, and may do better than some will who were not so much injured. A great deal of winter oats was killed out. Fortunately for most farmers, the weather of last week made it possible to resow and run a cultivator to cover the seed. There is some injured wheat in the Waldo hills and on the low prairies everywhere; especially in parts of Linn county there is damage from frost. Wherever the snowfall was sufficient to cover the ground, winter grain of all kinds looks well. So far as can be learned the orchards of this valley received no injury from the cold spell. The warm weather of last week may start the sap flow and give the trees a quickening that may result in injury, but Oregon has often seen peaches in bloom in February and had them bear well.

ACME PULVERIZING HARROW, CLOD CRUSHER & LEVELER.



DON'T BE DECEIVED BY WORTHLESS IMITATIONS.

All genuine bear Trade-Mark, have Steel Clod Crushers, Double FLEXIBLE Gang Bars, and the Improved Style also has

ADJUSTABLE REVERSIBLE COULTERS,

Which when worn may be turned end for end, thus giving double the amount of wear. Works the entire surface of the ground. No other Harrow combines these points.

Sizes: 3 to 12 Feet. With or without Sulky.

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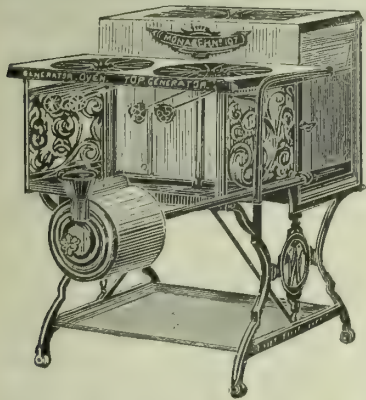
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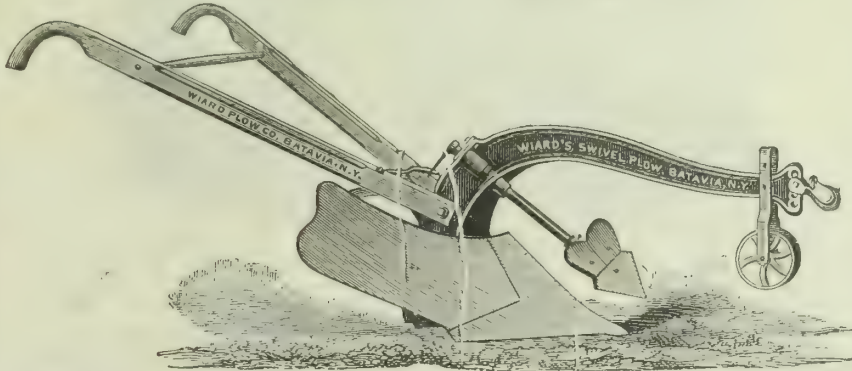
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Ladies' Eton Costume.

The style of the costume is decidedly novel, and the materials here chosen for it are plain and plaid bison tweed, ivory-white faced cloth and reddish-brown velvet. The foundation of the skirt and also its attached draperies are of the plain goods, the standard shape being employed for the former, and the customary provision being made for the use or omission of reeds and a bustle. The draperies are voluminous in their proportions and entirely conceal the foundation, except for a short depth at the left side of the front. The right-side edge of the front drapery or tablier is included without fullness in the right-side back seam, but the left side is uplifted by several upturning plaits near the top before being inserted with the corresponding side-back seam. Plaits arranged at the belt so as to turn forward at each side of the center supply the remainder of the draping, and all the plaits assist in producing the many graceful folds. Both side-edges of the back drapery are included with the side-back seams, and its bouffant appearance results from a triple box-plait at the right side and several backward-turning plaits at the left side of the center at the top, together with three upward-turning plaits at the left-side edge and several tuckings to the skirt. The drapery edges and the foot of the skirt are untrimmed, but sometimes a balayouse plaiting will underlie the latter, its presence only being made known by the movements of the wearer.

The basque is of plain tweed and has a stylish vest of ivory-white faced cloth. Its fronts, which are lined with silk, are loose-fitting, but do not meet at any point, but above the bust are turned back to form revers, which are held together at their lower corners by cord passed over two olive buttons, one at either side. The vest is adjusted by double bust darts, narrow under-arm and side-back gores and a curving center seam. Button-holes and pearl stud-buttons close the vest its entire depth, and one of the season's special fancies is illustrated by the tracery of brown soutache upon the white background of the vest. A high military collar of white cloth showing a similar tracing is at the neck, and a rolling collar of reddish-brown velvet meets the ends of the lapels in notches. The close-fitting sleeves are completed with simple little baton-trimmed cuffs that are finished with machine stitching, and the lower edges of the basque and its front edges below the lapels display a machine-stitched finish. The lingerie consists of linen cuffs and collar.

Costumes of this style will generally receive a tailor finish; a combination of materials is almost essential to bring about the good effect, though sometimes the contrasting fabric will be used only in the vest or waistcoat. White corduroy or velvet will make pretty vests for union with ivory; sage, hunter's or serpent's green bodices, and biscuit cloth overlaid with tinsel braid for association with those of mahogany, acajou or cinnamon. Cloths in herring-bone stripes, plaids, checks, bars, etc., will develop well in this way, and the suitings known as the velours soutache, which show designs like soutache braiding woven upon them, will be advantageously displayed by the style of drapery. A lining of soft silk or satin is an imperative addition to the fronts of the basque on account of their *neglige* adjustment.

The walking hat is of brown beaver, with a velvet-faced brim and glaze ribbon showing brown and moss-green, and two moss green wings trim it.

F. B. LOGAN, special correspondent of the PACIFIC RURAL PRESS, *Pacific States Illustrated Weekly* and fraternal journals, was in town this week on business. His letter last week in the RURAL PRESS was first-class, and will be of much benefit to our readers. — *Los Angeles Herald*, Feb. 17th.

A \$30,000 HOTEL is to be built at Colfax from plans by a prominent architect of this city.

Fig-Growing in the San Joaquin Valley.

Judge C. Talbot delivered the following address on the fig before Tulare Grange on Feb. 18th, and an advance copy was sent for publication in the RURAL PRESS. Our readers will find it interesting and suggestive:

The fig, of all trees, is the most venerable for its antiquity, and is most noted in history.

leaves, ye know that the summer is nigh." We also read that our parents clothed themselves in regalia made from leaves of the fig tree before presenting themselves to our Great Master, after the manner of our own members. From that day to this the fig tree, with her delicious and nutritious fruit, has been an important factor in the food of both man and beast, and also an important article in the commerce of the world. And here on the western boundaries of civilization where the restless waters of the Pacific dash against the golden

soil and climate. With our limited experience in fig culture, it would probably be presumptuous to make any predictions as to where the best districts for her culture may be found. Yet I am going to risk the assertion that future demonstration will prove that the western base of our great Sierra Nevada range, from Red Bluff on the north to Bakersfield and beyond on the south, from an altitude of from 300 to 1000 feet, will be the region where the best results will be obtained from the culture of the fig. This may properly be termed the

Sunshine Belt of California.

It is above the fog belt of the valley and beneath the cloud belt of the mountains. Of course I don't claim an exact line, but this is approximately the line. It will vary according to local and topographical surroundings. Here the great eastern hedge of pine and rock will break off the too sudden rays of the morning sun, and will catch the last kiss of his departing rays, as he sinks beneath the western ocean amid a sheen of golden splendor.

The fig, of all other trees that I know anything about, has the best staying qualities. It has doubtless been observed by all who have traveled over California, where an orchard has been started and finally neglected, if there has once been a fig tree planted, that while in the case of all other trees nothing but a charred body or rotten stump will mark the place of the once vigorous tree, the fig will remain alone vigorous and thrifty as ever. I will here recite an instance that came under my observation a few days ago: In passing the old Indian reservation, above Porterville, my attention was attracted to some very large trees. I took the trouble to measure one among several, and it measured nine feet in circumference a few feet above the base, and its sweeping boughs covered a space of ground 20 steps in diameter. I was informed by Judge Redd, of Porterville, that there is a tree at Lamot's ranch, on the South Tule river, that is considered a larger tree than this. There is a tree that I have watched with a great deal of interest for the last five years. It is on the lands of Butler & Ray in Butte Cove, four miles northwest of the Pilot Knobs, and some 12 miles northeast of Visalia. The tree was planted by some one who occupied the place previous to Mr. Butler, and doubtless watered it at first; but since Mr. Butler came in possession he has let it severely alone, never allowing any one to water, prune, or cultivate the ground. The tree has continued to make a fine growth and bears two crops of figs every year. It is on a red knoll, and the soil around is what we call "dry bog." This shows how people may be mistaken. Mr. Eisen states that figs will not flourish on adobe soil, but the finest fig orchard I have seen is above Porterville on soil that is strictly adobe. I presume that with the same climate and surroundings, the trees might do better in an alluvial soil. These trees stand as living monuments as to what may be accomplished on our treeless plains and along our foothills. I would most earnestly recommend to our farmers throughout this region to plant fig trees. Where they do not wish to engage in the culture of the trees for profit, if trees were planted along the highways and avenues it would give to the country the appearance of thrift, relieve the monotony of the parched plains, and ultimately prove to be a thing of beauty, luxury and profit. And the farmer, or better, a community, that will first start in this matter, will be first to come to the front and demonstrate in letters that all may read the possibilities of their district, because the culture of figs at no distant day is sure to become one of great profit. Houses for packing and crystallizing will follow the planting of orchards. Should the bottom ever fall out of the horticultural business of California, the man in the fig business need have no alarm, for I maintain that one can raise more hog-feed on an acre of land planted to figs than can pos-



LADIES' ETON COSTUME.

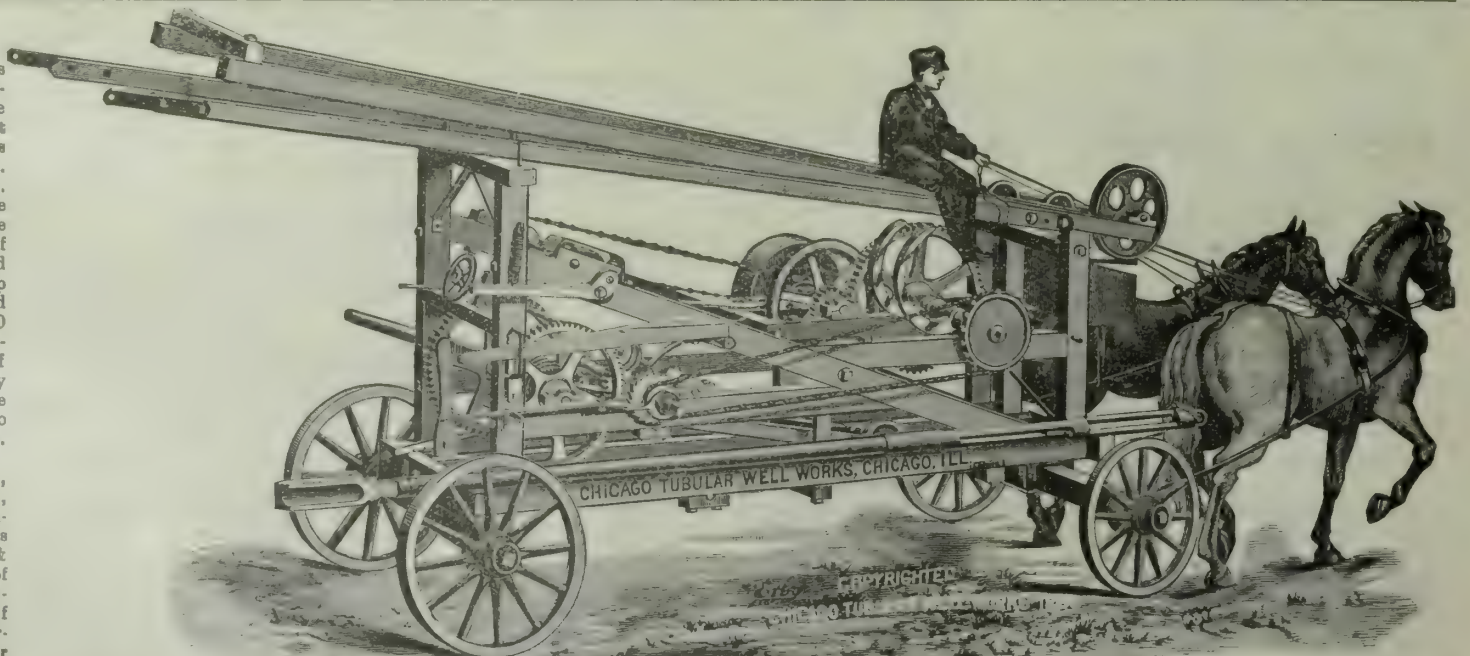
The Savior used it to illustrate that condition of the world when society would be ready to receive Christ at His second coming, for when asked concerning this matter, He said: "Now learn a parable of the fig tree; when his branches are yet tender and putteth forth

sands of California's shore, where the Orient has clasped hands with the Occident, she has made her home; and who shall say what her destiny shall be here in this sunny clime? And this is the purpose of this essay—to inquire into her habits and adaptations to our

A Well-Boring Outfit.

The picture shown above is an illustration of the latest improved rock-drilling machine for well-making purposes. It is called the Acme, and is manufactured by Messrs. Goulds & Austin, of 167-9 E. Lake street, Chicago, Ill. These gentlemen publish a complete catalogue of a very full line of well-making machinery and pumping appliances for deep wells, which they will forward to inquirers on receipt of 20 cents. In view of the importance of a permanent supply of water we think it would pay those of our friends who are interested in this question to correspond with this concern.

M. EHRET, JR., & Co., manufacturers of roofing, etc., have consolidated their business in St. Louis and Kansas City with S. D. Warren & Co., under the firm-name of the Ehret Warren Manufacturing Co. All contracts of the old firm have been purchased and assumed by their successors.



sibly be produced from any other source. As to

How Figs May be Grown

On land not subject to irrigation, I now propose to answer. Most of our large farmers have water wagons for hauling water for thrashing purposes. With a good tank and windmill, or horse-power, one man and team could water and keep in thrifty condition 40 acres of trees. Have a small depression around the tree, with a bushel of coarse manure therein; five gallons of water poured on this once in two weeks during the months of June, July and August would be sufficient to keep the trees growing, and if the second year should be a wet season, the trees would take care of themselves; but if a dry season, then the watering could be repeated the second year. After this no cultivation or attention need be given, and if the owner wants to take a trip around the world he may do so, and the trees will be none the worse for his absence, provided they are secure from the depredations of stock.

Variety.

The California purple or blue fig is the most hardy and thrifty of all former varieties, but I am told the White Adriatic is proving itself to be a very hardy and thrifty fig, and much superior to other varieties for drying. Figs of all varieties are easily propagated from cuttings, but cuttings should be planted in nursery and given good care to be sure of vigorous growth. In transplanting, a great deal of care should be used, as the roots are very sensitive to exposure, and when once removed from the soil should be planted with the greatest possible speed.

I cannot in this article speak further in detail. If the attention of the public, or any individual, may be called to the importance of the matter by this article, then good will have been accomplished. And again I would say to all in the foothill region, plant figs.

Interesting to Farmers.

The following is the result of a plow trial recently had in a field near Pixley, Tulare county, Cal.:

PIXLEY, Tulare Co., Cal., Feb. 27, 1888.

Messrs. Truman, Hooker & Co., San Francisco, Cal.—GENTLEMEN: We, the undersigned, California plowmen of Tulare county, to day witnessed a field trial between the NEW BRADLEY Square Corner Four Furrow Walking Gang Plow, "New Deal," "Stockton," and "Granger" Gang Plows on the ranch of Beel & Moore, two miles west of Pixley. We witnessed the SUPERIORITY of the BRADLEY over all others in the contest, as to lightness of draft, it running two horses lighter than the others and with much more ease in handling, and more perfect work being done. We also witnessed the superiority of its construction, it being made entirely of steel and wrought iron. It has HIGH wheels and large clearing capacity. Also your superior shaped Garden City "Q" moldboards, and the benefit of the rear wheel, causing the gang to run lighter, more steady and even than any four-gang in the field.

Yours very truly,

A. H. VESTEL, R. T. BAILEY,
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J. A. WHITAKER, W. WILSON,
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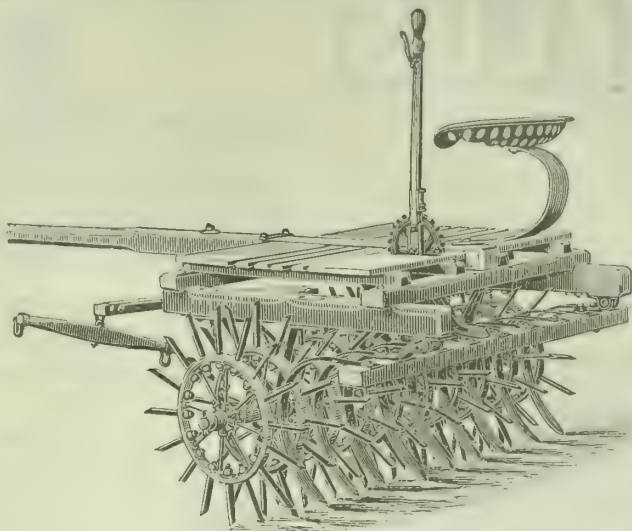
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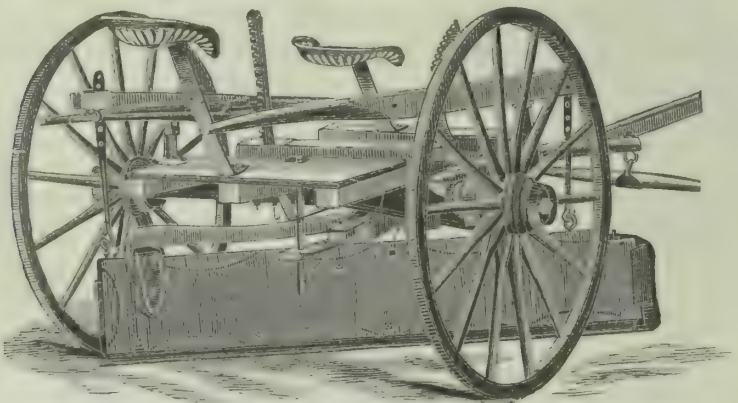
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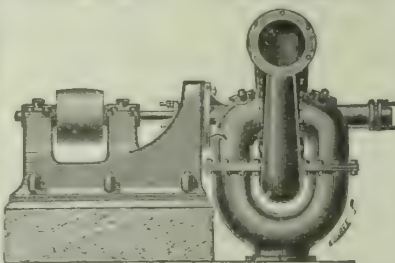
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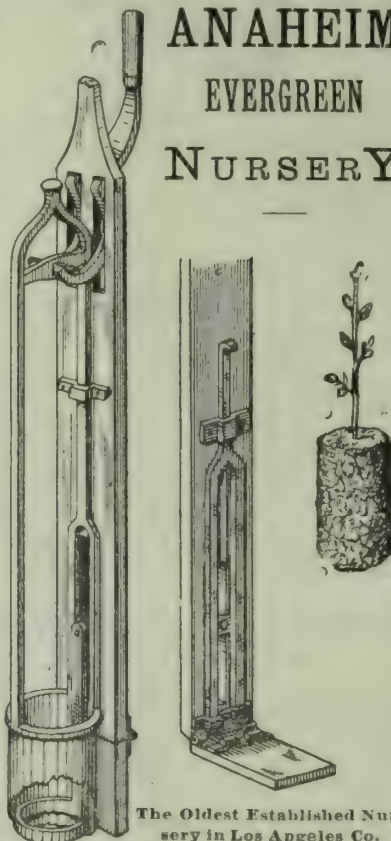
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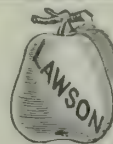
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A Fine Stock (home-grown) of the Genuine Botan Japan Plum

(Illustrated and described in RURAL PRESS of Feb. 18th), worked from BEARING trees, for sale by

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Lincoln, Placer Co., Cal.**SPECIAL.****Bermuda Grass Seed,**

\$2.50 per pound.

Thomas A. Cox & Co.,

411, 413 & 415 Sansome St., S. F.

Seeds, Etc., Continued on Page 198.

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Farmers who want the PUREST and BEST Strychnine, SURE TO KILL Ground Squirrels, Gophers, Mice and other animals which destroy the crops, should specify "MALLINCKRODT'S ST. LOUIS' STRYCHNINE, manufactured by

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SOLD BY ALL DEALERS.

Insist upon having our brand, and allow no substitution of other makes. See that our cap and label is on the bottles.



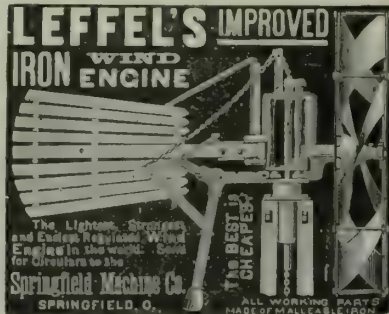
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Tulare, Cal.

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List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

- FOR WEEK ENDING FEBRUARY 21, 1888.
- 378,351.—SASH-FASTENER—J. D. Axtell, Santa Barbara, Cal.
 - 378,192.—POWER MECHANISM—Geo. Cottrell, S. F.
 - 378,091.—REVOLVER—Aug. Greth, S. F.
 - 378,096.—SMOKE-CONSUMING FURNACE—John Keane, S. F.
 - 378,371.—ORE-FEEDER—E. C. Loftus, Oakland, Cal.
 - 378,344.—CONVERTING MOTION—J. H. Pemberton, Los Angeles, Cal.
 - 378,262.—THRILL COUPLING—J. W. Pendleton, Greenville, Cal.
 - 378,215.—BRAKE BLOCK—G. A. Posson, Angwin, Cal.
 - 378,221.—PROPELLER WHEEL—W. L. Strong, S. F.
 - 378,345.—CARD EXHIBITOR—W. D. Valentine, S. F.
 - 378,270.—CARD EXHIBITOR—Valentine & Bailey, S. F.
 - 378,155.—LEVER-POWER ENGINE—E. T. Wheat, Oakdale, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Treatment of Flowering Bulbs.

EDITORS PRESS:—Will some one who is successful in growing hyacinths tell me how the bulbs should be treated after flowering out of doors? Directions in florists' books usually say that they should be taken up, dried, and put away



DISTRIBUTION OF FAT AND LEAN IN POLLED ANGUS CATTLE.

in a cool place; and in this climate where the earth becomes so heated and baked during the summer months, it would seem reasonable to follow such guidance. This, however, is my experience: Some fine Dutch bulbs planted two years ago gave a very poor show of flowers the first season. Inadvertently they were left in the ground. The following spring they sent up a magnificent display, several having two and even three stalks of blossoms.

As we intended to change our residence, the bulbs were then taken up and replanted in the winter. Again the flowers are small and few in number. Now, if left in the earth must they be kept dry, or will it do simply to ignore their presence while watering other plants?

Narcissus bulbs (I may add) behaved just as did the hyacinths, resenting being transplanted by showing nothing but leaves. I. H. Danville, Cal.

[This is a good subject for our floriculturists to discuss.—EDS. PRESS.]

LUMBER IN WASHINGTON TERRITORY.—Washington Territory, on account of its wealth of forests, coal and vast stretches of fertile land, has in seven years increased in population to 144,000, almost doubling. In 17 years the number of inhabitants has increased six-fold. This population produces for the world annually 500,000,000 feet of lumber, nearly 400,000 tons of coal, 250,000 tons of wheat, nearly 5,000,000 pounds of hops, to speak of nothing else, and is now pronounced the Queen of the Pacific, excepting only California.

MIRAMONTE COLONY.—We call attention to the advertisement in this issue of the Miramonte Colony Association. This colony is in the heart of the famous artesian region of the upper San Joaquin valley. The sale of lands in the colony is in the hands of C. H. Street, late secretary of the Immigration Association, who is now associated with the real estate firm of Greenwood & De Wolf to form the firm of C. H. Street & Co.

ANOTHER car-repair shop is the latest addition to the railroad yards at East Oakland.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
Feb. 23-29.																																				
Thursday.....	.00	52	Nw	Fr.	.00	52	Nw	Cl.	.00	64	N	Cl.	.00	62	Nw	Cl.	.00	58	Nw	Cl.	.00	70	S	Cl.	.00	64	SW	Cl.	.00	70	S	Cl.				
Friday.....	.00	44	Cm	Cy.	.00	54	N	Cl.	.00	70	N	Cl.	.00	62	N	Cl.	.00	56	NE	Cl.	.00	70	E	Cl.	.00	60	SW	Cl.	.00	64	W	Cl.				
Saturday.....	.00	50	Nw	Cl.	.00	58	N	Cl.	.00	74	N	Cl.	.00	66	SE	Cl.	.00	66	NE	Cl.	.00	70	S	Cl.	.00	66	SW	Cl.	.00	64	SW	Cl.				
Sunday.....	.00	50	SE	Cl.	.00	—	—	—	.00	66	N	Cl.	.00	66	Nw	Cl.	.00	64	Nw	Fr.	.00	74	S	Fr.	.00	—	—	—	.00	62	W	Cl.				
Monday.....	.00	48	W	Fr.	.00	48	N	Cy.	.00	66	S	Cl.	.00	66	SW	Fr.	.00	52	SW	Cy.	.00	74	S	Fr.	.00	54	S	Cy.	.00	60	W	Fr.				
Tuesday.....	.00	42	E	Cy.	.04	44	Nw	Fr.	.00	50	Nw	Cl.	.00	52	S	Fr.	.00	51	W	Cl.	.00	52	N	Cy.	.00	58	SW	Cy.	.12	56	S	Cy.				
Wednesday.....	.12	42	E	Cy.	.00	46	Nw	Fr.	.00	50	N	Cl.	.00	48	Nw	Cl.	.00	52	NE	Cl.	.00	50	N	Cl.	.01	43	Nw	Cy.	.24	54	SW	Cy.				
Total.....	.12				.04				.00				.00				.00				.01				.24				.14							

EXPLANATION.—Cl. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature, wind and weather at 12.00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Choice Beef.

Acquaintance with the best kinds of food increases more rapidly than knowledge in other departments of life, as life itself depends upon food and self-preservation is the first law of nature. Yet it would seem that after a man's hunger has been satisfied his knowledge of the better kinds of food advances more slowly; for example, it took England between a quarter and a half a century to ascertain the superiority of South Down mutton, yet this lesson having been learned, we appreciate more readily the quality of the Angus beef. The time was when, if beef showed fat on the outside, we considered it good; now the question is not only how fat is it, but whether the fat is distributed through the flesh or marbled—as an American would put it in reference to bacon, we desire a streak of fat and a streak of lean.

The cut here presented shows in a marked

A New Industry for California.

As an evidence of the peculiar advantages of the climate of California for special industries, we would refer to the establishment in Santa Barbara of a manufactory for the production of instantaneous dry plates for photography. We condense the facts from the Santa Barbara Press. It appears that two photographers from Maine—C. S. Bond and J. C. Higgins—after spending considerable time in visiting different parts of the State, have finally settled upon Santa Barbara as the best point for the establishment of this new business—the first in California and which will be a leading one of the very few in the country.

The projectors say they have found that Santa Barbara possesses the greatest number of requisites—an even, equable climate, more clear, sunshiny days, a clearer, drier atmosphere, and purer water.

The Santa Barbara Dry Plate Company has been formed, composed of C. S. Bond, J. C. Higgins, C. W. Shaw and C. V. Stevens, all of Maine, but who will become residents of Santa Barbara. Mr. Higgins is an experienced photographer, and Mr. Shaw the most experienced plate-maker in the United States. The company has ample capital and the business will be pushed energetically. The company proposes to make the finest dry plates in the country and to extend their business all over the United States, and they expect to make the new "Santa Barbara Dry Plate" a household word with photographers everywhere.

At the outset the company will employ from eight to a dozen men and will start with a capacity of \$10,000 to \$15,000 worth of dry plates per month. This will be increased as the business grows, and the plant will be enlarged as rapidly as necessary.

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To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, IF REQUESTED the following articles (while this notice continues), at the very greatly reduced figures named at the right:

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All Young and vigorous Stock, nearly all Imported as yearlings and grown upon our farms here, therefore thoroughly acclimated. Stallions and Mares of all ages, and Choicest Breeding. Also our Celebrated Herd of 150 HOLSTEIN-FRIESIANS at very much reduced prices rather than incur the expense and risk of an auction. A rare opportunity to secure first-class stock at low figures. Send for illustrated Descriptive Pamphlet, and mention this paper. GEO. E. BROWN & CO., Aurora, Kane Co., Ill.

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The only Cow that has given 26,021 lbs. 2 ozs of milk in a year.
The only four-year-old that has given 23,602 lbs. 10 ozs. in a year.
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The only herd of mature cows that has averaged 17,166 lbs. 1 oz. in a year.
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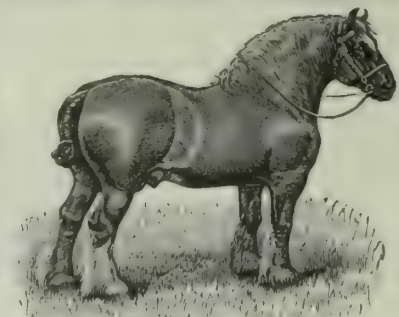
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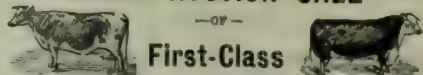
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SHORTHORN CATTLE

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AGRICULTURAL PARK, SACRAMENTO. On Wednesday, March 28th.

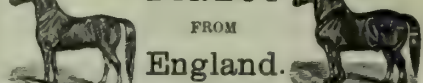
By direction of MR. JOSEPH COMBS, of Combs & Wilkerson, Bankers, Lincoln, Missouri, we will offer, on the above date, his entire herd of PURE-BRED DURHAM CATTLE, consisting of FIFTY HEAD BULLS, COWS and HEIFERS of the following well known families: YOUNG MARYS, BELINAS, VENUSES and ADELIDES.

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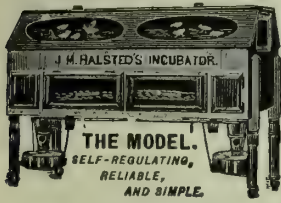
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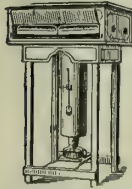


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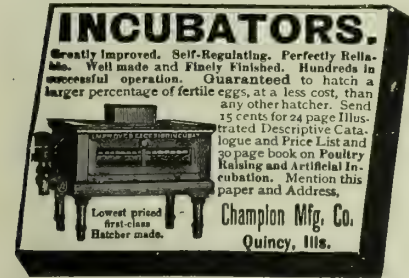
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Mixes instantly with water. Prevents the fly from striking. In a 2 pound package there is sufficient to dip twenty sheep, and in a 7-pound package there is sufficient to dip one hundred sheep.

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To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

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NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

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Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
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Dr. J. KOEBIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

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E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

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For Squirrels, Gophers, Birds, Mice, Etc.



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When I say cure I do not mean merely to stop them for a time and then have them return again. I mean a radical cure. I have made the disease of FITS, EPILEPSY or FALLING SICKNESS a life-long study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infallible remedy. Give Express and Post Office.
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al., ranch, doz.,	21 @	22	Geese, pair.....	2 00 @	2 50

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Eastern.....	20 @	—	do Dressed.....	16 @	20
FEED.					
Barley, ton.....	16 50 @	17 50	Turkey Feathers.....	— @	—
Feed meal.....	30 00 @	31 00	tail and wing.....	— @	—
Grd Barley ton.....	18 50 @	20 00	Snipe, Eng. doz.....	— @	—
Hay.....	11 00 @	19 00	do Common.....	— @	—
Middlings.....	19 00 @	20 00	Doves.....	— @	—
Off Cake Meal.....	32 50 @	—	Quail.....	— @	—
do new process.....	28 50 @	—	Rabbits.....	1 25 @	1 50
Straw, bale.....	50 @	65	do Hare.....	1 25 @	1 50
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Extra, City Mills.....	4 00 @	4 35	do Venison.....	— @	—
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Superfine.....	3 25 @	3 50	Cal. Bacon.....	10 @	11
GRAIN, ETC.					
Barley, feed, chl.....	77 1/2 @	85	Heavy, do.....	11 @	11 1/2
do Brewing.....	95 @	1 15	Medium.....	11 1/2 @	12 1/2
Chevalier.....	1 25 @	—	Light.....	11 3/4 @	12 3/4
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Corn, White.....	1 25 @	1 30	Cal. Smoked Beef.....	11 1/2 @	12 1/2
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Small Round.....	1 30 @	1 32 1/2	do Eastern.....	14 @	15
Nebraska.....	1 20 @	—	SEEDS.		
Oats, milling.....	1 55 @	1 60	Alfalfa.....	8 1/2 @	9
Choice feed.....	1 45 @	1 47 1/2	Canary.....	3 @	4
do good.....	1 40 @	1 43 1/2	Olive red.....	11 @	12
do fair.....	1 30 @	1 37 1/2	White.....	20 @	22
do black.....	1 30 @	1 40	Cotton.....	20 @	22
do Oregon.....	— @	—	Flaxseed.....	2 @	3
Rye.....	2 25 @	2 75	Hemp.....	4 @	4 1/2
Wheat milling.....	— @	—	Italian Ryegrass.....	10 @	11
Gilt edged.....	1 40 @	—	Perennial.....	7 @	9
do Choice.....	1 37 1/2 @	—	Millet, German.....	5 @	6
do fair to good.....	1 35 @	—	do Common.....	5 @	6
Shipping choice.....	1 35 @	—	Mustard, white.....	2 @	2 1/2
do good.....	1 32 1/2 @	—	Brown.....	3 @	3 1/2
do fair.....	1 30 @	1 31 1/2	Rape.....	15 @	17
HIDES.					
Dry.....	12 1/2 @	13	2d quality.....	13 @	15
Wet salted.....	5 1/2 @	6 1/2	Sweet V. Grass.....	7 1/2 @	—
HONEY, ETC.					
Bee wax, lb.....	21 @	25	Orchard.....	17 @	18
Honey in comb.....	12 1/2 @	16	Red Top.....	9 @	10
Honey in comb.....	16 @	19	Hungarian.....	8 @	9
do fancy.....	16 @	19	Lawn.....	30 @	40
Extracted, light.....	6 1/2 @	7 1/2	Mesquit.....	8 @	9
do dark.....	5 1/2 @	6 1/2	Timothy.....	7 @	7 1/2
HOPS.					
Oregon.....	8 @	15	TALLOW.		
California.....	8 @	15	Crude, lb.....	2 @	4 1/2
ONIONS.....	— @	—	Refined.....	6 @	—
Pickling.....	— @	—	WOOL, ETC.		
Red.....	— @	—	FALL-1887		
Silverskins.....	1 50 @	—	Humboldt and.....	15 @	18 1/2
Cut.....	75 @	1 15	Mendocino.....	12 1/2 @	15
NUTS-JOBBER.					
Walnuts, Cal., lb.....	8 @	10	Sacramento valley.....	15 @	18 1/2
do Chile.....	8 @	—	Free Mountain.....	— @	—
Almonds, hdshl.....	8 @	—	N'bern defective.....	— @	—
Soft shell.....	12 @	13	S Joaquin valley.....	10 @	14

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GREAT ARTESIAN BELT,

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This tract comprises 2640 acres, all level land and ready for the plow.
In this colony is the

Greatest Artesian Well in the World,

And a perpetual water-right goes with the land bought. Tracts of 20 acres will be sold for \$500—only one-third cash; balance, one-third in two years, and one-third in three years, with ordinary interest.

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An English gentleman, compelled to remain abroad for some years, has decided to sell the following properties owned by him: Forty acres, with all farming implements, horses, cows, poultry, farming tools, buggies, wagons, house (ten rooms) fully furnished, barns and out offices. This property is in

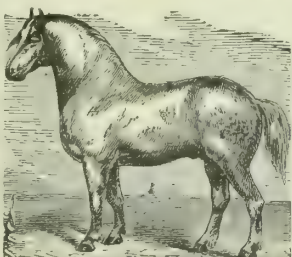
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Quite convenient to San Francisco. Depot S. P. R. R. adjoins the property. Also, 640 acres in San Luis Obispo, near Paso Robles.

This property must be sold at once. Full particulars from

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To be held at Bay District Park, San Francisco, Cal., on
Wednesday, March 7, 1888.

I will sell at public auction, on above date, ten head of choice Imported French Draft Stallions. These horses are of the same quality as I have shipped to this State for the past ten years, and the satisfaction which my previous sales have given is sufficient guarantee to the public for the future.

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At above time and place I will offer twenty-five head of choice Thoroughbred Registered Polled Angus Cattle, consisting of Bulls and Cows, being a selection from my herd, which has been awarded more Premiums at the Fairs and Shows in the East than any other herd in the United States. Parties desiring the best bred breed will do well to inspect this offering, which has recently been shown on the streets of San Francisco, and attracted so much attention.

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1000 FRENCH PRUNES,

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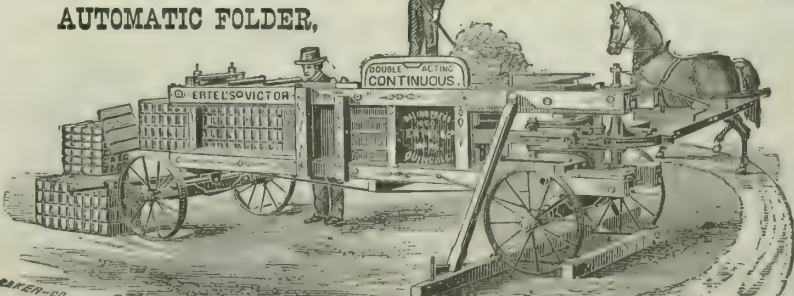
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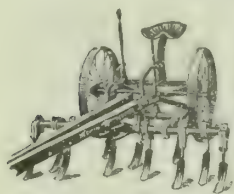
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The machine is simply PERFECT. It is expensively made and great care has been used in its manufacture.

PRICES: 4-ft., \$50; 5-ft., \$55; 6-ft., \$60. Weight, 325 lbs.

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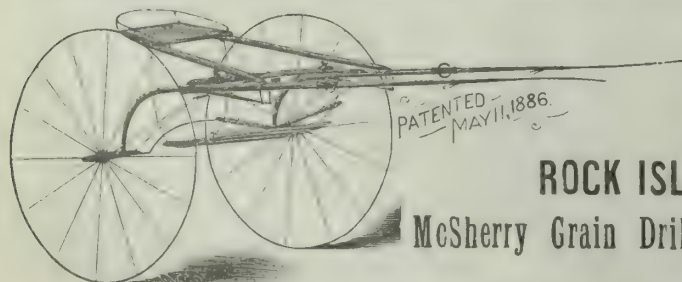
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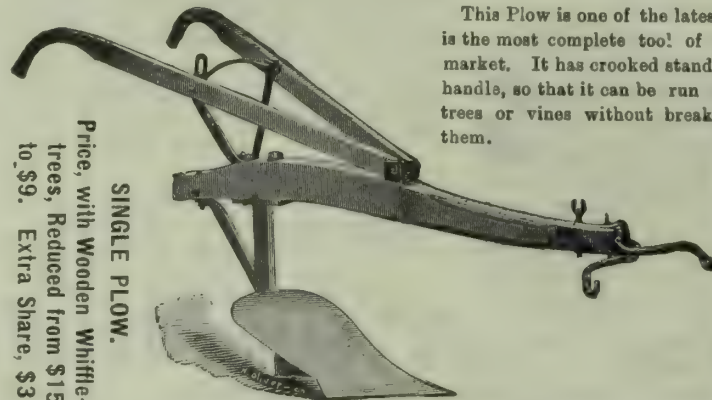
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PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 10.

SAN FRANCISCO, SATURDAY, MARCH 10, 1888.

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A Grand Shire Stallion.

As this is the week for the annual stallion show at Livermore, we symbolize the occasion by giving on this page a portrait of one of the grandest animals ever brought to this country—the English Shire stallion Blyth Ben, imported in 1886 by Galbraith Bros. of Janesville, Wisconsin. Blyth Ben was then a three-year-old, having been foaled in 1883. He was bred by J. Osborn Daintree of Cambridgeshire, England, and is by Kempston (3163), a son of Emperor 2d (2769) and out of a mare by Thumper (2136), a son of Waxwork (1298). Blyth Ben is a steel gray, and adding this point of color to the majestic proportions, as sketched by the artist, one can easily form a conception of the animal. Before leaving England, Blyth Ben won the first prize for three-year-olds, and sweepstakes for best stallion of any age in the Shire Horse Society's show. The year of his arrival in this country he also won the first award as a three-year-old in the Shire class at the Illinois State Fair; also the first at the American Horse Show held in Chicago in 1886. He also won first prize and sweepstakes gold medal at the Interstate Fair held at Madison, Wis., against all ages and breeds, first at Wisconsin State Fair, held at Milwaukee, and first at the Minnesota State Fair. Galbraith Bros. are entitled to much credit for bringing such an animal into the country.

In our issue of January 7th we gave a sketch of the points of value in the Shire horses, and we need not repeat them at this time. The breed seems to be gaining ground rapidly at the East, and has already scored some good points in California.

We would advise all those who desire to see a fine string of horses to go to Livermore on Saturday of this week, March 10th. The area open to entry this year has been extended, and it is likely that a larger display of horses will be made than ever before. The annual show at Livermore has grown rapidly from small beginnings, until it now attracts attention from distant parts of the State. If it continues it will be one of the notable events of the agricultural calendar. There should be local stallion shows in all our farming centers. They give the owners of fine horses a chance to show them to a large number of interested people and they furnish the breeder an opportunity of comparing breeds and individual sires, which is of much

value in selecting for specific purposes. Our farmers in all lines of production should go about more to gather hints for progress and improvements. A good place to begin such profitable trips will be at Livermore on Saturday of this week.

THE SUTTER CANNERY.—The experience of the cannery at Yuba City this last year should be suggestive to fruit-growers in all progressive localities. We are informed that the entire

THE FRUIT UNION.—The directors of the California Fruit Union have been in session this week, and have been giving considerable time to discussion of policies and measures. The election of officers for the ensuing year was had with the following result: President, P. E. Platt of Sacramento; Eastern Manager, A. T. Hatch; Vice-President and General Manager, L. W. Buck; Treasurer, National Bank of D. O. Mills & Co., Sacramento; Secretary, H. A. Fairbank. The new president, Mr. Platt, is too

The Trust Abomination.

We are glad to see that the New York State Senate Committee was not bribed or bulldozed out of its conscience by the trust conspirators of New York City. The telegraphed reports showed that great pressure was being brought to bear upon them, and that prominent citizens (who have interests in trusts) did not fail to come forward and declare in effect that their organizations were so beneficial that the organ-

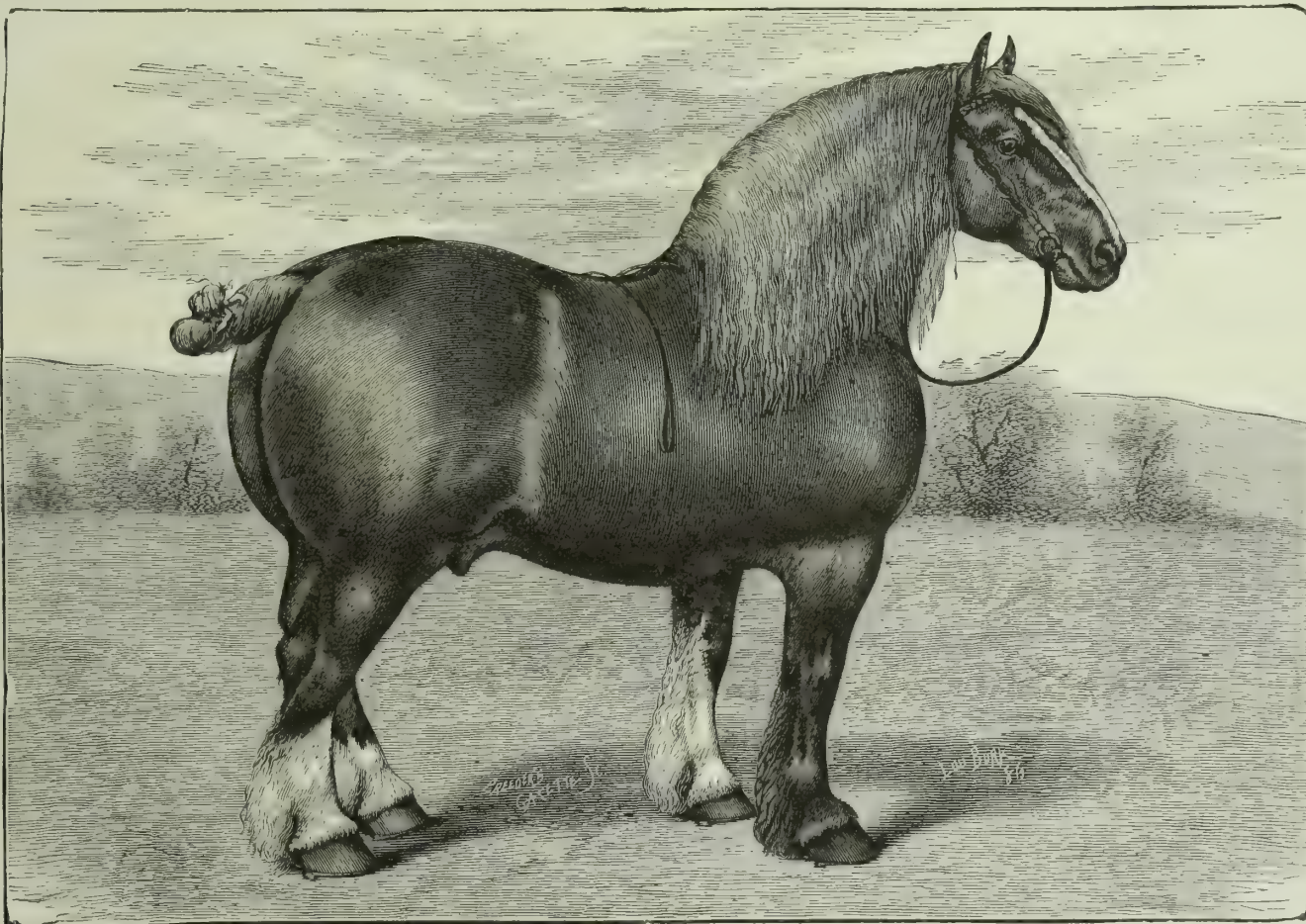
izers ought to have medals from the Humane Society or the Home Missionary Society. But this sort of evidence does not seem to have had much weight with the legislators of the Empire State, for the telegraph announces that their report to the Senate on Tuesday of this week contains the following paragraph:

However different the influence which gives rise to this combinations may be, the main purpose of the management and the effect of all of them upon the public is the same, to-wit: The aggregation of capital, the power of controlling manufacture, and the output of various necessary commodities; acquisition and destruction of competitive properties, all leading to the final and conclusive purposes of annihilating competition, and enabling such combinations to fix the price at which they would purchase raw material from producers, and at which they would sell the refined product to the consumer. In any event, the public at each end of the industry, the producer

and the consumer, is and is intended to be, in a certain sense, at the mercy of the syndicate, combination or trust.

The report recommends new legislation, and that the Attorney-General proceed against any violation of the laws. The committee investigated the sugar, milk, rubber, cotton-seed oil, butchers, glass and furniture trusts. It recommends that the Attorney General take steps to forfeit the charter of the Milk Exchange, which is declared to be a monopoly of the worst sort. A bill will be reported soon which the committee believes will modify, if it does not prevent, the greater evils complained of.

Thus New York seems to have taken a strong hold on the trust monster, and we hope it will shake the life out of it. It is a good place for the movement to start, for we imagine many of the trusts have New York charters. Now Congress should take a hint from New York, and give us a report, and, if possible, an enactment, which will check this most alarming form of the monopolistic tendency of the day. It will be a hard thing to crush out.



IMPORTED ENGLISH SHIRE STALLION BLYTH BEN.

pack for the past season has been sold at satisfactory prices. A shipment was made to Chicago on Tuesday of 90,000 pounds of canned goods, which exhausted the stock. The pack of this cannery has been in great demand, as the principle was adopted from the beginning of putting up nothing but first-class fruit. The benefit of this policy was seen immediately, for we heard it in the air months ago that the best fruit of the year was from the Sutter county cannery. There is abundant chance to emulate this, and now that the canning outlook is so fine there should be quite a number of local canneries started. If the principle be adopted and strictly adhered to that nothing but the best fruit fresh from the trees be put in the cans, there is no question about success, if the management be good as well as the fruit.

THE INYO PAPERS complain that maps lately published contain the names of pioneer towns that passed out of sight 20 years ago, and that they are very incorrect as regards both Inyo and Mono counties.

well known to most of our readers to need introduction. He is a member of the firm of W. R. Strong & Co. of Sacramento, who have for years been prominent in fruit-shipping. He is a man of exceptional executive ability, of tireless energy, gentlemanly in his bearing, and, as these qualities might indicate, esteemed and popular. It is rather hard to banish Mr. Hatch from the State after his term of arduous service, but to give him a chance to proclaim a little of his faith in California at the East will be a good thing for the State. There bids fair to be plenty for the Fruit Union to do this year, and we hope all arrangements will tend to move the fruit freely and successfully.

WYOMING STOCKMEN are happy. From all quarters come reports that losses have been very small. Three inches of snow within as many days the first of the week moistened grass roots in the neighborhood of Cheyenne. In the Big Horn basin a loss of less than one per cent is reported. On the Platte, Laramie and Cheyenne rivers the outlook is favorable. Sheep have wintered well.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Nevada County.

EDITORS PRESS:—Nevada county lies north of the central line of the State of California, extending from the summit of the Sierras on the east line of the State to the Sacramento valley on the west, a distance of 70 miles, with a width varying from 12 to 20 miles. The altitude in the western or valley region is less than 1000 feet, 2000 to 3000 feet along the central portion, with 8000 feet along the eastern boundary.

The line of the overland railway crosses the eastern boundary and traverses the southern portion for many miles. It then enters Placer county, but continues close to the southern boundary of Nevada till near its western limit. The Nevada county narrow-gauge railway connects with the overland road at Colfax, and extends thence north through the center of the county via Grass Valley and terminating at Nevada City, but two hours' ride from Colfax. The eastern portion of the county being mountainous, the principal industries are lumber and grazing. In the central are the quartz, hydraulic and placer mines, with the northern horticultural belt. The western or foothill portion consists of agricultural and grazing lands. The portion of the county adapted to horticultural and agricultural pursuits contains 250,000 acres.

Character of the Soils.

The soils are as varied as could be desired. In the neighborhood of Nevada City the granite crops and the soil is largely granite with alluvial surface, similar to the fruit soils of Placer county. At Grass Valley are the loamy hillsides tinged a dull red. Another variety is that of the slate districts, famous for its fine grapes. Scattered throughout the county are old river-beds composed of rounded boulders and loose rock, a character of soil unavailing in appearance, but once tried, proven the most profitable in fruit culture.

Climate.

As there is as yet no need of selling the climate in Nevada county, a word in reference to the same may not be amiss. The altitude of the county's agricultural lands being from 1000 to 3000 feet above sea level, effectually bars out all the malarial, fever-and-ague conditions of the lower counties. The absence of fogs and raw sea breezes, with cool nights inviting refreshing sleep and an ever-present inexhaustible supply of pure, cold spring water, makes life worth living, and the combined effects are everywhere seen in the hearty, healthy, happy children.

In Nevada as in all portions of the State, the climate is governed by the topography. While doubting Thomases may sneer at this, the fact remains, and one of the best evidences is the admitted fact that the earliest fruits in the State are those raised in these so-called northern counties. The critical month of the year for fruit being March, a comparative table shows that the average of the minimum temperature for that month was—Santa Barbara, 43.4; Riverside, 40.6; Grass Valley, 35.1. Bear in mind the fact that Grass Valley is 2400 feet above the sea level, and does not represent the temperature of lower and warmer portions of the county. Nearly one-half of the agricultural portion of the county from a few miles west of Grass Valley to where the hills slope rapidly to the westward is contained in the "warm belt," where no snow falls and frosts are never severe.

The rainfall is principally in the winter months, very little rain falling during July, August and September. In consequence, irrigation is resorted to, though many have proven that in this county cultivation can be made to supply the want of irrigation. It was the writer's pleasure to visit the nursery of Grass Valley's genial, progressive horticulturist and nurseryman, J. T. Rhodda; and while going over his grounds, Mr. Rhodda pointed with justifiable pride to his Bartlett-pear orchard of 1400 trees, set out on hitherto considered waste land. All of these trees showed a grand growth, and they had received no water. This is no exception, as lands on which are thrifty orchards, vineyards and vegetable gardens are located above the line of any ditch, and hence settle the question beyond controversy that profitable crops can be raised without irrigation. When it is desired to irrigate, these soils require but a fraction of the water used in other portions of the State. Thanks to her mineral wealth, Nevada county has a system of reservoirs and ditches not excelled in any portion of the State, and in consequence water is not measured out as though golden, but turned on freely and fully when wanted.

The Reservoirs

Are as follows:

	Cubic feet.
North Bloomfield Co.	1,050,000,000
Milton Co.	650,000,000
Eureka Lake Co.	1,130,000,000
Yuba W. & M. Co.	1,800,000,000
Omega & Blue Tent.	300,000,000

The South Yuba alone can supply 109,368,000 gallons daily. As San Francisco's source of supply can furnish but 12,000,000 gallons, or one-ninth the amount, some idea can be gained of the immense water supply available by com-

parison. Now that the courts have perpetually enjoined the hydraulic mines (for the use of which this water was originally brought in, at a cost of \$4,823,762), almost the entire amount is available for irrigation, and this coming season Placer county will secure a portion of the water to supply their ditches from Nevada's reservoirs.

Fruits of the County.

While the orange is grown successfully, as was shown by the exhibit accompanying Placer's citrus display at Los Angeles, the more practiced and reliable horticulturists recommend first the Bartlett pear, as this is its natural home, and nowhere does it attain so great perfection. Next to it in grade range the prune, Tokay grape, with its red mountain-given cheek, and the Picepturiens English walnut. While apples reach perfection here, the woolly aphid and codlin moth make it here, as elsewhere, a hazardous crop. The peach, cherry, apricot, and citrus fruits do equally as well in selected localities as in other counties.

That the soil and climate are both adapted to fruit is evidenced everywhere, but nowhere more than on the "Barren Hill Nursery" of the well-known Mr. Felix Gillet of Nevada City. This soil, so poor, seemingly, that Mr. Gillet turned the few inches of alluvial soil under for the roots, and brought to the surface the almost white granite soil that covers his nursery and makes it look like a well-kept gravelled walk, grows the finest, thriftiest trees that it has ever been my pleasure to examine, and in bearing qualities the soil or location is fully equal. Nevada county has much to be thankful for, but in the person of Mr. Felix Gillet she recognizes her greatest possession, honest, thorough, practical, a representative horticulturist, and enthusiastic in his work. Through him Nevada county is well known, especially in nut culture, which is Mr. Gillet's specialty, and for which he holds the first prize of our State Fair for "best exhibits of nuts."

Price of Lands.

Within five miles of railway communication, lands under good state of cultivation can be purchased for from \$10 to \$30 an acre, while wild lands can be bought from \$5 to \$10 an acre. Government lands are still open for settlement, and railroad lands for purchase at prices ranging from \$2 to \$5 an acre.

The schools, churches, banks, hotels and business-houses of the county are second to no county of like population, while the society is all that could be desired. Her mineral wealth is well known, the Idaho mine of Grass Valley alone having yielded over \$10,000,000 to date.

To reach Nevada county, intending visitors should purchase tickets to Colfax and then take the Nevada County railway to Nevada City, where the officers of the Nevada County Land and Improvement Co. will extend to them every courtesy. This company is composed of the leading men of the county, not merely as a real estate firm, but working to settle and build up Nevada county in every honorable way, and to them the writer is indebted for a large amount of valuable information as to the county's possessions and capacities.

Murphy, Cal.

E. H. SCHAEFFLE.

SHEEP AND WOOL.

Sheep-License in Lassen.

The supervisors of Lassen county, at a regular meeting held Feb. 10th, passed without a dissenting voice an ordinance of which the following are extracts:

SEC. 1. Every person engaged in the business of raising, grazing, herding or pasturing sheep in the county of Lassen, State of California, must annually procure a license therefor from the tax-collector, and make therefor the following payments:

First.—Those owning or having in their possession and under their control 5000 sheep or more, shall constitute the first class and must pay \$100 per annum for the first 5000 sheep, and for every additional 1000 sheep the sum of \$20.

Second.—Those owning or having in their possession and under their control 4000 sheep and less than 5000, constitute the second class, and must pay \$80 per annum.

Third.—Those owning or having in their possession and under their control 3000 sheep and less than 4000, constitute the third class and must pay \$60 per annum.

Fourth.—Those owning or having in their possession and under their control 2000 sheep and less than 3000, shall constitute the fourth class and must pay \$40 per annum.

Fifth.—Those owning or having in their possession and under their control 1500 sheep and less than 2000, constitute the fifth class and must pay \$30 per annum.

Sixth.—Those owning or having in their possession and under their control 1000 sheep and less than 1500, shall constitute the sixth class, and must pay \$20 per annum.

Seventh.—Those owning or having in their possession and under their control more than 500 sheep and less than 1000 shall constitute the seventh class, and shall pay \$10 per annum.

Eighth.—Those owning or having in their possession or under their control 100 sheep and less than 500 shall constitute the eighth class, and must pay \$5 per annum.

Ninth.—Those owning or having in their possession and under their control less than

100 sheep shall constitute the ninth class, and must pay 50 cents per annum.

Sec. 2. Every person who shall engage in the business of raising, grazing, herding, or pasturing sheep, or be so engaged within the county of Lassen, State of California, without first obtaining a license therefor, as prescribed by Section 1 of this ordinance, is guilty of a misdemeanor.

Sec. 3. The tax-collector shall be the collector of the license provided for by this ordinance, and it is hereby made his duty to collect the same, and he may enforce the collection as provided by Section 3360 of the Political Code of the State of California.

Sec. 7. This ordinance shall take effect and be in force on and after the first day of July, 1888, and all ordinances or parts of ordinances in conflict herewith are hereby repealed.

THE STABLE.

Raise the Weights.

If we had our way about the matter the present weights carried in running races would be raised from 15 to 20 pounds all around. The present scale is ridiculously light when we consider the qualities we ought to have in our fast stock. Racing is nominally for the improvement of the horseflesh of a country. If this is true, and the whole business is not a mere amusement or gambling machine, do let us really improve our stock to some practical end.

While we recognize that this is not the age of the sailing packet and the stage-coach, and that time is coin as it never was before, we would still like to see more interest taken in the class of racing that laid the foundation for the great advance that has been made in later years. In the older time, whatever other faults that age had, they certainly put the great quality of endurance in a position far nearer the place it deserves to have than the racing world of the last 15 years has done. In fact, the racing breeders of from 20 to 30 years ago built so well on the magnificent foundation received from the hands of the British lovers of the running horse that much of their work still remains intact, uninjured by the craft and assaults of the senseless fashion of turning horses into deer or greyhounds; for outside of their value as racing machines, many strains of our running blood are positively worthless for any practical use. Leggy hot-house grown weeds, without stamina or constitution, whose one gift is the power to cover three-quarters of a mile carrying a feather-weight jockey at top speed—and then shut up. That is not the stock that makes a nation's cavalry worth its feed. What we want is a type of horse that at four years of age can shoulder 140 or 150 pounds and cover a mile anywhere under two minutes, two miles well inside of four minutes, three miles in six, and four miles in eight minutes—with a few seconds leeway at this last distance, if needed, although we are sure that the above distances could be made in far better time than given by representatives of many of our racing families that still keep some of their old-fashioned stamina and weight-carrying capacity. And the additional weight would not be entirely a hindrance; for with a scale some 20 pounds heavier than at present, dozens of our best riders who are now barred because they have been foolish enough to follow Nature's lead and grow a little, could again straddle their favorites; and the average riding ability would be far higher than it is at present, when a man hardly learns the business before he must either quit or ruin his health by all sorts of hurtful ways of preventing natural growth and development.

Then much of the riding would be taken out of the hands of the feather brained little dare devils and put into the care of men who would not only have some regard for life and limb, but who would be able to ride a racehorse as such a noble animal deserves to be ridden, steadying his mouth skillfully, carefully judging the pace and finishing with plenty of reserve strength and energy. Our races would cause the death of far fewer boys and horses and would be much finer exhibitions of stamina in the horse and pluck and judgment in the rider under a scale of weight that would train us up cavalry and artillery horses such as the world has never seen.

—G. T., in San Leandro Reporter.

A San Benito Breeder's Views.

H. De Groat writes to the Hollister Free Lance as follows: The main and leading principles in breeding should be in selecting a sire and dam of fine form, sound constitution and free from all hereditary diseases and blemishes, and in the vigor of life. Avoid broken-down stallions, for where the constitution and limbs are impaired from old age and long use, there is not vitality enough to support the original form or action. Don't expect a perfect animal from such a source; don't look for as great a feat in your old age as could be accomplished in your younger days. All rules of nature say, "like begets like," and if you want to raise cripples breed to cripples. But if you wish to breed first-class animals you must not breed from those that are destitute of form and so old that they have lost both action and form, for

without vitality you need not look for perfection.

It is a law of physiology and a generally admitted fact by breeders and all authorities upon the subject of breeding, that to improve any blood, the sire must be the superior animal. Therefore, if your breeders would breed the highest type of the equine species, either the racer, trotter, or horses for all purposes, recourse must be had to the thoroughbred horses that have action and endurance, horses that have proven their worth by their deeds—horses of sound constitution—and if such sires are chosen, they must and will succeed. It is highly amusing to one at all familiar with the stock of the country to read the advertisements of the modern trotting stallions, all or nearly all claiming to be descendants and inbred from Messenger. What Messenger do you suppose they mean? Why, imported Messenger, the racer, who died Jan. 23, 1808, 80 years ago. There is not a horse in the United States that has one-sixteenth part of the blood of old imported Messenger in his veins. Why will breeders seek this peculiar strain if so desirable, adulterated as it is by the common horse of the country, when it can be found so pure and rich in the thoroughbred? Old Messenger was a racehorse and thoroughbred. The common horses of the country, as a class, are without beauty and finish, with big, ugly heads, coarse limbs, curly hocks, big feet, upright pasterns, and no heart to stay a distance of ground. Look around you. Is not this a true picture of the majority of the trotting stallions candidates for your patronage? If I desired this strain I would go to the thoroughbred, where I would find clear limbs, beautiful head and neck, long, elastic, and springing pasterns, and a heart to compass 20 miles an hour. The thoroughbred cross is classed as more directly pure, better, more desirable, because more reliable than those obtained through the coarse, sponge-boned, flat-footed, faint-hearted stallions advertised throughout the country as being descendants of "Imported Messenger." I would as soon expect to get the Messenger cross through these mongrel candidates for public patronage as to pour a barrel of whisky in the headwaters of the Sacramento river and drink good grog from the Bay of San Francisco.

HORTICULTURE.

A German Comment Upon Our Horticulture.

EDITORS PRESS:—I think it interesting and very pleasing to California farmers to see that exact views about the future of our country commence to spread abroad, and thus I send you this translation from the *Trierischer Landbote*, February 3, 1888.—F. CLOSS, Auburn, Cal.

The following notes may serve to give an idea about the extension of the vineyards and orchards in California. The figures are taken from official statistics. It ought to be mentioned particularly that fruit and viticulture in California so far are yet in their infancy; not even the thousandth part of the area prominently adapted for the mentioned branches of agriculture is cultivated. The fruit industry also, comprehending the curing, drying, canning of all kinds of fruits and the changing of them in other ways, is only in its commencement. Not less so the vine trade, in spite of the really astonishing progress which this very branch shows even now in comparison to other countries. With the increasing of the products of California the market of them in the trade of the world will be considerably enlarged also. The canneries founded in that country are not able to cover the demand only approximately, though they are remarkably enlarged and work with all possible force. The fruits of California replace (supplant) even now the products of all other countries in the trade of the world, and before a few years pass they will govern the world. These are not any of the vain-glorious praises which used to be told for years about the Golden West, but it answers perfectly to the observations and inquiries made in the very State. The future of California lies in her fruit and vine products; this is a conviction justified by facts, which enforces itself to every thinking man.

At the conclusion of the year 1886 there were in the State more than 100,000,000 vines, and more than (over) 8,000,000 fruit trees. The viticulture yielded 18,500,000 pounds of raisins; the fruit culture 2,000,000 dried plums; 22,500,000 pounds of fresh oranges and lemons were shipped to the East. The fresh, canned and dried fruits amount to 99,025,000 pounds besides that what is used up in the State itself.

The view that an overproduction of fruits is to be feared is entirely without reason. Years ago the very same was said. A glance at the lists of the import in the United States teaches that in the average the following quantities are imported: 50,000,000 pounds dried plums, 7,000,000 pounds figs, 54,000,000 raisins, 5,000,000 pounds almonds, 396,000,000 pounds oranges and lemons, 5,000,000 pounds of other fruit; altogether about 541,000,000 pounds besides olives and wine.

California exports so far 99,000,000 of fruits while the import in the United States amounts to 541,000,000 pounds. Therefore, if only the United States shall be supplied by California, the production must be six times larger than it is now; with this the export to other countries

and the increasing of the population is not even considered.

By these notes it is clear that the fruit culture in California is on an entirely sound foundation, more than that, the views for a truly splendid future are perfectly justified. But the fruit industry and the market of fresh fruits must keep in the line with the increased cultivation and production. This branch, however, being in the hands of experienced and far-seeing business men of ample capital, no danger from this side is to be feared. To the fruit and viticulture of the State belongs the future.

Small Fruits in Florida.

EDITORS PRESS:—This place is destined to become, if it is not already, the leading strawberry-growing point in the State. We have about 115 acres here, not all good, however—say about 90 acres of fine plants which will yield a crop above the average of Florida. There is so much exaggeration in the papers that it is impossible to arrive at the correct acreage at other points; but from information derived from private parties I believe that Gainesville, Bartow and Orange Park are our principal competitors, with an acreage of about 50 or 60 each.

Bartow and Gainesville, being south of us, heat us a few days or weeks in early shipments, but the few crates they are able to send North in advance of us amount to more in glory than in cash. One of the most remarkable things about the Florida strawberry is the great length of time during which the ripening season is prolonged. For this reason the oncoming of berries is very gradual, and, though our southern competitors may send a few berries to New York a month or six weeks ahead of us during the main shipping season—March and April—we keep fully abreast of them, and at the end of it we will not shrink from a comparison of books.

The soil here is peculiarly adapted to strawberries. It is not high pine and is only slightly rolling, being what the natives call "flat-woods," that is, a pine forest with many small cypress swamps, locally called "bays," interspersed. There is a large percentage of humus or vegetable mold in the sand, making it black, rendering the roads firm the year round and making necessary a system of surface drains. It is asserted that Lawley has 14 miles of these drains. Vast sheets of water stand in the woods in the summer "rainy season," still we are singularly free from fevers the year round. There is no drifting sand, and the native grass, though almost as coarse and harsh as pine straw, is cut in the piney woods with mowing machines at the rate of a ton per acre for strawberry mulch. It is this characteristic of the soil, its retentiveness of water, which gives us our chief point of superiority over other towns in strawberry-growing. On high pine land, 20 minutes after the hardest rain, the water is all gone out of sight. Here it runs along or lingers in the drains for hours, black as ink.

Florida has four seasons, the rainy season of midsummer, the two dry seasons of autumn and spring, and the moist season of winter. In the summer it is very difficult to get a "stand" of strawberry plants, owing to the tremendous beating rains. Then comes on the fall drouth, and in light sand the newly set plants are likely to perish. Last fall there was a drier season than usual, and our southern neighbors, Gainesville, Ocala, Bartow and others, suffered the loss not only of their young plants, but many even of the old ones. So our prospects are unusually good at present.

The first small shipments this year were made fully a month ago. Last Saturday, Feb. 18th, we shipped a few quarts over five bushels from this station. From this you will see that the berries are coming on slowly. Last year the writer made his first shipment Feb. 26th; in the first week we shipped 8 bushels; in the second week, 28 bushels. The berries came on with a rush last year.

A few quarts were sold in New York at \$3 a quart; but the most of them have brought only \$1.50 or \$1.25 a quart. Boston and New York are at present much better markets than Philadelphia. One of our citizens sent eight pints by mail to Chicago, each pint very carefully selected and packed in cotton, and they arrived in time for a "swell" wedding, bringing the fortunate grower a check for \$40. Ten dollars a quart ought to satisfy a horny-handed son of toil.

The first crop of strawberries grown here was marketed in the spring of 1884 and netted the modest sum of \$175, about 25 cents a quart. Last spring there were shipped to northern cities 122,000 quarts, netting about 16 cents a quart, or a total of about \$19,000. This spring we expect to sell \$25,000 or \$30,000 worth.

These small early shipments are sent by express in slatted bushel-crates and carry well even to Boston. This mode of shipment is safe up to April 20th or 25th if the berries are picked when pale red and not too many crates put into a car. But all large shipments have to be sent in refrigerator cars, at an expense of 8 to 10 cents a quart to New York; by express the cost is only about 6 or 5½ cents to Philadelphia. S. POWERS.

Lawley, Bradford Co., Fla.

A SINGULAR ERROR is the use of the word "cocoa-nut," which, botanical authorities agree, should be "coco-nut." The wrong spelling is charged upon Dr. Johnson, who is said to have confused the "coco-nut" with "cocoa," which is the product of the cocoa tree.

THE IRRIGATOR.

Developing Water in a Dry River.

Eastern people have passed the joke upon California that its rivers are turned upside down; that the rivers have the gravel on top and the water underneath, and have cited it as an obstacle to the development of the water supply of Southern California. Citizens who are handling real-estate enterprises have of late declared their intention of turning the rivers right side up, to wit: water on top and gravel underneath. As illustrative of this is the great submarine dam at San Fernando. The waters coming from the mountains, as they enter upon the valley, sink into the gravel and run along the bedrock. The San Fernando Land and Water Company about a year ago planned to construct a submarine dam across the Pacoima wash down to bedrock, so as to shut off the submarine flow that evidently was there. The enterprise is now complete, all but a space of 50 feet, and for the past 10 days the struggle has been a hard one to gain the mastery over the intruding waters from the large gravel deposit lying above the dam. The dam being complete, all except the portion named, the force of the entire subterranean flow concentrated itself at that point. To overcome this difficulty three centrifugal pumps of powerful capacity were set at work, and, running night and day, the water was reduced to within four or five feet; then, with all the steam-power that could be brought to bear, it remained in even balance until day before yesterday, when the water yielded and the bedrock was at last reached. So close was the contest that the slipping of a pulley or the stopping of a pump for even two minutes would result in the water rising so rapidly that the men would have to climb up on the framework and wait until the pumps had started up. At one time the water raised so rapidly while the pumps were stopped that it covered the pumps six feet under, and the men were obliged to dive to get the pumps above the surface. The determination of the river was to retain its former position, the bed on top and the water below, but with steam-power, assisted by scientific machinery, it has been brought to its proper position.

Yesterday a *Times* reporter paid a visit to the dam, and was granted the privilege of visiting the works now in progress. The dam is situated about two miles due north of San Fernando, and, as stated, is constructed across Pacoima canyon. On the east side of the canyon, croppings of the bedrock may be seen, and it was this fact that determined Judge R. M. Widney, the originator and projector of the scheme, to build the dam at this point. An excavation of 50 feet was made on this side of the canyon before bedrock was reached, the walls of the same being securely sided, and the work of building a cement section two feet wide by 50 in length was commenced. On either side of this wall was securely packed cemented bowlders of two feet in thickness, making a water-tight dam of six feet in width by 50 feet in height. On the west bank of the river was constructed a similar section, it being thought advisable to build the dam higher on the sides, as the tendency of the stream, in cases of high water, is to wash in on the banks, and the result now will be to concentrate its force toward the center of the dam, which, being built to a lower elevation above the surface than the sides, will allow the water to pass over.

The dam is about 600 feet long, and situated about midway is built a well, reaching from the bedrock to the surface of the dam. In this is situated a pipe main two feet in diameter, which extends to within three feet of the bedrock. Throughout the length of the dam, at certain intervals, are located layers of concrete pipe, so situated as to catch the seepage from the gravel deposits above, and the water is thus allowed to flow into the well, and is then carried through the main to the receiving reservoir in the valley below.

Near the west bank is situated another well, which will perform the same functions as the one above described.

The water passing through the immense gravel deposits has the advantage of a thorough filterage, and the water at no time has a chance to stand and become foul, through the thorough system which is employed.

The subterranean river now flowing down the Pacoima canyon has been calculated to be 500 feet wide and 15 feet deep at the lowest season of the year. It is now over 20 feet deep. The wells will be sealed water-tight at a distance of about 15 feet from the top of the dam, so that in case of flood, the wells will fill from that point to the surface, from thence passing over the embankment and allowed to escape.

At the time of the reporter's visit yesterday three pumps were found at work, discharging 36,000 gallons per minute, thus showing the flow of water that can be obtained, and the difficulties that have attended the undertaking in keeping the bedrock and the coffer-dams constructed above free, that the men may complete their work.

The water thus obtained at the dam will be carried to a reservoir situated about a mile from the town of San Fernando, from which distributing point the valley will receive ample supply both for irrigating and domestic purposes. About 20 miles of mains have been laid,

the new town of Pacoima at present receiving its water supply from this source. A pressure of about 60 feet will be obtained in the valley below.

The cost of the undertaking will be about \$30,000. Fully 1000 barrels of Portland cement have been consumed in the construction—more than would be necessary in the erection of any four-story structure in this city. It is expected that the dam will be completed in about 10 days.

The gentlemen composing the company are Judge R. M. Widney and H. L. Macneil of Los Angeles, Chas. Maclay of San Fernando, Geo. C. Hager of Orange and J. K. Alexander, Superior Judge of Monterey county. — *L. A. Times*.

THE APIARY.

The Bee in Southern California.

The *Los Angeles Times* gives the following interesting sketch: The honey-bee was introduced into Southern California in March, 1855, by Mr. O. W. Childs, who purchased a few colonies in San Francisco, paying \$100 per colony for them at that port. Under his care and management the bees multiplied and produced large quantities of comb-honey, which he sold readily at \$1 per pound. His success started a boom in the bee business, and in three years afterward nearly every American resident in Los Angeles county had bees to sell, but the price was a shade lower than that paid by Mr. Childs in San Francisco, for many were anxious to sell their bees at \$5 per colony. The price of honey had gone down to 15 cents per pound. Swarms of bees had escaped from the apiaries and located in hollow trees, clefts in the rocks, and holes in the ground, so that the land was literally flowing with honey. About this time the fruit-growers began to complain that bees destroyed fruit, and most of the bees were removed to a distance from the city and located in the foothills, and at favorable spots along the foot and sides of the mountains. In their new homes the bees produced a better quality and a much greater quantity of honey, found in the bloom of the black and white sages that abound in the hilly and mountainous regions, besides the nectar-yielding, indigenous shrubs and plants so abundant in Southern California in those days.

From 400 to 500 pounds of honey per hive was considered a fair yield, and as the quantity of honey increased the price decreased, so that four and five cents per pound was about all that good honey would command. Most of the honey was shipped by sea to foreign countries. A small quantity found a market in New York. The crop of honey in 1876 was enormous, thousands of tons being gathered in Los Angeles county alone, and equally large yields were produced in San Diego county, one person being credited as the owner of 6000 colonies of bees, producing \$50,000 worth of honey and beeswax. The next year, 1877, proved most disastrous by reason of an extremely dry season. Thousands of colonies of bees perished for want of food, and the spring of 1878 found many apiaries entirely destroyed. Discouragement took a fast hold on the average bee-keeper, and to such an extent that he quit the business in disgust and never embarked in it again. Low prices for honey have been the rule since 1876 until the present year, when, by reason of a short crop and the meager supply of honey on hand, both in California, the Eastern States and the West India islands, the price of honey has gone up nearly one-half more than it was a year ago, and this right in the face of low-priced sugar, an article that has heretofore governed the price of honey to a great extent.

Among the men of means now pouring into Southern California in search of a salubrious climate and a rich soil that has never failed to give a fine crop in 100 years, no doubt many may be found who have in their old homes handled the honey-bee, either for profit or pleasure—that pleasure derived from investigating the habits and peculiar instincts of the most wonderful creature in animated nature, seemingly endowed with an intelligence that man himself can hardly measure. To such men, coming as they mostly do from northern latitudes, where winter care of bees is often greater than the care and labor bestowed in summer, we would say, take hold of the bee business in this land of sunshine, where, on an average, there are not 15 days out of the 365 of the year in which the bee is not on the wing—in this land of perpetual bloom, where the honey-bee may gather nectar every day in the year. Take hold with your experience, and, keeping step with the progress and advancement that permeate every other branch of business, help the honey-bee to gather and store the unlimited quantity of nectar that burdens the bloom of millions on millions of flowers in this favored land of ours, and save from the wild winds this wealth of sweetness that would otherwise be forever lost to mankind. The health-seeker could hardly find a business so conducive to perfect restoration to health, and the student of science can nowhere find a field that will afford a more interesting and absorbing study than that furnished by the apiary. Very many of our prominent bee-keepers have turned their attention to town sites and corner lots, quitting a business that has heretofore yielded them wealth without the risks of speculation, and to-day there are fewer men in the business than there were 15 years ago.

THE DAIRY.

Grasses in Placer County.

G. W. Applegate writes to the *Auburn Republican* as follows: Having experimented to some extent to ascertain the best plants to cultivate for pasture and provide winter provender for stock, the writer thinks perhaps he may be able to give a few practical hints that may be of some value to foothill farmers or those to become such.

Alfalfa or Lucerne.—Alfalfa is undoubtedly the most valuable plant yet known on our coast for both pasture and hay production, and where the necessary conditions exist it is the most profitable. The land should be deep soil, well drained, and put in the best possible condition before sowing. If new ground is used it should be well broken, all stumps and roots removed early in the season, and re-plowed and well harrowed in the spring. Sow 25 pounds of seed per acre and cover with a brush drag. If the land has been cultivated a few years it is much better than new, as the soil is pulverized and a much better stand is obtained.

Under these conditions on good red land, 10 tons of hay may be obtained per acre, besides affording much pasture. These results, however, cannot be obtained without irrigation after each mowing. Three crops a season are enough, as the hay will be much better by allowing the plant to mature enough to be in full bloom when cut.

Almost every foothill farm can have a small field of alfalfa if the place has a running spring, by holding the water in tanks or a reservoir and flooding after each mowing, the amount cultivated to be measured by the quantity of water obtainable. Naturally wet land will not do at all.

Italian Rye Grass.—The next most valuable is the Italian rye grass, which will flourish under the same conditions as alfalfa. It becomes very valuable in connection therewith by sowing the seed on the alfalfa-field, a very small quantity of seed being necessary as the plant seeds the ground. The grass will take hold of every vacant spot and thus keep your crop full. The quality of the hay is fully equal to alfalfa in value for hay, but it will not produce near so much an acre.

Experiments.—I prepared a piece of land two years ago, and sowed thereon, in separate lots, alfalfa, Italian rye grass, orchard grass, meadow, Alsiki clover, evergreen millet, teosinte, dhoura and other kinds to ascertain their respective values for pasturage. The land was deep red soil on a sidehill, and there was no chance for irrigation. The seed all came up and grew pretty well, but the hares and deer raided it so that only a few plants of a kind were permitted to seed, and on letting the cattle on it I found the rye grass, orchard grass and mesquite were injured by tramping and pulling up of the plants, the alfalfa and evergreen millet not being injured by grazing. The teosinte and dhoura are annual plants, and will not do without irrigation any more than corn. Evergreen millet will make a good growth on any deep soil and afford a large amount of fodder for pasturage. I would advise all to be careful not to sow it on ground where anything else is to be cultivated, as it is very hard to get rid of.

The pasturage of the foothills can be greatly improved by clearing off the brush and sowing many of the kinds mentioned without plowing. The cost will be very little for seed.

The coming season I will try other grasses. I have no doubt some kind will be discovered to fill all requirements.

Sorghum and Straw Sandwich.

EDITORS PRESS:—The season is now close at hand when farmers who raise forage crops of any kind for feed are thinking what kinds and how much to plant. Last year we planted about one-half an acre of Early Amber Sorghum cane. We began cutting and feeding about the time it began to head, and the second growth was ready to cut in six or eight weeks. I do not think cane as good for milk as for fat, but I put it up for winter feed and find it a most excellent food for wintering stock. I put it up in a peculiar manner—to me a new plan. Last fall when putting straw in a barn the idea occurred to me of mixing green corn or cane in the straw. After putting about four feet of straw in the barn I cut a load of cane and spread it about six inches thick over the straw, keeping it a foot or so from the sides; then a foot or two of straw, then more cane and so on till the barn was filled. I also put in a load of green corn. We put in between four and five tons of green fodder, and its weight pressed the straw so we were able to put more straw in with it than without it. When we came to open it the fodder was in good condition, and the stock would eat up every bit of it. I shall put it in thicker next fall so as to have enough to try it for fattening purposes.

San Ramon.

F. B. MORE.

[The idea is a good one and we are glad to have such a satisfactory report of it. We understand that Senator Boggs of Colusa makes a sandwich of green alfalfa and straw with the same success described by Mr. More. What have other readers done with forage growing and curing? These matters are very interesting.—EDS. PRESS]

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Tamescal Grange.

For the first time in many years only a quorum were present at the meeting last Saturday evening, March 3d, owing doubtless to the stormy weather. Two new members were balloted for and accepted and one application for membership received. Bro. Sewell gave an interesting account of his trip to Southern California, also to Marysville and surrounding country; spoke of the oranges freezing solid on the trees this season, a thing unknown before. Through a suggestion from the Worthy Lecturer a committee was appointed to draft resolutions on the death of Judge Joel Russell of Haywards, a member of Eden Grange. Sister Eliza Brooks was reported sick but improving. Full and well-written minutes of the previous meeting from the Worthy Secretary were listened to with interest, an account of which meeting we add to our former report, as follows:

On Saturday, Feb. 18th, Bro. Field from Maine being called upon under the Good of the Order, expressed how pleasant it was to meet with fellow-Patrons here, thousands of miles away from his own State, using the same degree and password, engaged in the same cause in the work of the Grange, the foundation of which is love and confidence. He was heartily encored, and showed in his pleasant countenance that he was, as he expressed it, "happy all over."

Bro. Webster from Creston, who had not had the privilege of visiting his own Grange for months, corroborated Bro. Field's expressions of happiness in being present.

In discussing the tariff and free trade, it was stated that the question of the coming presidential election will not be the railroad question, the money question nor the telegraph question, but the tariff question as a blind to get not only the farmer's but the people's attention called to the lesser evil concerning import duties in lieu of the former questions which are of more importance not only to nearly all of the citizens of the present day, but for the welfare of those of the future.

Bro. Webster mentioned that the prospects were favorable for good crops in San Luis Obispo county. He noticed the death record in Oakland had been very severe during the winter, and very many of the old pioneers and leading representative men had passed to "that bourne whence no traveler returns."

The climate at Creston during the past month has been in great contrast with that at the bay; while fog and rain and cloudy weather had been the rule in Oakland, sunshine and pleasant days had been the rule there. They seemed to have rain when they wanted it in sufficient quantities. He invited Patrons when they want to get a delightful, healthful and sunshiny climate to come down and pay them a visit. He had come intending to withdraw the names of himself and family, as they will soon leave for a permanent home on his ranch at Huero-Huero, but the good-cheer and love of his old Grange had caused him to change his mind and remain in the folds of the Grange and to contribute to its support until such time as a hall could be prepared and a Grange organized at Creston, which he expected would be at no distant date.

Sister Kinney asked some pertinent questions as to how the difficulty the people are now laboring under is to be removed if men will continue to be led blindly by party ties and selfish and ambitious leaders. Bro. Webster confessed her questions were seemingly unanswerable. He had noticed that when the San Mateo tax suits were likely to be decided against the railroad company in the Supreme Court that they hastily paid the delinquent taxes in that particular case. The taxes being paid, the suit was withdrawn without giving the people of the country the benefit of the otherwise inevitable adverse decision to the railroad company. Pending suits continue, and the taxes remain unpaid, and over two millions of dollars of taxes are withheld by a few railroads in our country. No political party dares adopt Senator Pattison's minority report of the United States Railroad Commission. No party dares to take up the advocacy of the postal telegraph.

Secretary Babcock encouraged Sister Kinney with the remark that giving women the ballot would likely correct affairs. It was conceded that no hopes for reform would be realized except from the ashes of the old parties. Remarks followed from Bros. Frink, Paine, Renwick and Dewey on the same

subject. At this juncture recitations from the younger sisters enlivened these dry business problems, Sister Jessie Weed rendering in a pleasing and correct manner "Vigilance," and further on, as a closing piece to the program arranged by the Worthy Lecturer, Sister Nellie Webster ably recited the "Liberty Bell." Intervening, Sister Blackwood sang the old ballad "John Anderson My Jo" with pleasure to all, and Sister Dewey read a selection entitled "Rapid Passenger Service," a humorous description of ballooning in the future, [which may be found in our "Home Circle."]—EDS. PRESS.

At the next meeting, which takes place on Saturday, the 17th, at 2 o'clock, we hope to confer two degrees on a class of four in waiting. Also anticipate the pleasure of a visit from Sister Overhiser, who, we understand, is visiting her sister in San Francisco. Shall expect an account of her visit to the National Grange, etc. Hope that Sister J. F. Deming will be with us, as she is steadily recovering her health at her daughter's home in Oakland. S. H. D.

DISTRICT LECTURERS.—Worthy Master W. L. Overhiser has appointed the following District Lecturers: Geo. W. Hack for

In Memory of Joel Russell.

The Memorial Committee of Eden Grange has sent us the following tribute for publication:

WHEREAS, On Sunday, the 19th ult., in accordance with the Divine Will, Joel Russell of Haywards departed this life in the 66th year of his age, suddenly and without warning, being stricken down with apoplexy. Brother Russell was a charter member of Eden Grange—at one time its Master, and for a long time its Lecturer, and at one time Chaplain of the State Grange. Born in the State of Maine, he at an early age with his parents removed to the State of Massachusetts, where he grew to manhood. In 1850 he came to California by the Cape Horn route, and first settled in Stockton, then only a mining camp; thence he drifted to the Northern mines and to Portland, Oregon; and then back to San Francisco, and finally to Alameda county, where he arrived in 1852 "flat broke," without a dollar but with plenty of energy and determination. Selecting a piece of land in Alameda county on the Soto Rancho, he commenced farming, and when the title to that rancho was confirmed to the claimants for himself and as trustee for some others, purchased a seventh interest in the same, retaining to himself the farm he had settled upon, and

which tended to impel and ennoble morality. His views grounded upon personal conviction manifested themselves in worthy action in the promotion of truth and justice to all humanity. Resolved, That a copy of these resolutions be transmitted to his family.

W. C. BLACKWOOD,
F. PERHAM,
S. E. DENNIS,
Committee.

The State Executive Committee of the Prohibition Party having been called together in special meeting by Vice-Chairman Henderson, unanimously adopted a preamble and resolutions, of which the following are extracts:

WHEREAS, We have heard with profound sorrow of the sudden death of Hon. Judge Russell, the honored Chairman of our State Central Committee, and the standard-bearer of our party in the last gubernatorial campaign in California, it is hereby

Resolved, That we express our deepest and heartfelt sympathy with the bereaved wife and family in the great affliction and irreparable loss which have befallen them, and we pray for them that the presence, comfort, consolation and help of the Divine One may be graciously and fully vouchsafed to them.

Resolved, That the Prohibition party has lost one of its most faithful, noble, valued and devoted members, a man of sterling integrity, great fidelity to principle, a good and true citizen, a most genial, generous and warm-hearted friend, beloved and trusted by all who knew him.

In his funeral sermon, which was from the text "No man liveth unto himself and no man dieth to himself," Rev. Mr. Madge said: "Judge Russell will not be remembered because of his diligence in business, because of the lands he has bought and planted, or the gold he has accumulated, but for his devotion to a great principle. He will be honored by all true hearts because he dared to raise aloft and bear forward the banner of an unpopular and despised cause."

"Men whose views or feelings on the question of temperance reform are widely different from his, will, as they are true men, respect and reverence him for his noble courage, his persevering faith and his consistent efforts in opposition to the liquor traffic, the great overshadowing curse that is blighting the glory of this fair land. He never lost an opportunity to declare his principles. At home and abroad, in sickness and in health, and, like the apostle with the gospel 'in season and out of season,' he denounced this traffic in crime, and eloquently advocated its abolition. * * * Our departed brother did not live to himself, but for the cause of temperance and the good of others. Let us, as we surround his bier, rise out of self and live to bless our race."

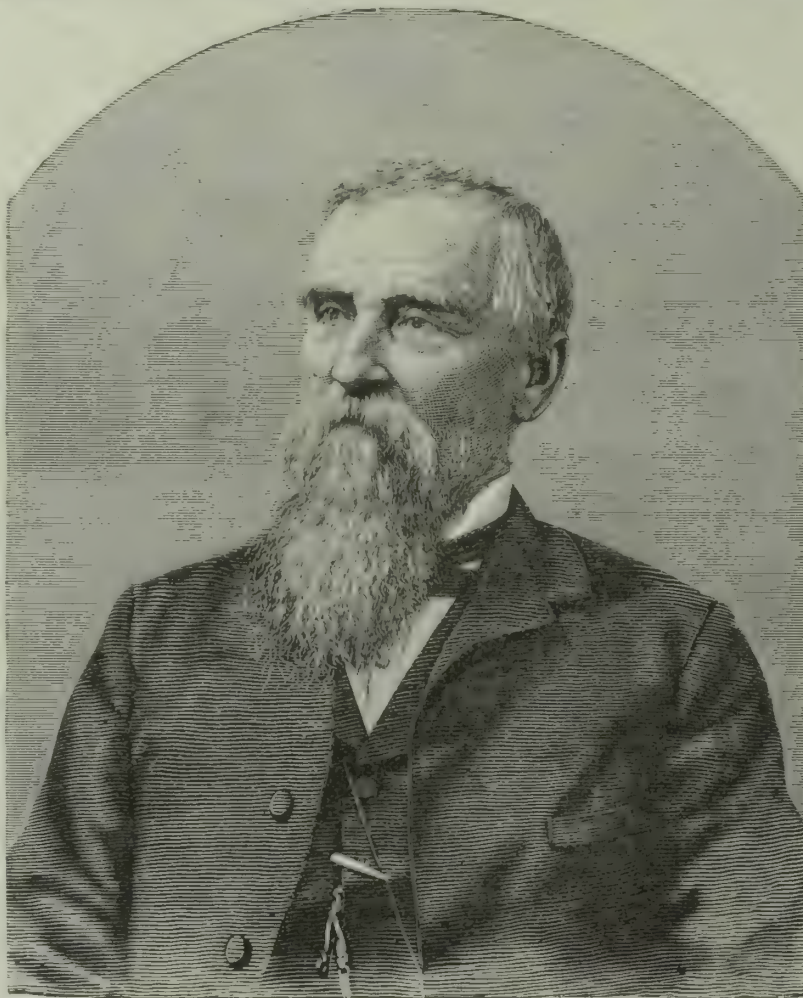
"Let me say that I have lost by his death a personal friend whom I had learned to love as a father. He was always ready to help in the work of the church. None could be more ready to give time and thought and money to the cause of Christ. The Congregational church has met with a great loss. We all have lost a friend."

A Card from Mrs. Russell.

The widow of our departed brother has published a card of grateful acknowledgment, as follows:

To Friends Tried and True:—The love of God and His presence seemed manifest through the tender sympathy and self-forgetting, tangible ministries of neighbors and other friends who seemed to fly, fairly, at the moment, to the place where the spirit of our loved one so suddenly, so blissfully, it seems triumphantly, took its flight. Let no one ever feel that true words of comfort are vain, for words have been so fitly spoken by voice and pen that they are "like apples of gold in pictures of silver," and let each who has spoken and each who has written and each who has sung with heaven-inspired voices it seemed in very truth, words of love, sympathy and consolation, take this to self, as from my own and my son's hearts in grateful acknowledgment and appreciation. Our little world turned its faces to us, clasped our hands, took us to its heart tenderly as the Master did to Mary and Martha. Jesus wept. Thrice has my heart been stirred to great faith in human nature taught by Christ's God-given, loving sympathy. Twice recently in California, as our hearts too well attest. We do not feel alone. Feb. 28, 1888. MRS. JOEL RUSSELL.

DEATH OF DAVID L. ADAMS.—Died in Oakland, Feb. 29th, David L. Adams, a native of New York, aged 68. Mr. Adams lived for many years in Buffalo, where he was foreman of a large shipyard. He resided in Oakland from 1874 to 1879, and then went to Dayton, Wash., to engage in farming. Eight months ago he returned to Oakland and made his home with his son, H. L. Adams. Alfred W. Adams of Oak-



THE LATE JOEL RUSSELL.

Sacramento county; Walter Renwick for Alameda county; R. G. Hamlin for Plumas county; S. Sollera for San Joaquin county; A. I. Cook for El Dorado county; and H. J. Ostrander for Merced county. The following have been appointed Deputies at Large: I. C. Steele of Pescadero, Geo. P. Loucks of Pacheco, and B. F. Frisbie of Yuba City. The Worthy Master was careful to appoint these Deputies at large so that one (Bro. Frisbie) could work in the northern part of the State, another (Bro. Loucks) could take care of the central section, and the other (Bro. Steele) could advance the Grange interests in the Southern District without the expense of traveling that would be necessary if only one Deputy was appointed.

Anti-Debris.

On the 22d ult. the Anti-Debris Association of the Sacramento Valley filed with the Clerk of the Board of Supervisors of San Francisco a copy of the Biggs bill, now before Congress, entitled "A Bill for the Investigation of the Mining Debris Question in the State of California," together with a copy of the protest against its passage which appeared in the RURAL PRESS of February 25th.

The matter is submitted to the Board of Supervisors of San Francisco by the Anti-Debris Association in the same manner that it has been submitted to other boards in the various counties of the State, simply to gain approval.

which remained his to the time of his demise. He subsequently purchased lands in the town of Haywards, which he improved and made his permanent home. In 1856 he married Miss Carrie M. Bartlett, who survives him. He was the father of a daughter since deceased, and two sons. He left property worth probably \$100,000. Brother Russell was always a prominent man in the county. At one time he filled the office of Associate Judge with the Hon. A. M. Crane in the Court of Sessions for Alameda county. He was a man of generous impulses, giving liberally his means to any needy purpose having his approval. In the war of secession none gave more than he to the Sanitary Funds. In politics he was a man of strong convictions, and always ready to express them. Originally a member of the Old Liberty party, he in turn became a Republican. When that party, as he had conceived, had completed its mission, he became a strong Prohibitionist. His time and his money for the last 20 years of his life were given freely to advance and disseminate its principles. In 1886 he was the Prohibition candidate for Governor of the State, receiving 6258 votes for that position. As a Patron of Husbandry he was a diligent and faithful laborer, having its welfare and prosperity at heart. Therefore be it

Resolved, That in the death of Bro. Russell the Patrons of Husbandry have lost a firm and active laborer, the community a valuable citizen, and his family a loving husband and father.

Resolved, That it is but just to offer this tribute to the memory of one who has left his sorrowing relatives and friends a legacy in remembrance of his virtues, his services, his honor and truth. Nobly did our brother perform life's duties on the stage of earth—his independent method of thought and action scattered the seed

land is another of his sons, and Amos Adams of San Francisco, formerly Secretary of the State Grange, is his brother.

Telegraphy in Congress.

In the U. S. Senate last Saturday Reagan reported adversely from the Postoffice and Postroads Committee the Edmunds and Cul-lom Postal Telegraph bills, and reported favorably what is known as the Spooner bill to regulate interstate commerce carried on by telegraph, and to subject the telegraph companies to the supervision of the Interstate Commerce Commission.

There were some amendments made, but they do not materially change the provisions of the original bill. The chief amendment is the incorporation of an equivalent to the "long and short haul" clause in the Interstate Commerce bill—a provision that it shall be unlawful to charge more for transmitting a message a short distance than for transmitting one a long distance in the same direction.

The report accompanying the bill says that the telegraph system of the country has become a monopoly, and complaint is made that rates are extortionate and are levied to pay dividends on watered stock. The committee, while recognizing the necessity for a reasonable and limited control of telegraph companies, doubt the policy of the Government securing the ownership and entire management of them. It does not pretend to extend the power of regulating to dispatches which are only within a State, and supplementary legislation will be made by States. The report in conclusion expresses it as the sense of the committee that whatever can be done as well by private enterprise and with as much safety and security to the people should not be undertaken by the Government at present.

No action was taken in the matter.

In the House of Representatives the consideration of the Pacific Railroad Telegraph bill was resumed.

Symmes of Colorado said the purpose of the bill was merely to compel subsidized railroads to comply with the conditions of the grants creating them. The contracts between the Union and Central Pacific Railroad Companies and the Western Union Telegraph Company were void *ab initio* and in direct violation of the express provisions of the statutes and grants creating the Pacific railroad and telegraph companies, and were in violation of public policy and against public law. The contracts under consideration had been made with the object and intention of defeating every substantial requirement of the grants. After Jay Gould and his ring had conducted the Union Pacific as long as he could make anything out of it, he had walked off, leaving the company bankrupt and taking along with him the assets of the telegraphic lines, with which he levied a discriminating tribute upon the people west of the Missouri river.

Dockery of Missouri said that under the granting acts the Pacific Companies were required to construct not only railroad lines but also a telegraph line. Instead of doing so, they had assumed to divest themselves of their obligations by a contract with the W. U. T. Co., conferring upon that company the exclusive right of way along the railroad lines. The acts of Congress requiring that the telegraph lines along the Pacific roads should receive all business without discrimination were nullified by this unlawful contract with the W. U. Co.

The bill was passed; ayes 197, nays 4; Bliss, Ketchum, Merriman and White of Missouri voting in the negative.

NORTH BUTTE GRANGE.—Bro. L. D. Hedger, Worthy Master of North Butte Grange, writes: Our meeting on the 25th ult. was well attended and all were in good spirits. The tariff question was discussed but no conclusion was arrived at. The weather is very beautiful at this time and the crop prospects splendid. I don't think I ever saw a better stand of wheat on the summer-fallow land, and the winter-sown grain looks well considering the storms and cold weather we had in January.

THE REGULAR MEETING of the Executive Committee of the California State Grange is hereby called to meet at the office of the Secretary, 220 Market street, San Francisco, at one P. M. on Friday, the 6th day of April, for the transaction of such business as may be brought before it relating to the interests of the Order.

A CORRESPONDENT informs us that the subject of starting a new Grange at Live Oak, Sutter county, is being discussed by the farmers in that vicinity. He thinks that as soon as harvesting is done a call will be made on the State Lecturer for that purpose.

Grange Work and Progress.

[Prepared Weekly by M. WHITEHEAD, National Lecturer.]

The multiplication of great trade conspiracies called trusts, formed upon the model afforded by the Standard oil monopoly, sets before the people of this country a problem which, in defense of their rights, they must soon undertake to solve. A trust is a combination devised for the establishment and maintenance of a monopoly in such a way that the real design of its founders and the operation of its machinery are in great measure concealed from the public. Absolutely controlling a large number of corporations, which seem to be independent of each other, monopoly in this form presents to the world the features of ordinary competition. But behind the mask there is only monopoly, heartless, tyrannical and oppressive. The trusts of these days are not corporations, but by usurping the franchises of many corporations they exert, without the restraining influence of charter regulations, enormous power. They are monopolies of monopolies.

Trusts Born of Greed.

"But a trust company—a corporation of corporations—what is that? What but a sea-devil in the moral world? It is the embodiment of famine; its multitudinous tentacles, each vital and each insatiate. It thrusts a sucker into every home. The measure of its hunger is the need of its prey. It drains the product of the muscle-force and brain-power of every breadwinner for its ravaging maw. Born of greed, what is a 'trust' but an appetite unappeasable for gold? Fed to grow, it grows only to feed. And reversing the order of nature, the baser organization gluts itself in the nobler; avarice feeds on the intellect, the affections and the lives of men."—*Chicago Herald*.

Wealthy Corporations.

"It is estimated by competent authority that more of the wealth of the United States is now owned by corporations than by private persons. Fifty years ago corporations were nothing; now they are everything. They dominate all channels of activity except farming and merchandising; they control legislation; they make hewers of wood and drawers of water of all who are outside of their charmed circles. Soulless entities, they are made the scapegoats of the unscrupulous conduct of the most unscrupulous men."—*Jackson (Mich.) Patriot*.

The Grange as an Educator.

Bro. L. H. Fassett, of Florin Grange, writes us: I can but note the difference between the members of the Grange at the present time and the same members when I first had the honor of joining our noble Order. Then very few tillers of the soil ever gave a thought to matters appertaining to government, either county, State or National. It is true some did, but their numbers were so few that their influence was never felt.

But to-day what a difference is to be seen. The sons of yeomanry are coming to the front, not only in local matters but also in State and National affairs. And why is this change? It is but the outgrowth of the teaching of our good and noble Order of Patrons of Husbandry, whose structure stands on that everlasting and immovable foundation—eternal justice to all mankind. Yes, it is its teaching that has made almost every member give some thought to such great questions as the carrying trade, tariff and National finance—questions that are of vital importance to tillers of the soil. Great wrongs can only be set right by organizing and giving such subjects thought. We should think and think until the problem is solved.

Akin to Bribery.

We find this in an exchange, credited to the *Forum*. Whoever be the author, it is sound morals: The custom of paying eminent barristers large retainers to hold their tongue, and not appear on the other side, has the features of own cousin to a bribe, especially if any jurist so committed stifles his convictions and looks on quietly to see injustice done. I was informed by the treasurer of a Massachusetts railroad, 50 years ago, that to get ahead of parties wishing to tap it with a rival road, he ran with all haste to Daniel Webster's office across the way. Webster, who had been already approached, but not retained in the adverse interest, and who, perhaps, preferred the new-comer's cause, answered in guttural tones that made the treasurer shudder: "There is no bone broken, there is no blood spilt;" and put the retainer of 500 easily earned dollars in his vest-pocket. That minister of the law, part of whose office is to check bribery, is himself bribed who for pay undertakes a case he thinks

he can carry, but which he knows or believes to be bad, and who urges it on purely technical grounds, the letter against the spirit, with arguments that have no weight to his own mind. He is a pettifogger, perhaps a bully, too; yet so strong a hold on court and bar has the theory of forensic fight, in which, as on the actual battlefield, whatever comes to hand is lawful, that I signally failed in trying to convince that excellent man and eminent judge whom I well knew, Chief Justice Lemuel Shaw, that the practice of the bar was in any way based on a wrong principle. He still held that contending counselors should do their best to represent or misrepresent, they having naught to do with absolute equity or truth; it was for the court and jury to decide after all the fair and unfair crossing of logical swords.

FLORIN GRANGE.—Bro. L. H. Fassett, Secretary of Florin Grange, writes: At our regular meeting on the 11th ult. the subject of National government was under discussion. They took up National finance and there was quite a lively debate. Bro. Wilson, of Enterprise Grange, was present and read an article on the subject. Sister E. Reese read an essay at this meeting on "Children in the Family," which was well received.

The Citrus Fair at Los Angeles.

Although the success of the citrus fair at Riverside, early in February, was so complete, and the attendance so numerous, the Riverside Board of Trade did not feel that "enough had been done, but decided to transfer the exhibit to Los Angeles, and thus give more Eastern visitors an opportunity to see compacted the choicest products of the southern orchards. Fruit was promised from various places, some of which were not represented at the former exhibition, and all contributors agreed to send the best selections of oranges, lemons, etc., at their command. The committee secured Armory hall in Los Angeles, where the displays were arranged with care and taste, and at last, on Tuesday evening, Feb. 27th, thrown open to public inspection.

The hall had been gaily adorned with flags and streamers, with silver and golden stars set here and there, while the stage, whence the 7th Infantry band discoursed fine music, was embowered with plants and flowers. The north side of the room was wholly given to Riverside. The south side was occupied with the exhibits of Ontario, South Riverside, Highlands, Santa Ana, Agua Tibia, San Diego county, Anaheim, Colton, Sierra Madre, and San Bernardino. In the center of the hall was a large booth decorated with ferns and trailing vines in which was a large assortment of oranges, Lisbon lemons, and other fruit, skillfully disposed. At either end of the hall were long tables running to the center, on which oranges of many varieties were arranged in huge pyramids, and in the form of hearts, stars, diamonds, and other beautiful designs. Next the stage was a large and varied show of raisins and bleached apricots.

To mention the exhibitors in detail and describe their several outputs would be largely a repetition of what we published two and three weeks ago. The Twogoods, E. W. Holmes, S. C. Evans, A. D. Haight, John G. North and many other growers whose names have become associated with the finest varieties of citrus fruits, were well represented.

One of the most noticed exhibits was a bank of handsome, vari-colored oranges, 10 feet wide and rising nearly to the gallery, bearing across its face the legend in small St. Michael's oranges, "Bakewell's Best." They were from the "Badkadyllyn ranch" of Thos. Bakewell & Sons, Riverside. A very large pyramid containing choice Washington Navels, Malta Bloods, Paper Kind, St. Michaels, Mediterranean Sweets, seedlings and other varieties of oranges shown by Patty & Perley of Riverside, also attracted a great deal of attention.

The display from Anaheim was perhaps the most varied of any, embracing Washington Navel and Mandarin oranges, Japanese persimmons, many kinds of preserved fruits in glass, very fine citron, bergamots and Sicily limes, English walnuts, St. John's bread or English locust, and ostrich plumes and eggs.

Besides the fruits, there were specimens of coal, porphyry, lime and pottery clay from South Riverside; and of Slover mountain marble, both rough and polished. Black, white and mottled marble was shown, and a marble stand, the stone having a greenish cast through it, was a very pretty piece of workmanship.

Heavy rains interfered somewhat with the attendance early in the week, but when the sun shone on Saturday, guests came in floods. Among them were Gen. Fremont and Mrs. Jessie Benton Fremont, who expressed delight at the charming display of fruits and flowers.

On Sunday morning the hall was filled with a worshipping assemblage, and Rev. Dr. Fay discoursed eloquently on "The Beauty and Bounty of Nature."

The display is claimed to be the finest and most complete citrus fair ever held in Southern California.

THE STATE BOARD OF SILK CULTURE has removed from No. 21 Montgomery avenue to rooms 91 and 92, Flood building, corner of Fourth and Market streets, where the reeling machines will soon be running again.

Mr. Porter's Views.

Washington Porter of Porter Bros. Company of Chicago is in California making his twentieth tour of examination of our producing regions. To a reporter of the *Bulletin* he has given the following expression of his views:

"In all my trips I have never before found the outlook for the California fruit business and for California so promising. I have never seen before so much interest in California shown in the East as at present. I tell you that the shipping of fruit there has done as much as anything to advertise this State. People are writing to me all the time, asking about where such fruit was raised, saying they have so much money and wanting to know which is the best part of the State to go to for fruit-raising. I am an immigration agent for California without emolument. I tell them all to come here, for I am a great believer in this State. It has done a great deal for me, and I am grateful for it. It is no exaggeration to say that our firm, since its establishment, has been handling fully 75 per cent of the green-fruit product of this State that is shipped east of the Missouri river. Last season I am sure our transactions in California products aggregated over one million dollars.

"Regarding plans for this season, I do not care to say much just at present, while our arrangements with the Fruit Union are yet unsettled. That organization has been a good thing, but they have ideas of their own regarding methods, and are planning a number of changes soon. They are talking of selling fruit by auction in Chicago, as they have been doing in New York and Boston. Personally, I could not object to that, for we would, doubtless, make more that way, but if you or they ask me as a business-man my opinion of that plan, I should be opposed to it for several reasons. One is, because last season we sold in Chicago to New York dealers for the New York market, at private sale, fully three times as much California fruit—union fruit—as the New York agents of the union sold at auction. The New York dealers had had their men in Chicago and would ship direct to their firms. They would save in this way often a full day—getting the fruit before their customers that much earlier—and with perishable fruit that counts. The auction fruit would reach the Jersey-City side in the morning. It had to be taken out and exposed for examination, and then sold in the afternoon. The men who bought in Chicago had their fruit ready for sale by nine o'clock. As to prices, I will wager a suit of clothes that the Chicago prices averaged more than received by the auctioneers. One New York firm alone bought over \$140,000 of fruit during the season. With sales by auction in Chicago, we could, of course, buy in enough to supply our customers, but there would, necessarily, be fully a day's delay in disposing of the fruit. All the dealers through Illinois, Indiana, and Michigan, that we supply now, cannot keep men in Chicago. They will have to telegraph and be to much more annoyance than by the present method. There is a greater local demand strictly in New York than in Chicago, and the auction plan, therefore, works better there than it would in Chicago. However, this is only my opinion. If the union wants the fruit sold one way, it makes no difference to me.

"Yes, I have been all about this State, and have noticed the large and increasing acreage in fruit trees, but I am not afraid of fruit-raising here being overdone. I used to think that way years ago, but new markets are opening all the time. The increasing population here will make a greater local demand and then the Eastern fruit districts are constantly failing or dying out. Last season the fruit crop of Delaware, Maryland, and all that peninsula country was almost a failure, and California fruit was consequently in great demand. The old orchards are shortening down and dying in many districts. There is a large undeveloped area here adapted to fruit-raising. Just look at that Fresno country; at what it was a few years ago and now. Fresno raisins are more sought after than foreign raisins. At a fair we had in Chicago, not long ago, I took a box of the choicest Dehesia raisins, covered all marks up carefully, and put them alongside of California raisins. I had dealers, expert judges of raisins, come and look at the two boxes, and I tell you not one could tell which was the California product and which the imported.

"And then French prunes from California are the finest in the world. The product is famous, and yet we do not produce here one-tenth of the amount annually brought to this country from Europe. Apricots, too, are the best that can be produced anywhere. The demand for canned and dried fruits and fancy preserves is increasing very rapidly. Some people here are just beginning to put up fancy fruit preserves like some French products, only invariably the fruit used here is better than that from abroad. The canning trade is growing. One of the dealers here told me that last year he sent 600 cases of canned fruit to Europe, just for an experiment, and now orders have come back to him for 7000 cases, which is a pretty fair increase in one year. A great many families East buy the California fruit and can it for themselves, some persons always preferring this way to getting the fruit already canned."

WE received at this port last month 100 135 tons of coal, against 80,780 in February, 1887. Prices still continue high.



Away.

I cannot say, and I will not say
That he is dead—he is just away!

With a cheery smile and a wave of the hand
He has wandered into an unknown land,

And left us dreaming how very fair
It needs must be, since he lingers there.

And you—O you, who the wildest yearn
For the old-time step and the glad return—

Think of him as faring on, as dear
In the love of There as the love of Here;

And loyal still, as he gave the blows
Of his warrior strength to his country's foes—

Mild and gentle as he was brave—
When the sweetest love of his life he gave

To simple things: Where the violets grew,
Pure as the eyes they were likened to,

The touches of his hands have strayed
As reverently as his lips have prayed.

When the little brown thrush that harshly chirred
Was as dear to him as the mocking-bird;

And he pitied as much as a man in pain
A writhing honey-bee wet with rain.

Think of him still as the same, I say:
He is not dead—he is just away. —Anonymous.

The White Lady.

One night I sat alone, thinking and thinking,
and wondering if there was any truth in the
story of the White Lady of the Hall, and
whether, if there were, I had the courage to
meet her, for the story went that any one who
dared to meet her and to speak to her should
have what he asked, though if you met her
and were afraid to speak, some great harm
would come—something worse than death
itself—madness or the palsy, or blindness,
mayhap.

Long ago, before any living man's grandsire
was born, they said the White Lady was a fair
woman and no wraith, a fair, meek woman
whom a king loved, and the Hall was the place
where she dwelt; and she wore jewels and fine
garments, and servants waited on her, and the
king came often to the feast, and to praise and
kiss her.

And sometimes he would send a message be-
fore he came, and bid her meet him under a
great oak that stood at the Hall gate, and she
always did as he bade her.

And one night a message was sent and she
went, as was her wont, to meet him; but as she
stood under the tree watching for him, one who
had beguiled her to the spot with a false mes-
sage smote her with an arrow, and she dropped
down dead.

A jealous woman had hired the murder, it
was said, and some say the jealous woman be-
came a queen.

The lady died, and the Hall was left alone
and moldered in ruin, but ever since, once in
a year, on the anniversary of the day on which
she went for the last time to meet the king, the
lady, all in white, walks, so the legend says,
thrice around the tree.

And the night is called in our neighborhood
"White Lady's Night" for no other reason;
and Thomas Martingale, going home late from
the Crown and Scepter, once saw the lady
under the tree—so he said—at least the old
folks told the story to the young, and we were
bound to believe it.

Now, upon White Lady's Night, I, Mark
Yardley, sat alone wondering and thinking.

I wanted something that I knew not how
to win.

It was not gold, nor was it silver, and house
and lands and the wherewithal to live I hoped
to win with my own strong arms, but what I
longed for seemed to flit beyond my reach.

Try as I might, I never could make sure of it.
It was a woman's heart.

I loved Alice Hunter as no man ever loved
woman before, but she smiled one day and
frowned the next; and then, too, she was above
me, and despised me, very likely.

How could I tell her what I felt that she
might make a mock of me? Yet, if I never told
her, all my chance was gone.

This White Lady's Night, thinking of the
story my grandmother often told me beside the
winter fire, I went mad, as lovers do sometimes,
and I said to myself: "I will go to-night to the
old oak; and if the White Lady walks I will
seize her robe and ask her to give me the wish
of my heart—if I die for it."

One must do something. Those that are in
love ask old hags to tell their fortunes, and
take the settling of leaves in a teacup for
prophecy. I knew one who said to himself:
"If the bird flying yonder lights on the apple
boughs my love will be happy; but if it flies to
the hedge all will go wrong;" and when the
little thing folded its wings among the apple
blossoms was glad all night.

Oh, yes, lovers are mad at times. I must
have been, then, when I opened my window

and dropped from it on the grass, and took my
way toward the ruined Hall and the old oak on
White Lady's Night, to ask my happiness of
the White Lady; but I did it.

Oh, how well I remember. The moon shone
overhead, round and white, and all was still.
The lights went out in the cottages in the hol-
low, and the trees stood black against the bright
sky.

And down upon the night fell, one after the
other, 12 strokes from the church clock; and
I knew that it was midnight, and the hour for
the White Lady to walk, and made all the
speed I could, lest she should come and go and
I none the better for her.

At last I stood before the Hall, and saw the
tree with its great branches spreading far and
wide—a tree that was more than 200 years old,
they said; and strangely and solemnly through
the empty windows of the Hall the moon was
shining; and I looked and held my breath, for
there, under the great tree, stood indeed a
woman's figure.

It wore some light garments, and was wrap-
ped and hidden so that I could not see the face,
and it moved a little as I came near, and, look-
ing over its shoulder, began to glide away; and
I knew that if gossips told the truth, I must
either win or lose.

I sprang forward, grasped the flowing robe
and held it close; and I whispered, for indeed
my heart beat so fast that my voice was gone:

"My lady, my lady! I have come here to-
night to ask you for a gift, and I fear you not;
for why should I fear? And you who died for
love will be kind to a lover. May I ask? Will
you listen, lady?"

Then a voice, soft as a young bird's twitter,
answered:

"Speak!"

Just "Speak," nothing more, nor did the
face turn toward me.

"I love one dearly, lady," I said, "and what
I ask is her heart. Can you help me?"

Again the whisper came, fainter even than
before:

"Her name? How can I tell unless I know
her name?"

"It is Alice Hunter," I said; "and oh! she
is dearer to me than my soul."

There was a pause.

Then faint and slow the answer came:

"Be bold; ask her for her heart, and she will
give it to you, on the word of the White Lady.
Now go; leave me."

I dropped the white robe.

The lady glided away, and I went home as
one might walk home in a dream.

And the next day I almost believed that I
had dreamt; almost, but not quite.

For I had grown bolder, and that day I told
Alice Hunter of my love, and she did not scoff
at it.

We were married.

When I had been a happy husband for a
month we returned from Boulogne, where we
had gone to spend our honeymoon, and gave a
party, to which we invited all our old friends
and neighbors.

In the course of the evening, the legend of
the White Lady became a topic with some, and
while listening to the conversation, I observed
my wife's color change, and finally saw her
leave the room.

Believing that she had become faint with the
heat, I followed in a few moments and found
her sitting on the stairs, with a smile lighting
up her features.

"I feared you were ill," I said, sitting down
just above her.

"No," she said. "I am quite well. I am
glad you followed me, for I have something to
tell you."

"And I have something to tell you," I said,
bending over her. "Something about the
White Lady our friends are discussing."

"Indeed," she said, hanging down her head
and toying with her fan. "Well, tell me your
story first and then I will tell you mine."

I told her what I had seen at the tree and
what the White Lady had promised me; and
then I asked her for her story, which she told
me in the following words:

"It was on White Lady's Night," she said,
"that I went down to the old oak to ask a gift
of the White Lady, and as I stood waiting,
half hoping, half fearing to see her, one came
over the hill, and I knew that it was you, and
tried to run away and hide myself, but you
caught me by the dress and spoke to me, so
that I knew you believed me none other than
the White Lady. And so first I learned that
you loved me, and, oh, I feared that you should
see my face; but, oh, I did not, and you let me
go when you had your promise."

"And so I was no ghost-seer, after all," I
said, "and the White Lady never spoke to me?
But what was it you went to the old oak to
ask of the fair ghost that night, my Alice?"

Then she turned her soft eyes away from me
and hid her head upon my bosom and whis-
pered:

"That you should love me, Mark, for I al-
ready loved you well, and I could not read your
heart."

"Then God bless White Lady's Night,"
said I.

And she answered "Amen" as she rose and
took my arm to lead her back to our friends.

THE London Times has an account of a small
vessel for a mission society in Africa, which is
built entirely of delta metal. The vessel is 21
feet long, 7 feet beam, with a depth of 3 feet.
For convenience in transporting, she was built
in three sections.

Rapid Passenger Service.

Cross the seas in four days in the new "Pocahontas?"
Forsooth, time and distance no longer can taunt us.
Soon we'll go round the earth in a sumptuous man-
ner.

Just as quick as an ant can crawl round a banana.
We'll whirl the big earth as we'd whirl a croquet
ball.
And play with the globe as a schoolboy would play
ball.

Very soon we'll be cramped for space and diversion,
And the world be too small for a Raymond ex-
cursion.

And we'll sink in ennui and in social stagnation,
For there'll be no place left for a summer vacation;
For the time will soon come, so the portents all utter,
When we'll wake in New York, go to sleep in Cal-
cutta;

When we'll breakfast in Rome near the palace of
Cæsar,

And dine in Soudan where no crackers nor cheese
are;

When we'll sup in Melbourne, go to bed in Bogota,
And breakfast next morning somewhere in Dakota.

Pondering deep on these matters, I fell in a vision,
And I'll tell you my dream with the utmost precision.

The world had grown old and had lost its variety,
And strong men—they perished from very satiety.
The doctors prescribed change of air for a medicine,
New sights and new scenes—so they all went to
Edison.

A chosen committee the Wizard accosted,
And told him the world was completely exhausted:

"'Tis a poor worn-out fiddle we can't play a tune
with,

Get us up a machine to go up to the moon with."

The genial inventor politely assented,
And the great Suter-stellar balloon was invented,

That would dart through the ether with arrowy mo-
tion,

As a pointed-nosed swordfish will dart through the
ocean.

As men now buy a ticket to go on the cars with,
In my vision they bought one to go up to Mars with.

There grew up a commerce between us and Venus,
Large business transactions were managed between
us;

Custom-houses were built to promote and to ease
trade

'Twixt us and the moon in the booming green cheese
trade;

And the thought of the earth in harmony kept tune
To the thought of the sages who dwell upon Nep-
tune.

Our coats were all cut in the most approved pattern
By the fashionable tailors who dwell upon Saturn;

We imported physicians for treating and curing us
From the medical college established in Uranus,

And the dudes, as before, still continued to weary us
By aping the customs and manners of Sirius;

We found that our neighbors could hardly endure us
If we didn't use the accent of distant Arcturus,

And with scorn, ill-concealed, would they all keep
their eye on

A man whose rude tastes were not formed in Orion;
And they thought that no act was more wicked or
stupider

Than not to believe in the bible of Jupiter.

So we copied all worlds, till at last Mr. Edison
Told his doctor point blank he would take no more
medicine,

"The balloon I invented has made us all flunkies,
We ape other worlds like a mere race of monkeys;
Our world's a mere echo—there isn't a doubt of it,
I won't take your physic—I want to get out of it."

—S. W. Foss.

Spring is Here.

[Written for the RURAL PRESS by M. S. P.]

During the dark days of rain that fell in the
first part of the month, I have enjoyed quite a
feast of good things in the literary line. Hunt-
ing in the old farmhouse, where I was spending
some weeks, for something to read, I came upon
a complete file of the RURAL PRESS from 1881.
The readers of the paper can well appreciate the
pleasure that lay before me and that in the days
following I so much enjoyed. The illustrations
were of great interest to me, as I have never
seen the places so well reproduced.

Noticing articles in the spring of each year
in reference to the early appearance of the wild
flowers, I sighed for the time when the fields
about me would be brilliant with color and
fragrant with the odor of the sweet-scented,
vari-tinted blossoms. Looking wistfully out at
the heavy clouds and falling rain, I longed for
them to clear away and let the warm sunshine
coax my little favorites from the now-soaked
ground.

I turned away from the window to the cheery
comfort of the bright blaze from the logs in the
large open fireplace, and fell to thinking of the
seven successive winters I have spent in Cali-
fornia. Surely each has been colder than the
ones before. Of course I have become more ac-
climated, but that alone does not account for it.
Last winter the sleighing and snowballing
called to my mind like sports in my Eastern
home. When I found that a friend living a
couple of miles above our county seat was posi-
tively snowed in, and had finally to walk out, I
thought is this our sunny California? Old resi-
dents assured me they had seen nothing like it
since they came here in the fifties. So my
spirits rose, and the next month my eyes were
gladdened by the welcome sound of nest-
building birds and by the fragrance of many a
blossom, so short a time since under the soft
white blanket that had covered the astonished
earth. This winter the cold wave that swept
the country from north to south was somewhat
moderated before reaching us, and though hot
fires and warm clothing were essential for a few
weeks, we escaped most of the annoyances of the
ordinary Eastern winter.

These days of warm, grateful sunshine, the

last of February, are a pleasant compensation
for all we had to endure for a short time. Yes-
terday one of the boys came in from hunting
with the first buttercup in his hand. I hailed
it as a friend long time away and returned to
stay with me quite awhile. Soon, I thought
joyfully, I can gather my hands full of them
all if I wish. Jack said he saw the bud of one
dear little cyclamen—"Black-eyed Susie," as
we call it. "Shooting Star" and "Mosquito
Bill" are other local names for this flower.
We have them purplish red, pink and white.
Though not native to the Eastern State where
my childhood was passed, one was once found
blooming and carried to a botanist living near.
He made a little study of it, and finally pro-
nounced it a California flower. How wonder-
ful it then seemed to me, and how dear it has
since become! As long as I lived there the
single plant bloomed once every other year.
Can any one tell me why? The theory of its
being there at all was that some passing bird
had dropped the seed.

Straight out from the front of the house is a
field of about 15 acres of cleared ground sowed
in wheat. Before long, in among the tender
green of the young wheat, will be flowers in
countless numbers, purple and golden, scarlet
and blue, pink and white. One year I counted
20 varieties. Think of the pleasure in store for
me! When the wind blows over them, they
bow before it, recalling to me Joaquin Miller's
lines:

"Sea wave of grass on the plain,
That breaks in bloom by the fountains,"

Grass Valley.

An Open Letter to the Secretary of a Fair Association.

Preparations for the various agricultural fairs
being now in order, the following letter to the
secretary of a fair association—published in the
Dakota Bell—is at once entertaining and sug-
gestive:

I am a farmer and I hear you are going to
have another agricultural fair next fall, and I
thought I would write and tell you that I am
getting ready for it.

You probably don't remember me, but I at-
tended your fair last year. I brought the dog-
gondest biggest punkin on the grounds,
though I reckon mebbey you didn't see it, most
of your time being took up keeping a record of
the different racing-horses entered. I also had
a fine blooded cow, while my wife brought a
big loaf of bread so light it wouldn't hardly lay
still, and two bottles of ho'made wine; though
you might not have saw these either, as I no-
ticed that besides the horse business you had
enough work for one man issuing permits to
those sturdy farmers which had three-card
monte outfits and such other agricultural
products.

And after all, it cost me \$10 to see the other
side of the cards one of these gentlemen ex-
hibited.

I reckon I may say I had hard luck at your
fair last fall. When I first drove in the folks
were making such a hollering 'bout a hossrace
that had just come off, and my team got scared
and run away and sprained my wife's ankle.
While I was looking round for a good place to
put the big punkin, a man came along and said
he was judge on wines and drunk up both bot-
tles of ours.

I afterward saw him standing in front of a
tent and yelling, "Ere's yer chance! Ere's
yer chance! Ere's yer chance! See the livin'
half-woman an' the man what was tittattoed
all over on the Island of Chattanooga! Only
one dime!"

I then went to tie up the cow, and when I
came back a tramp had his face in the loaf of
bread. I didn't care so much about that as
that I missed him when I kicked at him.

I staid three days, and each night some gyp-
sies, which were camping right on the grounds,
milked my cow and pounded her with a lum-
ber wagon whiffle because she switched her
tail.

I watched the races most of the time, there
not being much else to look at. One day I had
to pay a man \$15 because the hoss that came in
way ahead of the first two heats was the very
last one on the other three. I think that hoss
must have been too sick. I know I was.

The next day a pickpocket got my silver
watch.

About every hour Bill (that's my boy) would
come to me and get another half-dollar. He
said he had a system that he was certain must
finally beat the wheel-of-fortune, and the nut-
shells, roulette, and the man down back of the
barn who was throwing the loaded dice. I
couldn't say nothing because I took Bill with
me to show him how I was going to clean out
the three-card monte man that time it cost me
\$10.

My wife bought a bottle of liquid glue, which
proved to be mostly water, and a receipt for
soap which she afterward discovered was
printed in Norwegian. She would have bought
some other things, probably, but she lost her
pocketbook.

In the meantime I might mention that some-
body stole the whip, and spring seat, and end
board, and neck yoke off'n my wagon, and out
all the ivory rings off'n my harness.

When the fair was through I demanded my
diplomas on my cow and punkin, as they were
the only ones there. I got after some talk two
little pieces of paper with some printing on
them, and when I turned 'round to go out a

big fat man stepped on one of my corns. He was the owner of one of the race-horses, and was looking down rolling up the \$6500 the treasurer had just paid him as his share of the purses to put it in his pocket, so didn't notice me.

That, Mr. Secretary, is a brief and condensed history of my experience at your fair last fall. I shall come again this year, but as Bill says, I shall come heeled.

I shall make no exhibits, but I have got a two-wheeled sulky, and every day I hitch old Doll to it and run her round the five-acre field. I shall enter her in the senior class—as I believe it is called—I judge she is old enough.

Bill has got himself a thimble-rig outfit and has whittled some dice out of the bone of a mule's leg, and has inserted lead on the opposite side of the big numbers.

My wife is preparing liquid glue by the wholesale, the same kind she bought, and will peddle it on the ground.

For myself, besides entering old Doll and betting all my money agin her, I shall work the three-card monte business for all it is worth. I can already throw the cards so as to nearly always mix up my wife and occasionally fool Bill.

I am also painting the end of the ox-yoke to look like a face, and shall stick a clay pipe in its mouth and let people throw rolling-pins at it, three whacks for a quarter. Come over and try it. If you break a pipe you get six nickel cigars.

We shall all of us bum our feed on the grounds and sleep under the grand stand. If I can get a two-headed calf to exhibit in a tent (not to enter for a diploma) I shall do so. In fact, to sum the whole matter up, we shall come prepared for an agricultural fair, as we understand it. Yours truly,

ZACKARIAH WAYBACK.

P. S.—I shall wear a poker-dot shirt and smoke a cigar pinto high. Bill will stick out his chin and crook his elbow considerable.

Volapuk.

The cabalistic word is not a part of an Indian medicine man's incantation, as we might on first hearing it suppose, but the name of a new language—and, as the word really signifies, a world language. No nation ever spoke Volapuk, no one ever made love or a Fourth of July oration in Volapuk; it is a creation, a homunculus, a scientifically constructed business language. Whether it will live and make a place among its natural born competitors remain to be seen. About ten years ago Johann Martin Schleyer, then a priest of the Catholic church, now retired and living at Constance, Germany, published a scheme of a universal language especially adapted for commerce and international communication, which was briefly as follows:

First, the word forms should be derived from the simplest and most expressive roots of the different living languages.

Second, in structure it should be perfectly regular—the adjective, adverb and verb should be regularly formed from the substantive and invariably of the same termination. There should be one declension and one conjugation and there should be no artificial gender. In a word, it should be a perfect language, selecting the best from each existing language, and rejecting the useless, irregular and difficult.

In accordance with this plan Schleyer and those associated with him have constructed Volapuk.

In order to give a better idea of this "world language" we will take the word "nat," meaning nature, and trace it through some of its grammatical forms. First, its declension—Nat, nata, nata, nati; meaning nature of nature, to nature, nature (accusative). To form the adjective "ik" is added, and we have "natik" (natural). To form the adverb "o" is added to the adjective form—"natiko" (naturally). Every Volapuk noun, whose meaning permits, is susceptible of these changes. Comparison of adjectives is effected by adding the ending "um" for the comparative and "an" for the superlative—jonik, jonikum, jonikon (fair, fairer, fairest). The numerals run easily off the tongue—bal, tel, kil, fol, lul, mal, vel, jol, zul, bala (10), kils (20), etc. The personal pronouns keep the same vowel throughout, as follows: Ob (I), ol (thou), om (he), of (she), os (it), on (one, they, people, men, etc.). To form the possessive pronouns the adjective ending is affixed, as "obik," meaning my.

The conjunction of the verb is a marvel of simplicity. The verb form is composed of three parts: First, the root; second, the personal ending; third, the tense prefix. Taking that old familiar verb "love," we proceed as follows:

I love,	Iofob
You love,	Ilofol
He loves,	Ilofom
We love,	Plural—Ilofobs

To conjugate the different tenses:

I loved,	Ialofob
Thou hast loved,	Iclofoi
He has loved,	Ilofof
She will love,	Iclofof
It will have loved, etc.	Ilofof

The passive voice is formed by the further prefixing of the consonant "p" as polofob (she will be loved). Take even so complicated a tense form as "We shall have been highly honored;" in Volapuk one would say simply "Pulestimobs!"—*Hartford Times*.

YOUNG HOLKS' COLUMN.

Freddie's Match.

[Written for the RURAL PRESS by M. LEE RUSSOM.]

"Aunt Be, will you please lend me your engagement ring? I'll give you my word of honor we'll not lose it," said little Elda, holding up a tiny pink finger, pleadingly, for the shining, pearly, band that glittered here and there as Aunt Be arranged the bric-a-brac over the mantle.

"Why, Elda, what would you do with my ring? It is much too large for your finger. Oh! I know," she continued, teasingly, "you are going to play the old woman

"With rings on her fingers,
And bells on her toes—"

And want my ring for your big toe."

"How funny you are aunt, but you know I wouldn't wear your pretty ring on my toe," said Elda, "I only want it for a little while, to give to Fred, you see, aunt. Fred says this is leap year, whatever that is, and I'm to propose to him. He is to accept me, and, of course, I must give him a betrothal ring; mine are all too small. It is quite annoying to be compelled to borrow yours." Puckering up her brow, as she had seen mamma do sometimes, and looking very much like a miniature woman, Elda's little tongue flew on. "But then, Fred is a very proper husband for me, mamma says, so you must excuse me this time for my Lord's sake, will you not, Aunt mia?"

Smothering a smile, and trying to appear interested, Aunt Be glanced toward the lounge, where the little black-eyed rogue, called by Elda "My Lord," was taking his ease with his tiny boots crossed, and propped up with cushions on a line with his black, curly ringlets. Daintily clasped between two white, tapering fingers is a paper cigarette, while the imaginary rings of smoke curl up and over his head in a white circle far out in the room, seemingly unconscious that his little wife to be is begging a ring to bedeck him with.

"Very well, Elda," said Aunt Be, smiling in spite of herself at the mimic lord, "here is the ring. I hope you and your little husband will be all that is kind and good to one another until leap year rolls around again."

"Needles and pins! Needles and pins! When a man gets married, his trouble begins," sang out Freddie's small voice, between puffs of play smoke.

"Not necessarily so, Master Freddie," said Aunt Be; "but if you are going to be as lazy a man as you are a boy, and make your little wife do all the love-making, I will be truly afraid your song will come true, to you, at least. But I must go now. Don't lose my ring, Elda dear, and after Fred and you are married, I hope you'll teach him that it isn't proper to smoke in the presence of ladies"—and laughing gaily at Master Fred's hurried attempts to gain the perpendicular, Aunt Be left them to their play.

She was somewhat surprised on returning to the morning-room, half an hour later, to hear angry voices, mingled with heart-breaking sobs. As she opened the door to see what the hubbub was about she could plainly hear and see without being seen. Elda was crying and talking at the same time, while Fred was trying in vain to explain something.

Jumping up on an ottoman so as to be taller than Fred, Elda fairly screamed as she stamped her tiny foot: "I hate you, so I do; you are a mean, disgraceful man; you shan't! you shan't be my husband any more now. Oh, what will Aunt Be say? her ring is—"

Here Elda's hat died away into sobs, and Aunt Be came forward, but before she could speak Elda raised her tear-begrimed little head, with curls all mussed and blue eyes red from weeping; she did not look like a very happy sweetheart as she sobbed:

"Oh, Aunt Be, he—" but could say no more, for a big lump just would come up in her mouth.

"Miss Be," began Fred.

"You shut up, Fred Walker, I'll tell her myself," shrieked Elda, finding her voice as soon as Fred spoke.

"Miss Be, if you please, I would—" began Fred again, but was not allowed by Elda to finish his sentence.

"Fred Walker, go home, I tell you, I'll tell my own aunt," stamping her foot in a perfect torrent of rage. "You nasty, bad boy you. Oh! Aunt Be, he swal—"

"Swallowed your engagement ring, Miss Be, if you please," finished Master Freddie, with a very low bow to Be, while Elda hid her head under a sofa-cushion expecting every moment the whole house to come down on her.

"Why, Fred, what do you mean?" said Be, for the first time speaking since she came in. "You surely did not swallow my ring; it must be on the floor. It will kill you if you did swallow it. Oh, Fred, did you, did you?" seizing him by the shoulders in her excitement, churning him nearly to death.

"Yes, ma'am, I did," said Fred as soon as he could gain breath to answer.

"Sure?" said Be.

"Yes'm, sure."

"Oh, what shall I do?" cried Be. "Why, Fred, it will kill you. Here, somebody run for a doctor, quick! Freddie is dying!" screamed Be, almost crazy with fright.

"Miss Be, you must not be frightened. The

ring won't hurt me a bit. I've swallowed lots worse things than that. Why, I've already swallowed two nails, four or five buttons, I don't know how many pennies, and they never hurt me. I swallowed your ring purposely so you'd not marry Jack Inslow. I want you for my own aunt. I know Uncle Harry likes you very much; anyway, enough to marry you if this engagement was out of the way. I've been studying the matter over and come to the conclusion I could make everything work by putting Jack's ring out of the way. I didn't know how else to do it unless I swallowed it. There's Uncle Harry now; guess he heard you screaming. Miss Be, Uncle Harry, will you please tell her I've not been stretching things?"

"Tell her what, my young hopeful?" said Uncle Harry.

"Why, that you do love Miss Be," replied Fred. "Now I'm off to explain things satisfactorily to Jack. Hope he won't take it hard over losing his ring." And before either of them could command their lost faculties, the little tot was half-way across the street.

Jack was sitting in his delightfully cool studio studying up the easiest method of getting rid of two or three of his best girls without choking them to death on French sweets at a dollar per pound, when the door opened, admitting, to his no little surprise, a small boy still in skirts, but with very big, black eyes, who coolly paused half-way across the room and "took him in," as Jack expressed it in relating the story afterward.

"Well, my little man, can I do anything for you this morning?" asked Jack. "Granny sick, hey?"

"No sir, Granny's not sick, for the simple reason she's dead this long time," said Fred; "but I called to see you, sir, on private business, as man with man. I shall rely on your honor to have it strictly private."

"Very well, Mr.—"

"Frederick Walker, sir," said Fred, bowing.

"Very well, Mr. Walker, we'll not be interrupted here; you may proceed," said Jack, thinking this a jolly go.

"It is just this, Mr. Inslow, your engagement with Miss Be is broken off," said Fred, plunging into facts at once.

"The deuce it is!" ejaculated Mr. Jack.

"Yes, sir, that is what I came to tell you. I preferred the engagement broken, so swallowed the ring."

"Swallowed my ring!" exclaimed Jack, jumping up—"broken the engagement? You little rascal, the ring will kill you, and serves you right, too!"

"Not unless the ring is brass, Jack," put in Fred.

"Well, it wasn't brass, and cost me a pile, if that is any comfort to you. But that is not the question; who said our engagement was broken?" demanded Jack.

"I did," replied Fred, coolly.

"You did; well, you'd make a good lawyer with your assurance, young man."

"I've been thinking a little on the subject, cap'n, but I'm yet undecided whether to be a lawyer, bootblack or a dancing-master," said Master Freddie.

"The old geratch will make a dancing-jack out of you if you do not mend your ways," said Jack, who was getting mad, thinking some of the boys were playing a joke on him.

"Gov'ner, there isn't a particle of sense in getting angry over it. I prefer Miss Be marrying Uncle Harry in the place of you. I shall marry Elda very soon, so we will all be one family. Of course it is hard on you, Jack, losing your girl and ring at the same time, but grin and bear it, old man; you can get another almost as nice as Miss Be. If you'll just take it cool and write a note to Miss Be as I tell you, things can then proceed properly, and the old women of town can't talk."

"See here, young kid, who sent you here to see me?" asked Jack, getting an idea.

"I sent myself," replied Fred.

"Did Miss Be want you to come?"

"Anybody with half an eye can see, Jack, that she don't care two straws for you; but she is too much of a lady to say so. No doubt she would have married you some time if I had not taken it into my hands."

"Well, well, this is too funny," laughed Jack. "What is it you want me to write, you young rascal?" asked Jack, seeing the joke of the thing, and, indeed, being a little bit of a flirt, he enjoyed the newness of the transaction. In a short time the note was finished.

"Shall I read it to you, sir?" asked Jack, meekly.

"You may," said Fred, "as I never allow myself to stumble over badly written English."

Smothering a groan, Jack read:

My Dear Miss Grantee:

In our early acquaintance we allowed ourselves to drift into an indefinite engagement. At the time I was sincere in believing that I was offering you the one true love of my heart—the only love that could be laid at a pure, good woman's feet. I have since found out my grave mistake.

But it gives me courage to come to you, depending on your mercy and goodness in allowing the past to be forgotten between us.

Hoping you will allow me to continue your friend, I remain

JACK INSLOW.

"Will it do?" asked Jack.

"It might have been done up nicer if I'd had more time, guess it will do, though; much obliged to you, Cap'n Jack, for your trouble. Hope you'll come around to see us when we get fixed up, but now ta, ta."

Not long since Jack and I as his bride of six

weeks attended the wedding of Uncle Harry and Aunt Be. Freddy was best man and proud, looking often at Uncle Harry to see he was acting just right.

He says, with justifiable pride, that he is the ring better off than he was, along with the experience of match-making.

The joke got out on Jack, of course, and cost him any amount of trouble.

Clipper Mills, Butte Co.

DOMESTIC ECONOMY.

Tested Recipes.

[Written for the RURAL PRESS by ADA E. TAYLOR.]

Peach Cake.—Six eggs, one cup sugar, one cup flour, one teaspoonful yeast powder, one tablespoonful vanilla; beat the yolks, then add sugar, and beat till light; add whites of eggs (beaten stiff) and flour alternately, then flavor. Bake in three sheets; cut some ripe peaches in thin slices, prepare cream by whipping, and sweetening to taste, and adding vanilla. Put a layer of peaches between the sheets of cake, pour cream over each layer and over the top. This may also be used with ripe strawberries.

Minnehaha Cake.—One cup sugar, half-cup butter, small cup sweet milk, two cups flour, two heaping teaspoonfuls baking powder, whites of six eggs beaten thoroughly; flavor to taste and bake in sheets. Filling: Take one teacup sugar, a little water, boil together until brittle; when dropped in cold water, remove from the stove and stir quickly into the well-beaten white of an egg; add to this a cup of stoned raisins chopped fine, or a cup of chopped hickory-nut meats—and place between the layers and over the top.

Cracker Pudding.—One small quart of milk, one coffee-cup of sugar, six Boston crackers, rolled fine, one heaping teaspoonful baking powder, two beaten eggs, a little salt, a large tablespoonful of butter; flavor to taste, bake and serve with sauce.

White Puffs.—One-half pint milk and one-half pint cream, whites of four eggs beaten stiff, one cup flour, well sifted with one teaspoonful of baking powder; one scant cup powdered sugar, a little salt; flavor with lemon, whisk the eggs stiff, then beat in the sugar and add this alternately with the flour to the milk. Beat until the mixture is very light, and bake in buttered cups or tins; turn over, sift powdered sugar over them, and eat with lemon sauce.

Velvet Rolls.—Three pints of flour, one cup sweet milk, one small cup hop yeast, two eggs, three tablespoonfuls butter; work well, let raise, work and let raise again; make in rolls and put to bake when light.

Cream Muffins.—One pint of flour, one heaping teaspoonful of baking powder; sift well together one pint of cream, two eggs, tablespoonful of butter; boil cream and butter together, mix in the flour, add a little salt, and drop in buttered muffin-molds and bake quickly.

Snowballs.—One cup white sugar, one cup thick cream, whites of five eggs, two teaspoonfuls baking powder, flour to make a batter; flavor to taste; bake in small buttered cups.

Chinese Camp.

PRESERVATION OF MEAT BY SUGAR.—It results from a special report made to the French Minister of Agriculture that sugar is an excellent agent for preserving meat, and possesses some advantages over salt. In fact, salt absorbs a portion of the nutritive substances and of the flavor of meat. When an analysis is made of a solution of the salt dissolved by water contained in meat, we find albuminoid bodies, extractive substances, potassa and phosphoric acid. Salt deprives meat of these substances so much the more readily in proportion as it enters the tissues more deeply or acts for a longer time. It then results that the meat, when taken from the saline solution, has lost nutritive elements of genuine importance. Powdered sugar, on the contrary, being less soluble, produces less liquid. It forms around the meat a solid crust, which removes very little water from it and does not alter its taste. Thus preserved, it suffices to immerse the meat in water before using it. Although this treatment costs a little more than preservation by salt, account must be taken of the final result and of the loss prevented, which offsets the difference in cost between the two preservative agents. We think that navigators might profit by this. —*Revue Generale de la Marine Marchande*.

BOILED KIDNEYS.—Split them through lengthwise and run an iron skewer through them to keep them flat; pepper and broil over a clear fire. They should be lightly done. Serve on a very hot dish. Sprinkle them with salt and put a bit of butter on each.

BOILED PORK CHOPS.—Cut not quite as thick as mutton chops and broil over a brisk fire; turn them frequently and cook a dark brown. When ready to serve, sprinkle over them a little powdered sage.

LILY CAKE.—Two cups of sugar, two cups of flour, one cup of cornstarch, one cup of butter, whites of five eggs, one teaspoon of cream tartar and one-fourth of a teaspoon of soda.

CABBAGE SALAD.—Chop fine one head of cabbage, one pint vinegar, one teaspoonful mustard, one teaspoonful sugar, one egg and piece of butter size of an egg.



A. T. DEWEY.

W. B. EWER.

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See Advertising Columns.

The Week.

Storms have been the order of the week. Following close upon the apprehensive utterances in our last, the southerly winds began to repay their debt to the north and have continued until the elements were wrought up to a high pitch. Hail and rain on the coast and in the valleys, and snow without stint on the mountains, formed a decided change from the clear sky and dry air of preceding days. The winds were high, dust storms visited the interior, and shipping on the bay was dashed about as it has not been before this winter. The downpour was considerable in nearly all parts of the State, and the season's records are now reaching respectable figures. Corresponding elation is discernible in the spirits of those engaged in producing interests. The storm has, however, been a very cold one, and a rise in temperature will be desirable to push the growth of feed and enable stock to regain a condition of comfort, which is essential to

quick growth or generous production. We do not attempt a compilation of amounts of rainfall, for as we write the storm is still on and the Signal Service promises more rain.

The Tariff in Congress.

As premised in our last issue, the great tariff reform measure which has been so long fore-shown has seen the light in Washington and is now before the House of Representatives. Though we allude to but one measure, it was only made one on Tuesday, because until that time the bills relating to duties on imports and the bill for the reduction of revenue from interior sources had been developed separately. On Tuesday the marriage of the two measures was accomplished by the Democratic against the opposition of the Republican members of the House. The discussion of the measures has as yet hardly commenced, but it will be long, and, no doubt, very warm, and will outline policies for the great quadrennial struggle which will come this year over the election of a new President.

Interest now centers on what the bill proposes. We have, as yet, only telegraphic abstracts, but they probably indicate correctly the main features of the measure. The aggregate reduction of revenue by removal or lessening of duties is placed at \$55,000,000; this total includes about \$22,250,000 on account of the free list; \$18,750,000 on account of woolen goods, \$1,600,000 for China and glassware, \$750,000 in the chemical schedule, something less than \$500,000 on cotton, \$1,000,000 on flax, hemp and jute, and on sugar about \$11,000,000.

The full enumeration of articles to be placed on the free list would consume more space than we can command at this time, and it would probably be safer to await mail advices before attempting a complete statement. We shall therefore cull out articles which are included among strictly agricultural products or manufactures therefrom.

All wools and goat's hair, wools on the skins, shoddy, waste, etc., are placed on the free list after July 1st, and flannels, blankets, woolen hats, knit hoods, woolen or worsted yarns, and manufactures of every description composed wholly or in part of worsted, 40 per cent ad valorem (the present section relating to this class of goods excepts such as are composed in part of wool); woolen and worsted cloths, shawls, and all manufactures of wool of every description, made wholly or in part of wool or worsted, not especially provided for, 40 per cent ad valorem (the present duties on flannels, etc., range from 10 cents per pound and 35 per cent ad valorem to 35 cents per pound and 40 per cent ad valorem, and on woolen cloths, etc., from 35 cents per pound and 35 per cent ad valorem to 35 cents per pound and 40 per cent ad valorem); women's and children's dress goods, coat linings, Italianes, etc., 40 per cent ad valorem. (The present duties range from 5 cents per yard and 35 per cent ad valorem to 9 cents per yard and 40 per cent ad valorem); clothing ready-made and wearing apparel of every description of wool except knit goods is placed at 45 per cent ad valorem (now 40 cents per pound and 35 per cent ad valorem); cloaks, dolmans and other outside garments for ladies and children, wholly or in part of wool, 45 per cent ad valorem (now 45 cents per pound and 40 per cent ad valorem).

All carpets, 30 per cent ad valorem (now ranging from 6 cents per yard for hemp or jute to 40 cents per yard and 30 per cent ad valorem for Axminster and other grades).

Timber of various kinds; timber or lumber, whether hewn or sawed; also wagon and shipping material, and all kinds of wood not specified in the bill; provided the articles mentioned are not subject to duty in the country whence imported, otherwise the present duties to be levied.

Salt is free with the same restrictions as timber.

Vegetables, meats, beans, peas, etc., are to be free.

Flax, hemp and various vegetable fibers, burlaps, not exceeding 60 inches wide, bagging, tin plates and tagger's tin, beeswax, tanning bark, oils compressed from seeds, petroleum and its products, mineral waters and imitation cements, tar and its products, turpentine, preparations known as essential, expressed, distilled and rendered oils, alkalies, alkaloïds and various chemical compounds; bulbs, fruits, nuts, seeds, etc.

The following are among the reductions: Starch is 1 cent per pound (now from 2 to 2½ cents); rice, cleaned, 2 cents, uncleaned 1½ cents (now 2½ and 1½ cents respectively). Paddy, three-fourths of a cent per pound (now 1½ cents); raisins, 1½ cents per pound (now 2 cents); peanuts, three-fourths of a cent per pound (now 1 cent); shelled peanuts, 1 cent per pound (now 1½ cents).

Sugar not above Number 16 Dutch standard is as follows: Tank bottom syrups, etc., not above 75 degrees polarization, 1 15-100 cents

per pound, and for every additional degree 3-100 of a cent per pound; above 16 D. S. and not above 20, 2 20-100 cents per pound; above 20 D. S., 2½ cents per pound. The present duties range from 1 4-100 per cent below 14 D. S. to 3½ cents per pound for sugars above 20 D. S. The lower grade of molasses is unchanged, but that testing above 46 D. S. is reduced from 8 to 6 cents per gallon; confectionery, 40 per cent ad valorem (now 10 cents per pound).

It will be seen from the above that all fruits and nuts are to be free, also olive oil and raisins are to be reduced one-half cent a pound. These are the things which, in connection with wool and lumber, California producers have most strongly striven for, and now that the issue will be made before Congress, it will be in order to exert all the influence possible to save these articles from the crash. We shall recur to the subject at another time.

The Experiment Stations.

Since our last notes on the establishment of agricultural experiment stations in this State under the Hatch law, there has been due progress made in the work. The Regents of the University have approved the plans submitted by Prof. Hilgard for the fitting up of the Central Station at Berkeley, and this includes a cheap but commodious building for laboratories, rooms for seed and other collections, an office, etc., all of which are imperatively needed for the execution of the work. They also approved the proposed expenditure for improvement of the propagating-houses and appliances at Berkeley, which is required, as the propagation of fruit varieties, forest and timber trees, and economic plants generally, will be largely done at the Central Station, and then sent out for planting and trial growth at the outlying stations. It is also proposed to buy tools and machines for use at the several stations. These and other things looking toward equipment will be pushed forward immediately.

Measures preliminary to the location of the outlying stations are also proceeding. As has already been stated, it will be required that enterprising people who desire a station in their neighborhood will have to deed about 20 acres of land to the Regents in trust and furnish money to put up the needed buildings, which it is thought will cost about \$2000 at each station. It is intended now to establish about four of these stations, and they will be placed so that the results of experiments may be significant for a considerable area of the State. Prof. Hilgard has already made two trips to points which have applied for stations, and where the people seem ready to meet the conditions required of them. One of these is in the foothills, which Prof. Hilgard considers fairly representative of the foothill soils and climates, and another is in the central coast district. It is probable that he will commend to the Regents the acceptance of these stations. In Southern California the subject is also exciting interest, and no doubt a satisfactory situation will be decided upon. In the San Joaquin valley there are also steps being taken, as at its last meeting Tulare Grange appointed a committee to confer with Prof. Hilgard. If these locations should be accepted, they, with the grape stations in Alameda, Santa Clara and Fresno counties and the Central Station at Berkeley, will make eight stations for California, to be in operation, or at least in actual preparation for planting, during the coming winter. How many other stations there may be will depend upon funds available. Of course stations are not established merely because some one wants them in their vicinity; but when the locality is representative of quite an area, and the station is to have the advantage of friends who welcome it by aiding in its establishment, it is likely that the institution will go where it is wanted. As we said in our previous article, any community which thinks its claims should be considered should communicate with Prof. Hilgard, to the end that the best selection of location, all things considered, can be made.

Who Is It?

Who sent us a postal note from Middletown, Lake county, without sending his name?

Who did the same thing from Selma, Fresno county, some time ago?

It is impossible to give proper credits unless people will send their names with the remittance. Let all subscribers take notice.

U. S. Irrigation Law.

The measure which was introduced by Senator Stewart of Nevada is probably the one which the telegraph announces as having passed the Senate on Tuesday. It requests the Secretary of the Interior to direct the Director of the Geological Survey to examine the water-courses in the Western States from which water is taken for purposes of irrigation and to locate at various points thereon sites for the construction of reservoirs to hold, out of the abundance of the winter supply of water, sufficient for irrigation in summer. The reservoirs are to be located in natural basins adjacent to the streams from which they will be supplied. They will only be located in such portions of the public domain as are susceptible to cultivation.

This proposition was contained in a bill introduced by Senator Stewart early in the session and mentioned in our issue of Dec. 3, 1887. As the Government now owns most of the land which would be needed for these storage reservoirs, and has also vast areas which would be made productive by them, it is properly a subject for national enactment. The question of storage reservoirs has long been considered in this State as the solution of the problem of securing water for our vast arid areas. Some notable works have already been completed by private enterprise, but they are only the beginning of what can be done to secure an immense valuation for lands which are now worthless. There is plenty of water, if it be saved when most abundant, to supply every foot of land which can be reached with it. The United States would gain immensely in sale of lands now vacant and open up a field for the energy and capital of thousands of people now seeking homes in the West. But this law, as we understand it, only calls for a careful survey of the region and location of places fit for reservoirs, etc. This preliminary step to a great work should certainly be taken. It will also give the Geological Survey a chance to do a little agricultural work, as the law provides, which will be a good thing, too. The measure seems very promising and likely to succeed.

The Grape-Growers.

The grape-growers are in session as we write, and we cannot outline the meeting this week. The meeting of the State Society resulted in the adoption of the proposition to organize a Wine Exchange, something on the plan of the Produce Exchange, and a committee of nine was appointed to submit a plan in detail. Prof. F. Pohndorff was elected representative to the International Congress to be held next May at Madrid. Resolutions were adopted concerning taxing wine and duties upon imports which we will give next week.

The general convention opened on Wednesday afternoon, with a good attendance. The wine exhibits are numerous. T. C. White of Fresno read an interesting essay on raisin-making, which we shall publish at another time. The convention will continue during the week and promises to be very successful.

THE SORGHUM SUGAR PATENT.—Washington dispatches state that the Attorney-General is bringing suit against Magnus Swenson, the purpose being to cancel the sorghum sugar patent taken out by him. The bill of complaint sets forth that Swenson's discoveries were made while he was in the employ of the Government and receiving a salary for conducting experiments in that line; that the improvement is of great public importance, and that research was made by the Department of Agriculture to the end that this industry should be made available and remunerative to all citizens who desired to engage therein; that the respondent is demanding large sums of money for the use of this process, so as to establish a monopoly and grievously oppress the people upon invalid patents. The Commissioner of Agriculture, referring to the bill, says he is informed a trust is being formed to control the manufacture of sorghum sugar by means of the Swenson patent. He says the case of the Government is very strong.

SOAKING WHEAT IN ACETATE OF LEAD.—At a French agricultural school wheat is soaked in acetate of lead solution six hours before sowing. The seed is said to germinate more quickly and grow more vigorously than wheat subjected to any other fertilizing treatment.

Prof. Budd on California Fruit-Growing.

In our report of the meeting of the State Horticultural Society in last week's *RURAL* we alluded to some remarks by Prof. J. L. Budd of Iowa, and promised at another time a fuller statement of his observations and deductions drawn therefrom. This promise we redeem this week in the form of an interview, the questions being framed so as to draw out Prof. Budd's views without suggesting California opinions upon any of the points advanced. Prof. Budd's views will be read with great interest at the East where he is so well known and highly esteemed, and his favorable decisions concerning California will aid in our advancement. He is professor of horticulture and forestry at the Iowa Agricultural college. He has been secretary of the Iowa State Horticultural Society for 14 years. He has been associated with the foremost horticulturists of the farther East in mutual aid and esteem, and when the distinguished Charles Downing died he made Prof. Budd legatee of his very valuable horticultural library and unpublished note-books and papers. In 1882 Prof. Budd visited Europe and the great east plain of Asia to search for fruit varieties suited to the hard climatic conditions of the Northwest and Canada, and secured a fine collection which are now being propagated and tested. It is likely that our College of Agriculture will secure a selection for trial planting at the experiment stations in different parts of the State. The following is the

Interview With Prof. Budd:

What conclusions have you reached in regard to profitable commercial fruit-growing on the Pacific Coast?

This is a broad question. Taken as a whole, the immense stretch of country from the Oregon line to Mexico is so varied in soil, elevation and climate, that the most favorable conditions can be found for the profitable growing of every one of the temperate zone and sub-tropical fruits of the world. Yet there is little foundation for the popular belief that a large number of species or varieties of the fruits can be profitably grown for distant shipment on any one farm or in any one neighborhood. To illustrate: The soil, elevation and exposure to the desert winds of the Riverside fruit lands seem to be specially favorable to the perfect development of the citrus fruits, but the older settlers have found that the apple, pear, plum, apricot and cherry cannot be made profitable in a commercial way.

Yet at the Riverside Fair grand specimens of the apple, pear, cherry and prune were exhibited, grown only a few miles distant, at an elevation of nearly 3000 feet.

Again, the soil and climate of the San Joaquin valley near Fresno seem specially favorable for the perfect growing and the perfect drying of the raisin grapes, and to the perfect maturation of the wine grapes. It also seems remarkably well adapted to growing and curing the White Adriatic and Smyrna figs. But the amateur growers of the apple, pear, cherry, plum, apricot and prune cannot consistently urge their friends to plant them for profit, yet they will hasten to state that the elevated valleys of the Sierra Nevada range will grow all these fruits in perfection.

Your conclusion, then, would be that each locality should make a specialty of the two or three fruits which have proven best fitted for its special soil, elevation and exposure?

Yes. Even if we admit that a dozen or more of the fruits will succeed perfectly in one locality, it will prove best to concentrate the energies of the producers on the systematic growing and neat and methodic packing, canning, crystallizing, or drying of the fruits selected for shipment to a distant market.

In America and Europe it will ever be found that special localities may attain a reputation for the perfect growing and packing of special fruits, but rarely, if ever, if they attempt a system of mixed planting and handling.

Among the many advantages of co-operative union on two or three specialties is the methodic and united effort to keep down the noxious insects.

On the other hand, the mixed planting on the "happen-so" principle of beginners always leads to waste and uncertain profits.

In connection with an old resident, we made a careful estimate of the losses the past season

around a noted fruit town in the south part of the State. The land for miles around the town has been planted in a mixed way by amateurs, in plots ranging from 2 to 15 and 20 acres. We found that the crops of over 200 acres of peaches, 150 acres of apricots, over 50 acres of prunes, 200 acres of grapes and many scores of acres in the aggregate of apples, pears, plums, cherries, quinces, olives and almonds had been permitted to go utterly to waste.

The fruits had come into bearing ahead of the establishment of a cannery, dry-house, winery or any other needed facility for handling or packing the fruit for a distant market.

Even in this older part of the State we see at Fruitvale, Haywards and at other points much evidence of waste and loss growing out of the mixed planting of about everything the nurseryman has to sell.

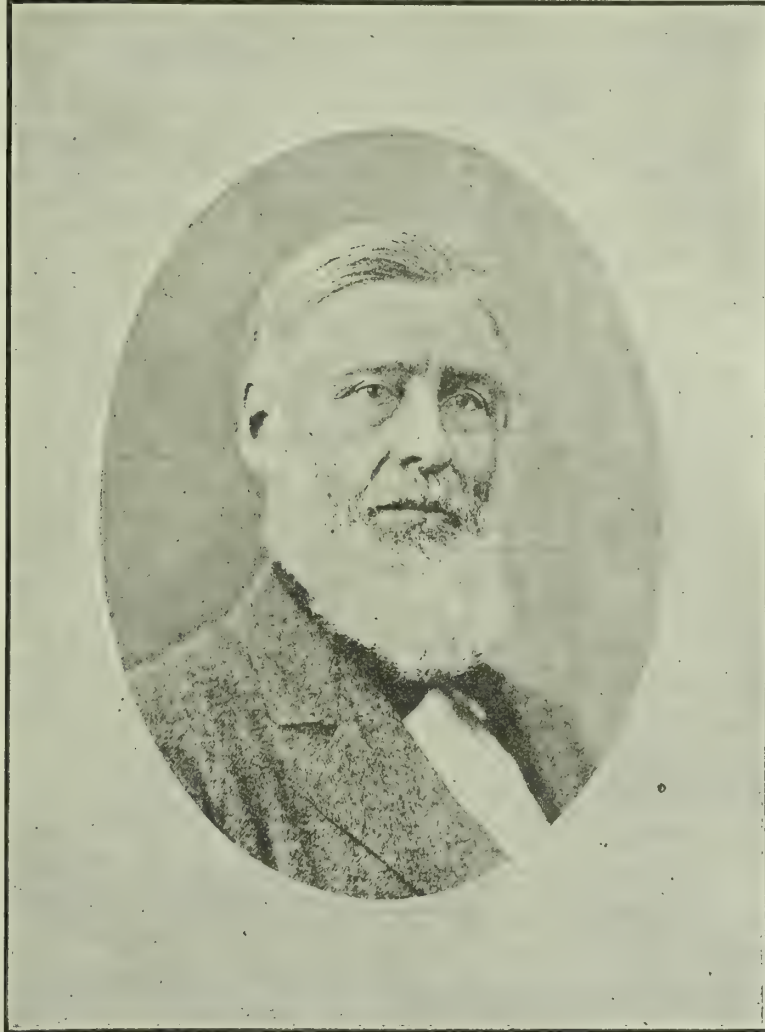
Do you think it possible to overstock the markets by pushing the specializing system of fruit-growing? For instance, is it possible to produce too many raisins, too much wine, or too much first-class dried or canned fruit?

cial fruit-growers, the planting of the deciduous fruits of like countries of the world should be encouraged.

The introduction of new fruits is attended with difficulties, should such work not be intrusted to our Agricultural college at Berkeley, especially at this time when the liberal provisions of the Hatch Bill are available for just such uses.

The friends of the Hatch Bill have urged from the start the pressing need of experimental work of this character in every State of the Union. But I know of no State or section of the world where systematic trial stations are as much needed as in this extremely varied State.

It is now the decided opinion of experienced fruit-growers that many of the hot, dry, interior valleys of the State will never grow first-class apples, pears, cherries, plums, apricots, or some other desirable fruits. Yet parts of the Old World are in climate and soil almost, or quite, identical with these sheltered valleys, yet they are able to grow as fine varieties of these fruits as can be grown in Michigan.



THE LATE ASA GRAY.

In products, as in professional life, there is always room upstairs. The world has not many spots where nature has given as perfect facilities for the growing and drying of certain fruits, such as the grape, the apricot, the prune, the peach, and the fig, as can be found in certain select localities on this coast.

In the Old World the products of sections where special fruits have been grown for ages now seem to be degenerating. If California can produce dried fruits, canned fruits, crystallized fruits, etc., of better quality, and put up in better shape than can be found in Europe or Asia, she can rule the market, even in London or Liverpool.

If we admit the increased profit of special planting and special packing and marketing, we must not forget that our State is rapidly becoming a haven of rest in a favored climate for thousands of home-seekers. Will not these home-makers wish a full collection of the fruits, shrubs, and plants that can possibly be grown in their locality?

Without doubt, yes! In the Sacramento valley, in most of the Northern valleys and at many other points modified by the breath of the Gulf Stream, the amateur can safely make a wide selection from the lists of the local nurserymen, though these lists are almost an exact reproduction of those of Rochester, New York.

But in the great San Joaquin valley and in all the mountain begirt valleys in South California, on homesteads, even of the commer-

cially in the interior sections requiring irrigation.

A critical examination of the leaves of the Duchess apple or the Chinese snow pear will show special provisions for endurance of a dry, hot air. In like manner, any one of the fruits and shrubs or trees of East Europe will show from one to three more rows of palisade cells in the leaves than is found in those of South-west Europe.

Do you think it right for the Agricultural College to propagate trees for general distribution in the State? Some say it would be running opposition to the nurserymen.

We have had some talk of this kind in Iowa, but it is all nonsense. The growing of a few thousand trees and plants for distribution to trial stations in the State for the advancement of the horticultural and forestry interests would soon bring credit to the central station. Already the college grounds at Berkeley have many rare trees and shrubs which should be propagated and distributed.

Prof. Budd and family started homeward from Oakland at the close of last week, promising to return at another time for the study of the fruit regions of the State which he did not find time to visit. He is evidently much pleased with what he has seen in California, and has caught the California fever enough to lead him to plant out a piece of land, which he bought during his visit, as a private experiment station for the trial of rare growths which he finds not grown here.

Portrait of Prof. Gray.

We give on this page a portrait of the late Asa Gray, engraved from a photograph kindly lent us by Prof. J. G. Lemmon, who wrote for us the excellent sketch of Prof. Gray which appeared in the *RURAL* of Feb. 18. The death of the eminent botanist has been the occasion for the most impressive and sincere expressions of regret and bereavement throughout the whole scientific world. We are sure that our readers who had not the fortune to know him personally will be glad to have the sight which our portrait gives of his thoughtful, kindly countenance.

A FLOUR TRUST.—Advices from the East of Feb. 10th report that commercial circles were at that time excited over the report that the large flouring-mills of the country were about to form a gigantic trust to keep up the prices. A thorough search among manufacturers and dealers brought to light the interesting information that the rumors were in part true, and that the trust was really in a fair way to successful completion, that the great mills of Minneapolis, Detroit and the Northwest are the prime movers in the scheme, and that a well-known lawyer in Boston had been retained as attorney to represent the Eastern interests. The idea is to lay out the wheat-fields of an immense territory and send out buyers. The plan is to keep out all outsiders by resorting to a system of discouragement. Should an outsider turn up at a station and bid for wheat, the combination can bid five or ten cents higher and shut him out. The extra price paid did not amount to much when averaged up with the purchases over the entire district. The arrangement with the mills was that each must take its quota of the wheat daily and each pay the pro rata amounts called for by the agent. If any mill wanted any more than its share on any given day it could get it by bidding up the price and paying the difference into the pool. The great object in the way of success is the various brands used, all of which have a special value which any retrenchment will injure.

ITALY AND CALIFORNIA.—At the annual meeting of the Italian Chamber of Commerce, held in this city March 1st, Secretary Dondero reported that during the year 468 communications relating to commerce had been received from Italy and responded to. Fifty samples of California products had been sent to Italy, and over 200 samples of that country's productions had been received. The expenses incurred by the Chamber during the year reached \$1853.47. Imports of merchandise from Italy during the year amounted to \$357,812, as against \$168,700 for the year 1886.

G. L. BERRY, ranchman of Laramie, Wyo., has killed 14 bears this winter.

QUERIES AND REPLIES.

Cutting Brush to Kill.

EDITORS PRESS:—Not having seen any answer to the above inquiry, a few weeks ago, I take my pen to give a little of my experience and observation.

But first I will say that the general health in Lake county is too good to catch the "boom" in its virulent and aggravated form, yet I think we had our share of the blizzard or cold wave.

Everything now, though somewhat late, is lovely and prospering. While in places the rage is for planting forest trees, we, here in Lake, are more interested for a cheap and easy way to kill the brush and trees to clear the land. The oak and the chemical are the most liable to sprout. Now the time that they can be killed by chopping without digging entirely out is very short and does not come exactly the same time or month every year. For the evergreen oaks and other evergreen brush, the time is late in the fall, just before the coldest weather sets in in November or December.

The "grubs" or oaks that shed their leaves have to be treated entirely different. Their time is in spring or early summer at their most vigorous growth. Suddenly deprived of their leaves, the stump and roots are overcharged with sap, some kind of fermentation sets in, and I have seen the timber mold and commence to decay in a few days when it was very warm weather.

Of course, in the light of science, it cannot now be admitted that a tree or plant is ever entirely dormant or ceases its vital activity unless it dies. In the cases of the evergreen, if they are cut just before the coldest weather in which they are the nearest dormant, the length of time before they can put leaves out again kills them.

The brush fires generally happen in August or September, so they start out again in the warm weather. But I have burned chemical and brush later on in the season and not a vestige of a sprout was ever seen.

The roughest, toughest, most unsightly and persistent thing is the oak "grub," yet it may be made an interesting subject of observation. In the open, hilly parts of California it is generally present. The acorn starts up the first year but a few inches above the dry, hard ground, but the root runs four or five times the length of the top. Now year after year the stock browses it, the fire runs over it, worms gnaw and sapsuckers drill for 15 or 20 years, but every season new sprouts start from the tenuous and growing root. I have often seen from one root a dozen or more scraggy branches two or three feet high half dead. Then by some happy concurrence of circumstances, and under the protection of the scraggy mass, one or two sprouts would shoot up rapidly above the reach of stock and soon assume the dignity of a tree. Sometimes I have attempted to assist the incipient tree by clearing away, so as to throw all the growth into one shoot. But alas! like gratuitous advice it failed to accomplish any good, for it often fell a prey to some accident; perhaps it would be from the depredations of the inevitable "sapsucker that never sucks sap," as one writer for the RURAL called him awhile ago; but somehow I never could believe he was such a testotal abstainer as to never take a drink with his worms. C. P. SCRANTON.

Lower Lake, Cal.

These notes are very interesting. Will not other readers write of what they have done or seen in land-clearing and brush-killing? As many are now engaged in reclaiming waste lands, the subject will be widely interesting.

Keeping Buds Dormant.

EDITORS PRESS:—How shall I keep buds dormant? Some say in damp earth, in a dark place, or bury in the earth, or cover up in a box. Shall they be wholly covered up or leave one end out?—SUBSCRIBER, Los Angeles.

Scions can be kept for some time merely by burying the sticks at the base of the tree from which they are taken, covering about half their lengths in the soil; or if they start too soon in such a situation, by burying them half-way in the earth on the north side of a barn or outbuilding out of reach of the sun, and covering with an inverted box or barrel. The earth should be moist, not water-soaked; that is, not where water stands. This usually keeps the buds dormant as long as necessary in most parts of the State. On an unusually warm day cover the box with an old sack and throw a pail of water over it occasionally and it will cool down by evaporation. Remove the box at night and allow the heat to radiate, and cover again early in the morning. Such a treatment ought to do as well as any, except by the use of ice for cooling.

COLORADO LAMBS.—A farmer in Colorado has Southdown lambs six months old that weigh 140 pounds each, and it has been estimated that they will clip at least 12 pounds of wool each when they shall be 14 months old. As extra mutton now sells at eight cents per pound for sheep in lots, each of the above is worth \$11.20.

The Firewood Business.

The high price of coal and the better use for their time which wood-choppers in some parts of the State are finding, has brought prices of stove wood and charcoal to an elevation not known during recent years at least. The managers of the Donahue road in Sonoma county have issued a circular intended to stimulate the production and shipment of wood over their line to San Francisco. Though the circular in some respects seems to be written in the interest of the transportation traffic rather than of the wood-producer, the statements are interesting enough to warrant publication:

It is a well-known fact that for the past four years the wood business has been carried on at almost a loss to the producers; they have made but little above the actual cost of production. This not only applies to those producers situated where their transportation must be by rail, but the same applies to producers on the coast where transportation to this market is by water. The larger part of the wood coming to this city comes from the coast and balance by railroads leading to the bay. Herefore on account of the great supply from the coast, prices have been kept down, as buyers use inland producers to beat down prices on the coast and use coast producers to beat inside prices, but the time has come that this can't be done. The coast producers have to a large extent quit making wood and have turned their attention to lumber, railroad ties, posts, pickets and shingles; their reasons for doing so are two-fold. First: On account of the low prices obtained heretofore, and more profit in making the above articles. Second: The fact that they are well aware that after cutting their wood they cannot get it to a market on account of the scarcity of vessels.

For the past six months the demand for vessels to carry lumber, shingles, posts and railroad ties has been so large for San Pedro and San Diego that tugs have been employed to tow sailing vessels from the Sound, Humboldt and Mendocino to the southern coast ports to save time, and the same vessels towed back empty. It has been almost impossible to charter at all for San Francisco, and there are very few vessels engaged in carrying wood. Sailing vessels prefer lumber, etc., to wood, and owing to the difficult and dangerous places for loading, and the high rates of insurance on vessels going to those places, they are asking higher rates for carrying wood than for lumber. It is almost impossible to get a vessel to go for wood at any price. If this is the case during the winter months, while there is hardly any building going on, what can be expected in the spring and summer, when the demand for lumber will be ten-fold greater? The woodmen on the coast can see this and also see that there will be a very slim chance to get wood to market after it is cut, and for that reason are not wasting time and labor in that direction. Even during the winter the demand for lumber in the southern part of this State is far in excess of the supply. This being the case, there is no chance of coast wood coming to San Francisco in any amount. This will cut off at least 50 per cent of the supply and throw almost the entire wood business on to the railroads, and the supply being below the demand, good rates will rule. Wood is selling for more in San Francisco now than at any time in the past ten years. In fact, it is readily taken at almost any price. The largest consumers of wood are the brick-yards, and they have heretofore had more or less wood left over to start the next year's work, but this year they are entirely out of wood and almost out of brick. They must start to making brick as soon as the weather will permit (probably by May 1st), and must have wood at any price. They cannot use anything else. Where is it to come from unless you benefit by this warning and be prepared to meet this coming demand at good liberal rates? You cannot expect to meet this market with green wood after the rush comes.

In order that you may know about who and what the different woods are used for, I will take each separate.

Peeled or Tan Bark Oak.—The highest priced wood that comes to this market. It is used principally by the Chinese for stove use and is cut up small. Also used for stove wood by those who prefer wood to coal. Price ranges from \$9 to \$11 per cord when delivered here.

Block and Live Oak.—Cut into stove wood and used in place of coal. Also used in some cases for steam fuel. Price ranges from \$8 to \$9.50 per cord.

White Oak.—Used by brick-yards and for steam fuel. Price ranges from \$7 to \$8.50 per cord.

Pine or Fir.—Used by brick-yards in preference to any other kind of wood. Also used exclusively by the bakers. This is the choice wood and more in demand than any other. Price ranges from \$8 to \$10 per cord.

Redwood.—Used by brick-yards and for kindling wood by wood-dealers and the Chinese. Price ranges from \$7 to \$8 per cord.

Tan Bark.—Used by tanneries exclusively. Price ranges from \$17 to \$20 per cord.

Charcoal.—Used by the Mint, all hotels and restaurants, and by the Chinese. Price ranges from 45 cents to 60 cents per sack.

The rates of freight on above articles to Tiburon will be as follows:

Kind.	Cloverdale and points south.	Points north of Cloverdale.
Peeled or tan bark oak...	\$2.50 per cord	\$3.00 per cord
Block and live oak.....	2.25 " "	2.50 " "
White oak.....	2.00 " "	2.25 " "
Pine or fir.....	2.25 " "	2.50 " "
Redwood.....	1.87 " "	2.00 " "
Tan bark.....	3.15 " "	4.00 " "
Charcoal.....	24.00 " car	30.00 " car

The above rates are for carloads of eight cords of four-foot wood.

When cutting for San Francisco market cut only four-foot wood, as stove wood will not sell. It would be well to consider the fact that a little care in trimming the knots down close when chopping wood increases its value from 50 to 75 cents per cord. The schooner rate on all kinds of wood from Tiburon to any brick-yard, Oakland or San Francisco, is \$1 per cord in lots of 32 cords or over (32 cords being a schooner-load). Along the line of the Cloverdale & Ukiah railroad there are large quantities of fine, large white oak timber, and to those in that section I would state that Ludwig & Kroncke of the Santa Rosa Planing-Mill have made a liberal offer for white oak logs. They will pay \$8 per 1000 feet for white oak logs (cut from the body of the tree between branches) in lengths of 8, 10, 12, 14 and 16 feet delivered on car at any station on C. & U. R. R. and S. F. & N. P. R. R. This is for the full measure of the log inside the bark at the small end of log. This will pay about 45 per cent more than cutting same into cord wood, and balance of the tree can be cut into wood. As the body of the white oak is very large and straight, this item is worthy of attention. They will also buy laurel, maple, locust, ash and oak logs, delivered on cars, at good prices.

In the near future this company will transfer cars from Tiburon to San Francisco, thereby giving shippers a better market and a saving on schooner transportation.

CHAS. THORN, JR.
General Freight Agent.

TANNING SHEEP PELTS.—We are asked how to tan a sheep pelt with the wool on. It is a question that frequently comes to us, and it would be well if those who think they will need it would preserve these directions: Wash the pelt in warm water and remove all fleshy matter from it. Then clean the wool with soft soap and wash thoroughly clean. When the pelt is perfectly free from all fatty and oily matter, apply the following mixture to the flesh side, viz.: For each pelt take common salt and ground alum, one quarter-pound each, and one-half ounce of borax. Dissolve the whole in one quart of hot water. When sufficiently cool to bear the hand, add rye meal to make it like thick paste. Spread this mixture on the flesh side of the skin. Fold the pelt lengthwise and let it remain two weeks in a place that is airy and shady. Now remove the paste, wash the pelt and dry it, but before it is dried, and when nearly so, scrape the flesh side with a crescent-shaped knife. The more the pelt is worked, the softer it will be.—Western Rural.

ART WORK FOR EASTER.—We have had the pleasure of examining the beautiful art work for the Easter season published by L. Prang & Co. of Boston, represented on this coast by J. H. Dorety, 529 Commercial street, S. F. These goods are to be found at the best stationers' and art stores, and should find their way into all households, as they are elevating in their influences. The collection embraces cards from the most modest to the most elaborate, all beautiful and appropriate in design and execution. There are also novelties in paper and satin, some of which have much of the justly-prized handwork. Delicate landscapes, birds, Easter lilies and other spring flowers are largely represented, and lovely children and maidens add the human element to the line. Among the more pretentious works are sachet bags, handkerchief cases and the like, all with the Easter emblems; also books and booklets embodying fitting devotional sentiments. Prang's work will result in making Easter another Christmas, so far as gift-making goes, and we don't know but that will be a good thing for both givers and recipients.

COMPARATIVE CONSUMPTION OF TOBACCO.—M. Paul Leroy-Beaulieu gives figures showing the quantity of tobacco consumed in the different countries of Europe. The rate per 100 inhabitants is, according to him, as follows: Spain, 110 pounds; Italy, 128 pounds; Great Britain, 138 pounds; Russia, 182 pounds; Denmark, 224 pounds; Norway, 229 pounds; Austria, 273 pounds.

A VETERAN SONGSTER.—Geo. F. Bronner of Sacramento has a remarkable canary bird. The Record Union says he was presented to Mrs. Bronner 18 years ago, has daily filled their home with his merry warblings, and still sings as sweetly as ever. He has been blind several years, but this does not in the least affect his singing.

A BRONZE TURKEY, exhibited at the N. Y. Poultry Exchange show last month, stood three feet six inches high, measured four feet eight inches in length, had a spread of wings from tip to tip of seven feet four inches, and weighed 48½ pounds.

SECURED BY CULTIVATION.—The cinchona bark obtained from the Java cultivated plants, because of their greater medicinal yield, brings two or three times the price of the bark brought into the market from the South American forests.

HARDWOOD LUMBER FOR HOUSE-FINISHING.

—A Chicago paper says: In other countries the general use of hardwood lumber is taken as a matter of course. But little more than 10 years since it would have been hard to find a firm in Chicago doing business in hardwood lumber exclusively, except perhaps for use in the manufacture of furniture. To-day this is entirely changed. No house of any pretensions is erected that has not more or less hardwood trimming, and usually in the entire trimming, as well as the floors, nothing but hardwood is introduced. This is not altogether because the architectural taste has changed, but largely because many of the hardwoods, such as maple, ash, oak, and even cherry, can be furnished dressed for less money than the same grade of soft pine can be obtained. One firm, and probably the largest in the line in the West, Hayden Bros., have a yard covering six acres of ground, in which there is nothing but hardwood lumber. The yard is centrally located, with ample track facilities, and within it is piled over 6,000,000 feet of hardwood lumber of all descriptions. Sheds are built for the storage of fine mahoganies, etc., and large drying kilns enable the firm to deliver kiln-dried lumber on short notice, and not only supply the local market, but ship to all parts of the country.

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800 Acres Rich, Level Land.

To some one who will summer fallow and cultivate well, will be furnished free water and use of 160 acres of good land (S. E. Sec 13, T. 21, R. 23) within 9 miles of Tulare, S. W. Forty acres formerly plowed. Land on all sides cultivated and pastured. Water for irrigation (if needed) free. Also (without water) 640 acres (Section 13, T. 23, R. 24), four miles westerly of Tipton and S. P. R. R., all in Tulare County and the Artesian belt. For particulars call on E. M. DEWEY, 7 miles S. W. of Tulare, or A. T. DEWEY, 220 Market St., San Francisco.



"Walnut Grove"

Registered and Thoroughbred. POLAND-CHINA HERD

My herd consists of the best strains that can be found. Stock all recorded in A. P. C. R. I have a fine lot of spring, summer and fall pigs, also a few choice yearling sows, for sale. Prices to suit the times.

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75,000 TONS CAPACITY. 75,000 Storage at Lowest Rates.

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Special attention to practice before the U. S. Land Office and Interior Department.

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General John Bidwell's tract, Chico, Cal. Maps of this property are now ready, and applications received for the 5-acre tracts and town lots, 90x200 feet.

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The Tulare Register has just issued a bound volume of 221 pages, chock full of historical, descriptive and statistical information regarding that great and growing county. It answers every question a home-seeker will want answered about the county, and answers correctly. Sent post-paid on receipt of \$1. Address

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GREAT ARTESIAN BELT, KERN COUNTY.

This tract comprises 2640 acres, all level land and ready for the plow. In this colony is the

Greatest Artesian Well in the World,

And a perpetual water-right goes with the land bought. Tracts of 20 acres will be sold for \$500—only one-third cash; balance, one-third in two years, and one-third in three years, with ordinary interest.

Apply at once for best selection to

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SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. 5 ACRES IN FRUIT, well attended to, will make a handsome income. One Acre in Strawberries will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$80, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

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EARLIEST FRUIT LAND IN THE WORLD.

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FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land?

DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10 acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

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Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES
At \$75 per Acre.

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. One hundred and seventy-five acres at Palermo are now being set out in the choicest varieties of Florida Orange Trees. Maps and further particulars of

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Improved and unimproved lands to any extent from 5 to 5000 acres with good, comfortable homes and all necessary conveniences, for sale on desirable terms. These lands require no irrigation, Railways convenient, ample supply of water, and the climate cannot be surpassed. Apply as above.

SANTA YNEZ,

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THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil.

TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for homes or quickly paying investments, cannot do better than purchase here. For further information refer to

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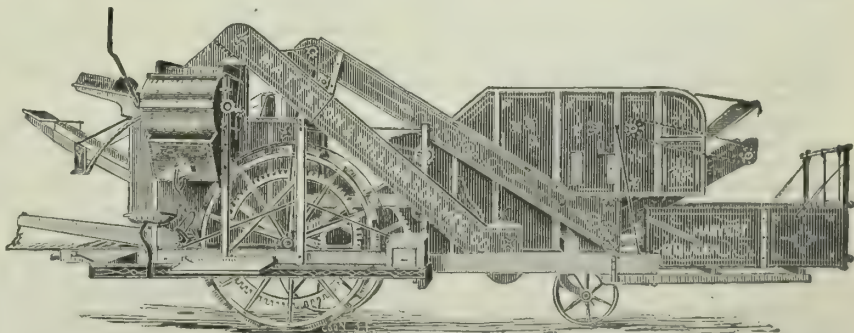
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Sizes—10, 12, 14 and 16-foot cut. Each Machine has Steel Shafting and Straw Dump, which saves all the Straw and Chaff. Header easily detached to ship or pass through 10-foot gate. SEND FOR PRICE LIST AND TESTIMONIALS TO

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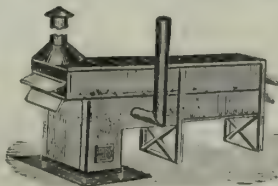
Scientific Principles.

Produces the Best Results at the Least Expense.

L. W. PARSONS,

At San Jose Agricultural Works,

SAN JOSE, CAL.



AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

HARVESTER FACTORY IN PROSPECT.—San Leandro Reporter, March 3: Geo. Stockton Berry of Visalia, the inventor of a steam harvester, which has been running successfully for the past two seasons, was in San Leandro last week, looking for a site for a manufactory near the railroad station. He was very favorably impressed with our town and considered that it had great advantages as a manufacturing point on account of the excellence of the climate, nearness to the city, and the low price at which the necessary amount of space could be obtained.

Amador.

RURAL ACTIVITIES.—Mt. Springs Cor. Dispatch, Feb. 21: This neighborhood has taken quite a boom in farming this season. From Miller's to Boyce's station there is certainly 25 per cent more land plowed and sowed than ever before, and still the good work goes on. There are some new arrivals here from the frigid zone of Dakota, named Lamb. Mr. Lamb has bought 750 Muscat grape-roots, 40 fig trees and a number of olive cuttings, and is putting out grape cuttings for a starter next year. Orrie Jones on the Mocking Bird ranch is setting out grapes in addition to his present vineyard. The Bion Bros. have about 20 acres in grapes and fruit trees in bearing this year. They have also sown several acres to alfalfa. The purchasers of the Silver ranch will be up in about two weeks with olive trees to set out 80 acres.

Calaveras.

INDUSTRIOUS PLANTERS.—Valley Springs Cor. Prospect, March 2: Mr. Pattee is planting a large lot of apricots and will also plant raisin grapes. Mr. Edelon is busy on the Stevens farm with all the help obtainable in the vicinity. He will plant 34,000 cuttings of the choicest wine-producing varieties. He has drafted the Japanese colony, women included, into the service. Mr. McKee from Sacramento will plant ten acres in choice fruit trees, principally prune. He is putting his tract in fine order. Mr. Geibe will plant 10,000 cuttings, mostly of the raisin-making kinds. Mr. Lemon has been battling brush and has planted five acres of olive trees. He has also planted 200 peach and apricot trees, besides adding some to his vineyard. Mr. Will Turner, who has charge of Henry Turner's ranch, has planted a small olive grove and also a mixed lot of deciduous trees. He, too, is trying his hand at alfalfa-growing and puts in his leisure hours making stone fences. The grain sown in the surrounding country is looking finely, and the acreage is larger than ever before. Thus you see that the season of '88 opens with decided marks of substantial progress in old Kay Paverons.

Colusa.

"COALS TO NEWCASTLE."—Colusa Sun, Feb. 25: Last Saturday two freight cars on the narrow gauge were required for a shipment of trees from L. F. Moulton's nursery to the lower country. This shipping of nursery-stock down the country is something new. However, Mr. Moulton has taken extraordinary pains with his nursery, and has it free from pests, and every tree is what it is represented to be.

WILD PIGEONS.—The point of timber south of Arbutuck is full of wild pigeons, much larger than the tame one or the wild bird of the East. There are birds there by the tens of thousands, and the sport is said to be fine. When we were in there surveying on the canal a fortnight ago there was a continual bang of guns in all directions.

Fresno.

PLANTING ABOUT KINGSBURG.—The Herald reports that the setting out of nursery stock is going on briskly in the vicinity of Kingsburg, and gives a list amounting to 375 acres just planted or being prepared to plant to vines and fruit trees.

POSTPONED INDEFINITELY.—Fresno Republican, March 2: After vainly endeavoring to arrange the work of the committees in a systematic manner, and get the members to go to work in earnest, the few gentlemen who have interested themselves in trying to get up a rabbit-drive in this county have concluded to give the matter up entirely.

Inyo.

DISTRICT FAIR.—Inyo Index, Feb. 29: On Saturday last the Board of Directors of the 18th District Agricultural Association met in Independence. Present—Pres. A. R. Conklin and Directors Nathan Rhine, Wm. Walker, Wm. S. Enos, Wm. K. Miller, Thos. J. Goodale and John Shepherd. It was determined to hold the Second Annual Fair of the Association at Independence, commencing Monday, Sept. 17, and closing Friday, Sept. 21, 1888. Monday will be devoted to arranging exhibits, and the pavilion be opened to visitors on Tuesday. There will be racing each day during the week. A liberal premium list will be arranged and advertised in due time.

THE INYO ARTESIAN COMPANY has filed articles of incorporation. Its purposes are to prospect for water and sink artesian and other wells in the county of Inyo. Its directors for the first year are: Samuel D. Thurston, John A. Hannah, Patrick H. Mack, Henry Rhine, I. J. Woodin, all of Independence. Capital stock, \$10,000, divided into 2000 shares, of the par

value of \$5 each. Actually subscribed, \$250. The Inyo Artesian Co. means business and will purchase necessary machinery and begin boring wells just as soon as sufficient stock is disposed of to justify the work.

AGRICULTURAL ASSOCIATION.—Independent, March 3: The Association owns $4\frac{1}{2}$ acres of land within the limits of the town of Independence. This is all inclosed by a tight-board fence seven feet high, and within this inclosure is a large and well-constructed pavilion. In addition to this is a fine mile track, with grand and judges' stands, half a mile south of the town limit. All this is valuable property and will speedily become more valuable. The encumbrance upon the property only amounts to \$1904 and is all held by one member of the Association. Mr. T. J. Goodale of Fish Spring generously offered to give a large number of shade trees for setting out in the Association park at Independence. These trees are now being transplanted, are already large, grow very rapidly, and in three or four years will make fine shade.

Lake.

PIGS AND MEASLES.—Clear Lake Press, Feb. 25: During the prevalence of measles lately, at Long valley and vicinity, Hiram Kennedy's children were the first to be taken. His little boys had picked up a litter of young orphan pigs and made pets of them. During the cold nights they would box their little pets and put them in the house. In due time, after the boys were prostrated with the disease, those little pigs broke out with an eruption all over the body exactly like that upon the children. They whined, squealed and scratched, and got just as sick as any urchin—in fact, four out of the litter got too sick and succumbed. Of the two that survived, one is blind and the other is going into consumption. This may all be regarded as a joke, but Mr. Kennedy, who is entirely reliable and reputable, can never be convinced but that those pigs had the measles.

Lassen.

ABOUT LAKEVIEW.—Cor. Mail, Feb. 20: Everything is progressing nicely here. Farmers are all very busy now, plowing and sowing their crops. I notice improvements on several places, new fences, preparations for building, etc. The water is fast receding in Honey lake again; not more than half the surface seems to be covered. Of course when the snows in the mountains melt, the streams will rise considerably.

SPRING NOTES.—Susanville Cor. Reno Gazette, Feb. 23: After a season of real winter weather, some of which was noted for its unprecedented coldness, spring, real spring weather has put in its appearance, relieving the valleys of their covering of snow, thereby hurrying up the farmers a month at least ahead of former seasons. The opinion now prevails that most of the fruit buds of the peach and cherry trees were killed during the winter. Many vegetables, especially potatoes, are found to be frozen, but there was a large crop last season, so that nothing like scarcity is feared.

Los Angeles.

MORE BARLEY has been sown in the neighborhood of Anaheim this season than for years previous. One correspondent states that some of the vineyards have been dug up and sown to barley.

FARM NOTES.—Cor. Bulletin, March 3: The rains have come just right for farmers, and every foot of land that is cultivated will produce a crop. The farmers have all made money for the past two years, and have planted large crops this year. In the line of hay and grain and dairy produce, there is not much to export. It is all used at home, and the only trouble is, there is not enough. Fancy prices are paid here for choice dairy products. The wonder is that more people do not engage in this branch of farming. Two ladies, formerly schoolteachers, cleared \$2500 last year from a ten-acre farm near this city. The income was derived from small fruits, a few cows, and poultry.

Monterey.

BARLEY IN DEMAND.—Salinas Index, March 1: There has been quite a lively movement in barley here during the past few days, orders having been received at Ball's warehouse for 50 or 60 carloads, and for as much more at Spence's Switch. About 4000 sacks were sent from Salinas yesterday. It goes overland to Chicago.

IN THE FASHION.—Sinclair Ollason last Monday evening finished setting out 2000 fruit trees on the land recently purchased by him from August Johnson, near Natividad. The trees consist of apples, apricots, French prunes, pears, peaches, etc., of the best varieties.

Napa.

FINE HORSES.—Mr. T. C. White, the proprietor of Russian vineyard of Fresno, while in St. Helena this week, purchased through F. W. Loeber, a handsome carriage team owned by H. W. Crabb, for \$1200, said team being a pair of Whippleton colts. He also purchased the young stallion, Alcona Chief, from Mr. Loeber, for \$500, and the spotted team owned by S. W. Kenyon for \$450. This speaks well for the horse interests of this section, when men come from Fresno to purchase fine driving horses at long prices.

Nevada.

SNOW AND BLOSSOMS.—Grass Valley Tidings, March 3: Snow for the last two or three days and the ground is all covered with white! There must be a beautiful sight at Isaac L.

Weed's orchard, north of Alta hill, where some of the fruit trees are in bloom. Miss Ella Weed brought us two days ago a bough of an apricot tree and it was one mass of beautiful blossoms. The spring flowers and the snow coming together enhance each other's beauty; and, moreover, the snow is not going to prevent the flowers from developing into fruit.

PLANTING WALNUT ORCHARDS.—Transcript, L. Charonnat is making preparations to plant 2500 preparturiens walnut trees at his farm on Canada hill, in Nevada township. The land has been fenced and will be put in prime condition for the reception of the trees, which were raised from nuts planted last year by Mr. Charonnat. A. Isoard has ordered from France several thousand Franquette walnuts, and when they arrive he will plant them in the immediate vicinity of Nevada City. The Franquette is an extra large nut with a full and rich meat, has a soft shell, and does not blossom until so late in the season that all danger from frost has passed.

Placer.

NECTARINES.—Auburn Republican: John Boggs says that people will plant more nectarine trees when the fruit is better known and appreciated. As yet it does not bring quite so good prices as the peach, but that is because people do not yet understand it. All the shippers, however, like to have a few boxes to put in a car of fruit, and Mr. Boggs recommends the Boston variety.

Sacramento.

PUTTING OUT SHADE TREES.—Record Union, Feb. 25: Dr. Obed Harvey and John McFarland of Galt were in Sacramento yesterday making selections of a large order of shade trees. They propose to add to the attractiveness of that locality by planting trees that will provide shade and ornament at the same time. Among the improvements in this direction, Dr. Harvey, Mr. McFarland and the Sargent Bros. will plant trees on both sides of a driveway or avenue extending four miles in length, out from Galt to McFarland's residence. The varieties to be planted are Monterey pines, umbrella trees, sour orange, red and blue gum trees, cork elm, black walnut and acacia. The example being set by Galt should be followed by all towns and cities in the State.

A STRANGE CHICKEN THIEF IN SACRAMENTO. Bee, Feb. 29: For some time past persons residing in the vicinity of 14th and D streets have been missing chickens from their hen-houses, and there have been almost nightly raids on the fowls. Yesterday morning, about three o'clock, Ross Sprague heard a racket among his chickens, and, seizing a shotgun, sallied forth to bag, as he presumed, a Chinaman. When near the hen house, an animal sprang out and started to run away, but Sprague fired, and with excellent aim, as he killed instantly—a large fox. The animal was a fine specimen of the Reynard family, and his appearance gave ample evidence of the high living he has been enjoying. Where the fox came from is a mystery.

San Bernardino.

FINE DITCH.—San Bernardino Index, March 3: The Highland Ditch Co.'s ditch, built by the Mountain Nursery Co., has just been completed, water being turned into it on Saturday. The main ditch, which skirts the foot of the mountain and will supply the thousands of acres abutting the hills, is one of the finest constructed in the State. It has its source about five miles above the terminal point, obtains its supply from the never-failing Santa Ana river and Bear valley reservoir, is cemented the entire distance, has nearly a mile of tunnels and a capacity of 1500 inches, which will meet the stipulations in the contract of giving an inch of water to six acres—an abundance in the driest season. This main canal being high above the tract, no sluggish stream will course the ditches. About 200 laborers are at work digging ditches and cementing them, and already two miles have been completed on the eastern and southern boundaries, and innumerable laterals are in progress. The company has expended \$200,000 in securing water alone, and will have an abundance for all purposes.

San Joaquin.

NURSERYMEN BUSY.—Lodi Sentinel: The Stoddard tract, about 100 acres, under the charge of the well-known nurseryman, Jas. A. Anderson, has all been planted to fruit trees. Mr. Stoddard will have a fine lot of peach trees for sale next season, having planted over 100,000 pits this year. The Childs property, purchased by the well-known firm of Strong & Co. of Sacramento, is fast undergoing a change, and will soon be one vast orchard and nursery. Middlekauff & Co. are busily engaged in transforming their recently acquired property into a nursery. They are old hands at the business, having furnished thousands of trees for Lodi and vicinity.

San Diego.

HORTICULTURAL SOCIETY STARTED.—Wildomar Cor. Union, Feb. 25: Last night a meeting was held in the Hotel Wildomar parlors to organize a horticultural society. The attendance was very good and a great deal of interest manifested. Hon. J. C. Chambers was chosen chairman, and R. A. Wilmes, secretary. The society will meet each Friday night at the hotel. It was agreed to have two subjects for next week's discussions: "What Fruits Shall We Cultivate?" to be led by Ezra Embree, and "What Flowers and Ornamental Shrubbery Shall We Cultivate?" to be led by Wm. Col-

lier. These gentlemen have had some years of experience in the line of their subjects, and will be able to handle them very intelligently.

BRISKLY AT WORK.—A great deal of the country about Wildomar has been plowed up, and is now verdant with new barley, oats, wheat and alfalfa. Hundreds of acres have been turned, and yet plows are going and seed is being sown. At present people are mostly engaged in planting fruit trees, of which a great many have been put out—peach, apricot, pear, orange, olive, plum and prune. A large number of grapes will be put in the valley this spring. The water supply is fine, being piped to nearly every house in the town and additions. It is very clear, pure and cool. Only one canyon as yet has been entered, but the supply is abundant.

Santa Barbara.

LOMPOC LINES.—Record, Feb. 25: There has seldom been a finer winter for stock in California. The grass has been superior from about Jan. 1st and now there is a most luxuriant growth from valley to mountain-top. The spring wild-flowers are somewhat earlier than usual, owing to the early fall rains. There are now at the wharf 2400 sacks of potatoes for shipment south, and Capt. Averill states that large quantities of mustard, beans and barley are daily delivered for shipment north.

GRAIN.—The largest deal in this section in grain for the year past was made Tuesday, when W. S. McKay, Dutard's agent, bought of Ben Burton over 400 tons at the landing, consisting of wheat, barley and English mustard. This was principally rental received by Mr. Burton from the Jesus Maria rancho. Mr. Burton has methodically entered upon the work of clearing the brush from the extensive mesas of the Jesus Maria rancho, and this year a thousand or more acres will be added to the available lands for grain.

Santa Clara.

STALLION SHOW.—San Jose Times: At a recent meeting of the Santa Clara Valley Agricultural Society, it was decided to hold a stallion show at Agricultural park on Saturday afternoon, March 17th.

Sonoma.

INVASION BY ENGLISH SPARROWS.—Petaluma, Feb. 29: English sparrows are determined to take this city. Five years ago linnets were plenty, but the sparrows have driven them away, and in every tree and about the cornices of the stores on Main street their nest-building is carried on and their ceaseless twitter is heard. They have so far defied every effort to dislodge them.

Trinity.

THE SHEEP TAX.—Trinity Journal: The ordinance levying a tax of five cents a head on sheep pastured, etc., in the county was passed at the regular meeting of the Board of Supervisors, Nov. 8, 1887; its object was to make non-resident sheep-owners pay for the privilege of driving in their flocks from the valley and making Trinity county a summer pasture. For a number of years back large bands of sheep from the Sacramento valley have overrun the summer ranges in the northern and central part of the county, doing considerable damage to roads and other property, and consuming feed to the detriment of tax-paying stock-raisers. The owners of these bands pay no taxes in the county and the sheep are not driven in until after the first of March; the sole object of the ordinance was to make these roving bands of sheep pay for the feed consumed and the damage done by them.

Tulare.

POULTRY THAT PAYS.—That the raising of chickens is not profitable is often disproved by ranchers who keep a few hens. A gentleman living near this city has 200 hens of mixed breeds—Plymouth Rocks, Leghorns, and Black Spanish—that furnish "pin-money" for his better-half. Last week the product of his poultry-yard amounted to 90 dozen eggs, which he disposed of at 20 cents per dozen, making a total of \$18. The cost of feeding his chickens amounted to about \$3, leaving \$15 profit on one week's product.

A STALLION PARADE, says the Times, will occur in Visalia on Saturday, March 10th. Owners of horses are requested to join in the exhibit without regard to age or pedigree of stock. Mussel Slough stockmen have promised to be present with the best horses owned in that section, and it seems probable now that at least 100 stallions will be exhibited, coming from all parts of the county.

POTATOES.—Richard Drais shipped 500 sacks of potatoes to Phoenix, Arizona, this week. Richard Hyde has also shipped potatoes to Arizona recently, and about 2000 sacks to Los Angeles. These are the first shipments ever made from here to Arizona. On Friday last, Feb. 24th, C. O. McDermend of the Briggs ranch, four miles southeast of this city, was engaged in digging his potato crop, consisting of about 75 sacks. They were large marketable potatoes, suitable for the table of any lover of that edible, and not in the least injured by frost or freezing weather. What do our Eastern friends think of a country where potatoes, cabbage, radishes, lettuce, cauliflowers, etc., are gathered fresh from the garden every day in the year?

Tuolumne.

PEACH BLOSSOMS.—Union Democrat, March 3: In the yard of Mr. G. C. Baker, in Sonora, there are several peach trees in full blossom at the present writing. They certainly anticipate

the early market and propose giving Tuolumne a boom in the bloom.

Ventura.

ASPARAGUS.—N. B. Smith called at the *Free Press* office on the morning of February 22d and exhibited a fine display of asparagus cut from his garden. The plant was fully six inches in length and challenged the admiration of an epicure.

ARIZONA.

A MOUNTAIN RANCHER.—Florence *Enterprise*, Feb. 25: E. M. Reavis came down Monday from his ranch beyond the Superstition mountains, bringing a lot of fresh vegetables, including some of the biggest and best cabbages. Heads that averaged more than ten pounds in weight were solid and firm, and as tender as young lettuce. He raises parsnips, five inches in diameter, that are extremely tender, and all his vegetables are of superior quality. He has 200 acres of land on his farm, 35 acres of which is under cultivation, and supplies vegetables and fruits to Pinal, Silver King and Florence. A never-failing stream of pure water is used to irrigate his land. The elevation is 5000 feet above the sea level, where all kinds of deciduous fruits flourish. Wild walnuts and cherries grow abundantly and some cherry trees have attained enormous size, being fully three feet in diameter. Blackberries and raspberries grow wild in plenty all around the mountains. Potatoes do well, the Early Rose, Goodrich and a few other varieties being the best, while some kinds will not grow at all. Mr. Reavis is a typical frontiersman—active, restless, hardy and hospitable. He is nearly six feet in height and strongly built, affable and intelligent, and the story of his life and adventures would make an interesting volume. He thinks the "Baron" Reavis is a distant relative, but regards him as a black sheep of the family and unworthy of his recognition. Mr. Reavis started homeward early Tuesday morning, following his patient burros and accompanied by his favorite dogs that follow him wherever he goes.

NEVADA.

FROM EASTERN RANGES.—Elko Cor. *Reno Gazette*, Feb. 22: February thus far has been most agreeable. Grass is peeping out upon all the sunny hillsides and the temperature at night scarcely falls below 40° above zero. I learn from Bradley & Russell that their bunch of cattle in Cassia county, Idaho, have gone through the winter thus far in fair condition with but little loss. They have evidenced a great deal of good judgment and caution by distributing their cattle in various localities remote from each other, so that if a zone of storm weather reach one locality it will nine cases out of ten miss the other ranges. I glean from Thomas Cain and Abner Wiseman of Clover valley that their large band of cattle is doing exceedingly well from the fact that they were fed during the entire winter. They do not apprehend a loss over the average; but, like nearly all the rest of the cattlemen of Eastern Nevada, complain of frozen limbs and feet. Daken & Bro. of Lamoille valley report their stock in good condition. They do not think they will lose over three or four per cent, for the reason that they had an abundance of hay, with good shelter for their stock. All classes of stockmen in Eastern Nevada have learned a lesson during the past year which will not soon be forgotten. This great and important interest narrowly escaped great loss and a heavy set-back. They have resolved as a body to raise and put up more hay, to preserve their fenced ranges for fall and early winter use, to erect more sheds from year to year for the protection of their stock, and continue in this new departure until the old mode of letting large and valuable bands of cattle take care of themselves will be only known as history of the past.

OREGON.

CARROTS.—*Rogue River Courier*: G. H. Briggs of Kirbyville from a half-acre of ground realized 9 tons of carrots last season, and from another quarter-acre 13 tons, an average of 52 tons per acre. This is a big yield and shows what a little care will do; the half-acre tract did not receive the same attention as did the quarter-acre. Other ranches over that way produce equally large crops.

BLUE GRASS.—In a talk with Lewis Strong, one of our sturdy, painstaking farmers, not long since, he said it was a custom with him to grow blue grass for hay. A number of acres were thus sown a few years ago, from which two crops per year are cut. After cutting it is highly necessary to water the ground, as the roots will not make a start because of dryness of the soil. Twice a year, then, this hay-feed is to be irrigated. After starting, the ground is so covered by the matting of the shoots, the moisture is perfectly retained. Mr. Strong has a little farm of a trifle over 330 acres, much of which shows care and system of work.

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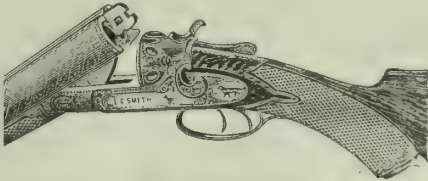
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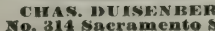
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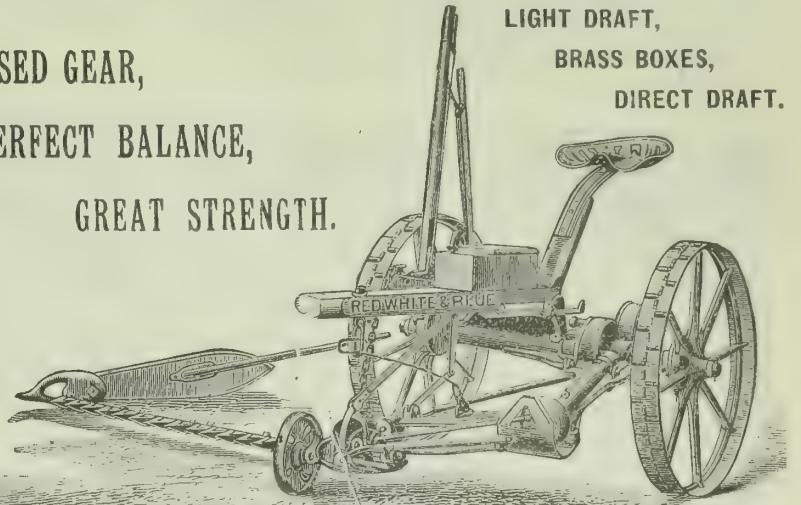
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FORESTRY.

Pine-Set Mountains.

[Written for the Rural Press by JOAQUIN MILLER.]

I wonder if any one of us ever stopped to ask where the lumber is to come from which is to be used in the thousand and one "cities" that have been laid out this past twelve months in California. It is well enough to look ahead a little. For they surely will be built; if not this year or this century, why then the next year or the next century. And the difference between a year and a hundred years is not of nearly so much account or moment to the State as to a man.

Where will the lumber come from? There is not wood enough on all this Western slope, wide as are the continuous woods

sea, once the "suburbs" and the very core and soul of the city so far as beauty and fertility were concerned, had been destroyed, drowned by the wood-cutters. That is, men were permitted to cut down the trees growing far up the Tiber. This let the sun in on the ground, baked it hard, burned up the roots, bushes, briars. Then the rain fell suddenly and direct on the hard, baked ground, and so rushed on to ruin of all things. Ostia, away down by the sea, was buried. It lies there twenty feet under ground to-day. And dozens of other pretty towns all up and down. The once pretty Pontine lakes became marshes—malaria! And that was the end of Rome. It was the axe of the Roman, not at all the sword of the Goth or Hun, that slew Rome. For "men may come and men may go," but the forest must grow forever.

We went far up the Peavia to the pretty

made their tenants plant and perpetuate the forest.

The millions and millions of posts or spiles on which Venice was built were grown here; planted no doubt by the hand of man, although of this one cannot speak positively. But we do know certainly that all the trees to be found here now—and there are many hundreds of miles of them—were planted and protected by the hand of man. This river debouches immediately into the lagoons about Venice. All the rainy season through you see rafts—great, long rafts of logs—fastened together by hazel-bush withes, tall and splendid fellows, nude to the waist, guiding them, plunging down this tumultuous and swift river on the way to Venice.

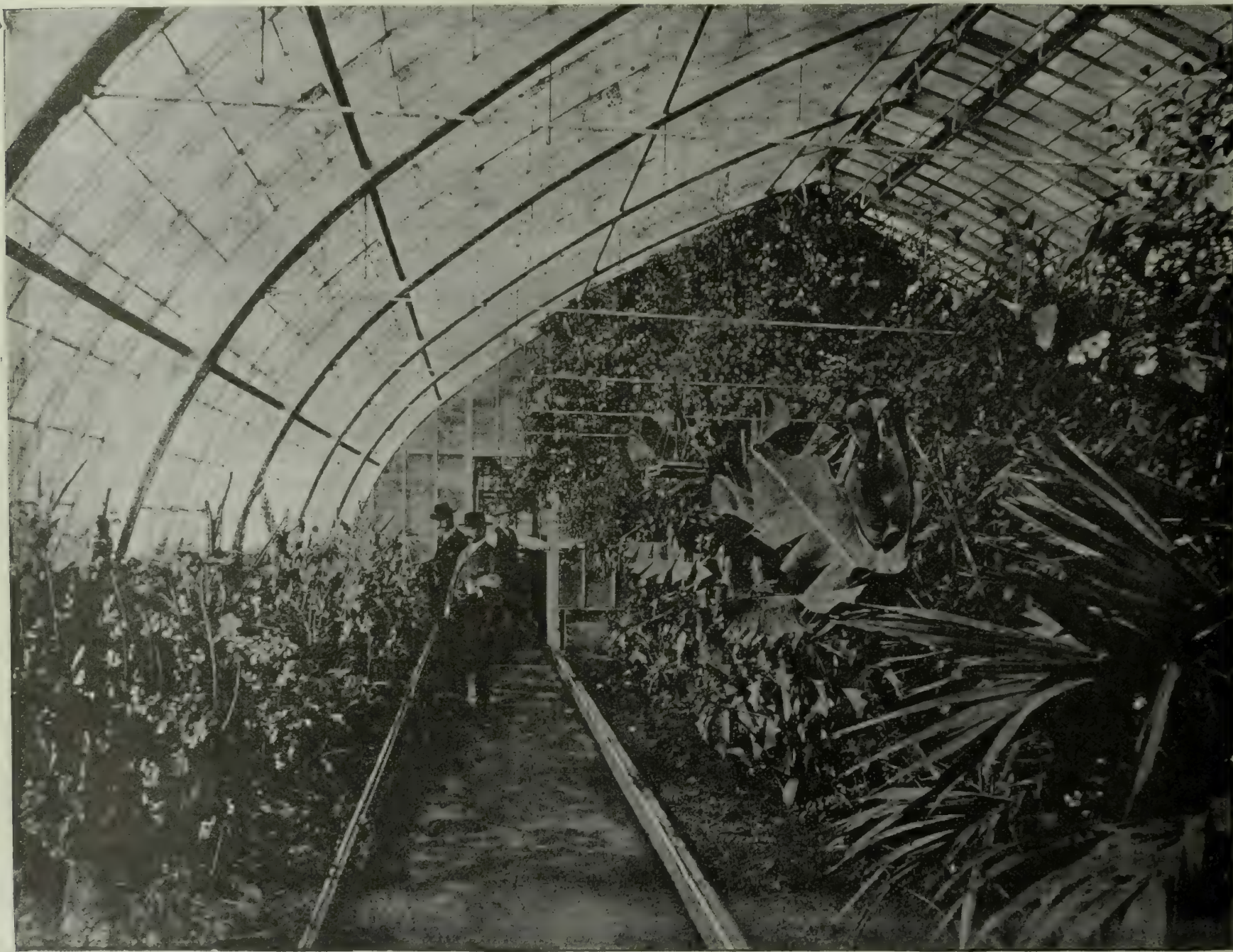
The forest trees grown here are mostly pine—pine of many kinds; also some cedar, as well as fir and cypress. A great many wild berries, or rather wild berries that have

they still insist on saying that if poor Titian had not got his head turned by good fortune and gone to Venice, he might have lived to a good old age!

It is much to know that you can see the very peaks here, these very same pine-planted peaks that he put in his landscapes in his wonderful pictures of the Holy Family. Indeed, it is told of Titian that he put in his landscapes of scenes in Palestine certain sorts of trees not to be found in the Holy Land, so true was he to nature; so resolved to paint things exactly as he saw them there on his native hills and snowy heights.

But what I set out to say was this: We must plant our steeps in pines also. What Italy did away back in the Dark Ages, we can also do here in the light of this day and land.

We are going to build the cities we have



A WARM CORNER IN THE CONSERVATORY, GOLDEN GATE PARK, S. F. (See page 217.)

where rolls the Oregon, to build up one-half of these baby towns that were born and baptized with pretty names this year just past.

Let us look into this thing. More than a dozen years ago I was with Garibaldi at Rome reading up the history of Italian Forestry. For the old hero had a vast plan of planting the empty and barren campagna with eucalyptus trees; and backed by his energy in this direction, the Italian Government even dispatched a ship to Australia for this tree. When I state briefly that I have been three times summoned to appear before the Ministry to give what information I could about trees in California, you will begin to understand something of the interest taken in Italy in the matter of tree-planting; bearing in mind all the time that Italy is a land almost entirely like our own; subject to droughts, subject to sudden fires, and indeed all disasters of flood and flame that beset us here.

Well, we found, by reading and riding about and observing closely, that all that part of Italy lying between Rome and the

little mountain town of Peavia di Cadora, where Titian was born, to look after forestry there. This is not very far from the border of Austria. Here is a colder clime and a stronger race, mentally and otherwise. The people are a blue-eyed people and have soft, yellow hair, such as you see in Titian's wondrous pictures. And here is an entirely new order of things. We found perpetual snow here on the mountain-tops, and trees stood in line like soldiers even up to the very edge of the snow. All these had been planted by the hand of man. Further back than memory or tradition ran we found that all this mountain region that bends its snowy white summits around and above Venice had been planted and kept in forest trees continually.

Of course there had been no patriotism in this at all, or any other than absolute selfishness at the bottom of all this brave work. The mountains from time immemorial have belonged to Austrian noblemen. You can still see one of their stupendous castles here in the pass of Peavia di Cadora. These noblemen found that forestry paid; paid better than anything else, and so they

been made tame by centuries of cultivation, grown here in these regimental woods that hang in long and regular lines against the steep hills, and these berries are picked by women and children and taken to Venice in boats.

At haying-time you will see many men on the steep and craggy places, holding stoutly on to ropes, with their feet braced solidly against some stone or tree. Away down at the other end is a wife, and maybe a child also. The wife has a short scythe in her strong hands. Her fine arms are bare, and a rope is fastened firmly about her shapely waist. The child also is securely tied, and is clutching at the grass as fast as the mother mows it off, to hold it from sliding down the almost perpendicular steeps and being lost in the roaring white waters below. A happy, healthy, strangely healthy, people. Titian was induced to leave here and go down to live in Venice. He died there of the plague when nearly one hundred years old. And it is told of these healthy and hardy mountaineers, who plant pines and suck in the odors of them, that

conceived here on this shore. But we have yet to plant and grow the pine trees that are to go toward the building of the larger number of them. And if Austria found it profitable to grow pines and raft them away down from the snow to the Adriatic sea, what is the reason we may not plant our hills with pines at a profit also?

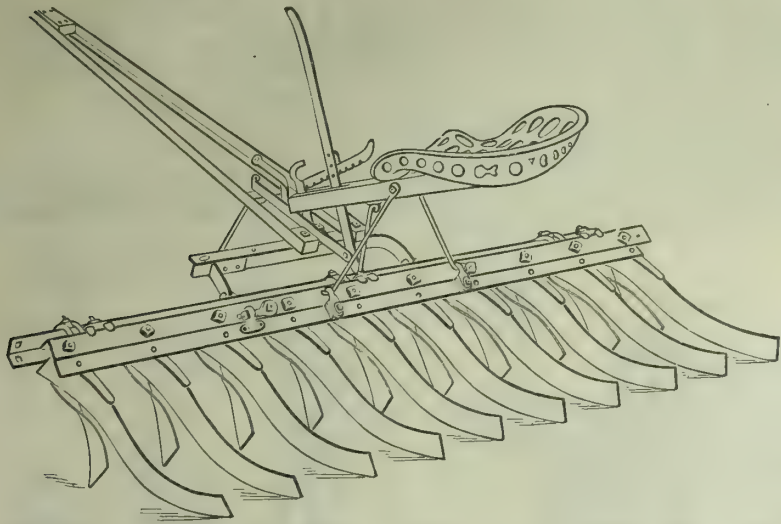
The fact is, we are living "from hand to mouth," like savages. It is told of our Shoshone Indians, when asked by the Government to plant gardens, that they refused to do so, alleging as an excuse that as they were constantly at war they would probably not live to eat the fruit of their labor.

I write it down as a fact that I have many times heard men decline to plant forest trees here in California for the very same selfish reason: they would not live to sell the lumber.

"After us the deluge," cried the French. And sure enough the ruin, of that selfish generation at least, was not far off.

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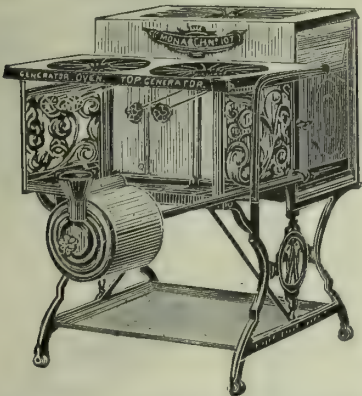
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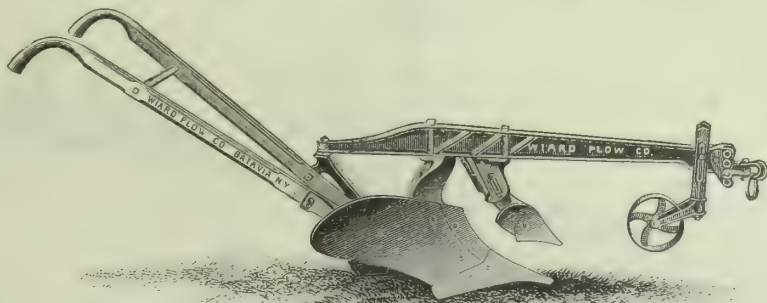
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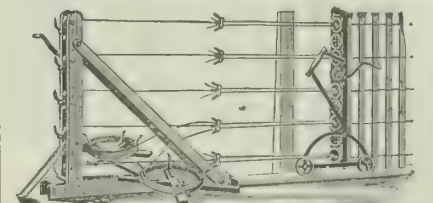
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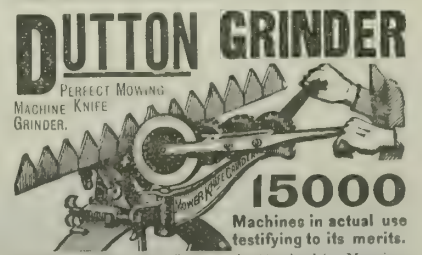


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Can be carried into field and attached to Mowing Machine Wheel. New Descriptive Catalogue free. **HIGGANUM MANUF'G. CORPORATION,** Successors to R. H. ALLEN & CO., 189 Water St., N. Y. Main Office, Higganum, Conn.

941 HIDDEN NAME CARDS, group pictures, puzzles, games, cards, album verse, and the largest and best sample book of new style cards ever issued. All for 2-cent stamp. **CHAS. ENU JOHNSON & CO.**

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In 10,000 Shares of \$100 each.
Capital Paid up in Gold Coin, \$624,160.
Reserved Fund, \$40,000.
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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up, and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

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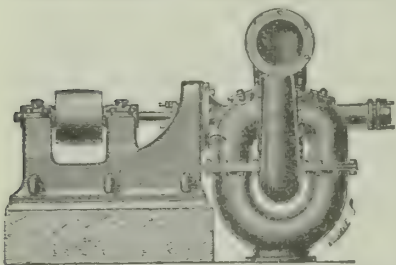
San Francisco, Jan. 1, 1888. Cashier and Manager.

H. P. GREGORY & CO.

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SOLE AGENTS FOR

WEBBER'S CELEBRATED

**IRRIGATING PUMPS.**

WE ALSO CARRY IN STOCK THE LARGEST LINE OF

MACHINERY

In the UNITED STATES.

Consisting of Wood and Iron Working Machinery. Pumps of every description.

ENGINES AND BOILERS
A SPECIALTY.

JOHN T. SULLIVAN,

Manufacturer of CUSTOM MADE

Boots and Shoes,

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FACTORY, N. E. Cor. Battery & Jackson, SAN FRANCISCO, CAL.

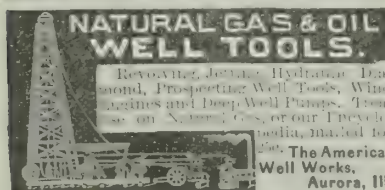
Full line of Ladies', Misses' and Children's Fine Shoes

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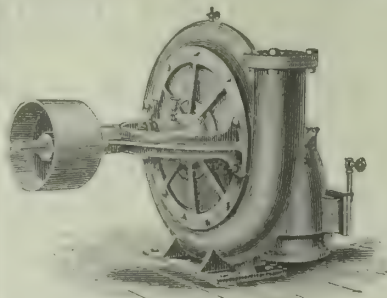
Howell's Men's \$3.00 Shoes

In Button, Congress and Balmorals; Opera and French Toes. SEND FOR TRIAL PAIR.

CUSTOM HEAVY WORK A SPECIALTY.

**NATURAL GAS & OIL WELL TOOLS.**

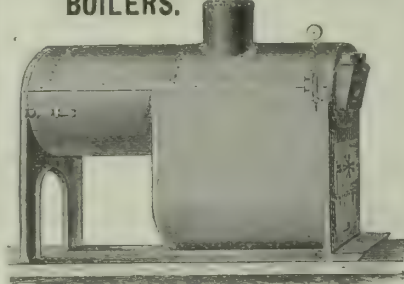
Revolving Jetting Hydrator, Diamond, Prospecting Well Tools, Wind Engines and Deep Well Pumps. Tools on Natural Gas, or our Petroleum, made for The American Well Works, Aurora, Ill.



Jackson Centrifugal Pumps.

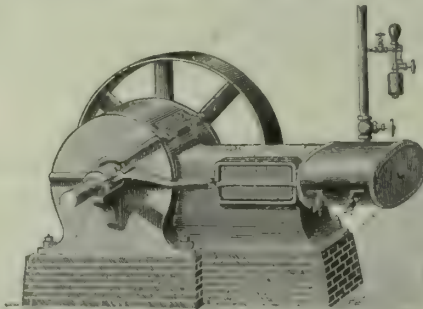
JACKSON Automatic Expansion SELF-OILING ENGINES.

Made in ten sizes, from two to sixty-horse power, and carried in stock for prompt delivery.

"ECONOMY" PORTABLE BOILERS.MOUNTED ON SKIDS.
2 1/2 to 20 H. P.**BYRON JACKSON,**

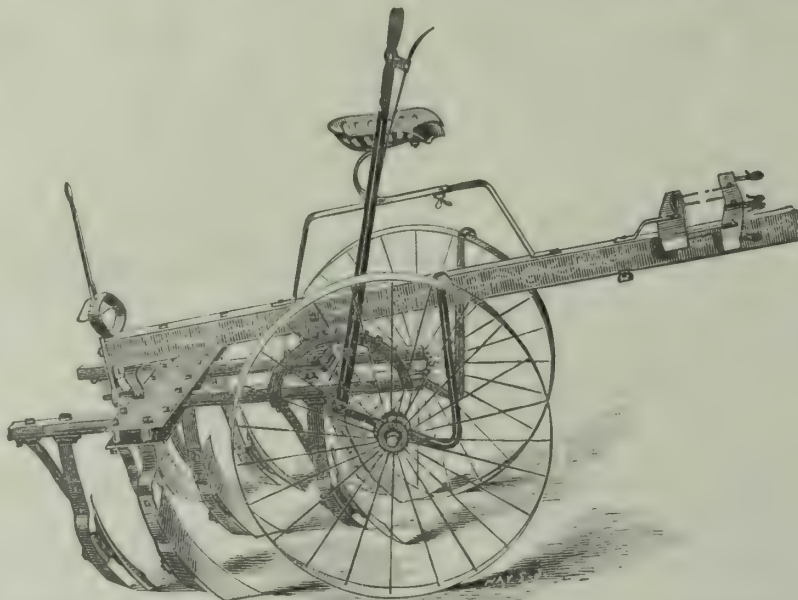
625 Sixth St., San Francisco, Cal.

For quantities of water not less than 100 gallons per minute, and for lifts not exceeding 100 feet, there is no better pump than that illustrated in the annexed engraving. It is very simple, durable, and economical. I make them in sizes from 2-inch, 100 gallons per minute, to 24-inch, with a capacity of 14,000 gallons per minute, and am prepared to build larger sizes to order. They must be set within 20 feet of the water; will draw it that far and force it up 90 feet. They are very satisfactory in wells not over 100 feet deep.

**COMPLETE Power and Pumping PLANTS A SPECIALTY.**

ADDRESS:

BYRON JACKSON, 25 SIXTH ST. San Francisco.

THE SAN JOSE Orchard & Vineyard Cultivator.

The most complete and the easiest handled machine in existence. Made entirely of Iron and Steel, with the exception of the poles. Weight, 335 pounds. This is the only machine that can be handled on the sidehill. By means of the shifting pole and the adjustable teeth the machine works to perfection. These can be used to advantage on level ground also and the machine made to work fully a foot and one half nearer the trees.

All our machines are 7-tooth, 4-foot cut, but can be increased to 9-tooth, 5 foot cut by the addition of two extra arms, secured in a grooved casting, in the ends of the frame, by means of a set screw. This is an improvement not to be found in any other Cultivator, and Farmers having both Orchard and Vineyard will readily see its value, for when cultivating in the Vineyard the 7-tooth is as large as can be used, and when cultivating in the Orchard, by the addition of the two extra arms, the machine is increased to 9-tooth and an extra foot of work accomplished with the same amount of team and without undue strain or exertion.

On the 7-tooth machine the outside teeth extend 8 inches outside the wheels, and on the 9-tooth 16 inches. These Cultivators are perfectly balanced by means of a lifting seat.

All our Cultivators have the PATENT STEEL SHOVEL BACK. This is one of the greatest improvements on cultivating tools ever introduced. The Shovel Back Sleeve is fastened to the Standard by a bolt in the lower hole, while in the upper hole we use a hard wood pin, which in case the Shovels catch a root or strike an obstruction, it breaks off and lets the Shovel fly back, so as to pass over. Nothing is broken but the wooden pin, which can be replaced in a minute's time.

We have Agents for these machines in nearly every town in the Fruit-growing districts of the State. Every machine guaranteed to give satisfaction. Write to us for circulars and we will refer you to our nearest Agent.

Address:

SAN JOSE AGRICULTURAL WORKS,
San Jose, Cal.**PICHOLINE OLIVES For Spring Planting.**

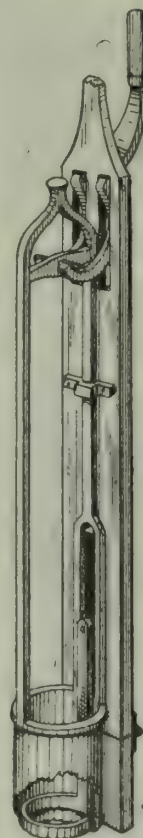
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LUTHER BURBANK, Santa Rosa, Cal.
SANTA ROSA NURSERIES.

Seeds, Plants, Etc.

ORANGE TREES FOR SALE

—AT THE—

ANAHEIM EVERGREEN NURSERY

The Oldest Established Nursery in Los Angeles Co.

100,000 1 and 2-year old Orange and Lemon Seedling Trees.

20,000 Pepper Trees 3 to 5 feet high, and 10,000 in boxes.

150,000 Blue Gum and Monterey Cypress IN BOXES.

A large stock of Italian and Weeping Cypress, Pines and other different kinds of Ornamental Trees.

50,000 Fruit Trees of all kinds.

The Evergreen Trees are taken up with my

PATENT TRANSPLANTER,

With a ball of earth around the roots, just as if they came out of a flower pot.

TIMOTHY CARROLL,

Box 61, Anaheim, Los Angeles Co., Cal.

1000 FRENCH PRUNES,

4 to 5 feet, at \$25 per 100. In lots to suit.

TRUMBULL & BEEBE, Seedsmen,
419 & 421 Sansome St., San Francisco.**SIBLEY'S TESTED SEEDS**

Catalogue Free! Containing all the latest novelties and standard varieties of Garden, Field and Flower Seeds. Gardeners everywhere should consult it before purchasing. Stocks pure and fresh, prices reasonable. Address: Hiram Sibley & Co., Rochester, N. Y., or Chicago, Ill.

SEEDS GIVEN AWAY! A package Mixed Flower Seeds (500 kind-), with PARK'S FLOWER GUIDE, all for 2 stamps. Every flower lover delighted. Tell all your friends. G. W. PARK, Fennettsburg, Pa. Be prompt. This offer appears but once more.

KY. BLUE AND ORCHARD GRASS SEEDS
P. CARROLL, LEXINGTON, KY.

Seeds, Etc., Continued on Page 222.

LOOK AT THIS.

Parties willing to invest in an Improved Grape Picking Implement, as well as some other improvements in Horticultural and Garden Tools, efficient and cheaply made, will do well to address
R. F. TALMADGE,
SANTA ROSA, CAL.

FINE CARPETINGS,
RICH FURNITURE,
ELEGANT UPHOLSTERIES.
CHAS. M. PLUM & CO.
UPHOLSTERING COMPANY,
1301 to 1207 Market St., cor. 9th, S. F.

Friendship With a Bird.

I have had one little brief friendship with a bird during the present summer, which seems like a tender dream, a fleeting glimpse into an unknown world, a peep into fairy-land, to me.

On one summer morning, which had succeeded one of those coolish nights which come a little sharply after a season of intense heat, I stepped out into an old-fashioned garden which lies just beyond my apple tree. A group of crimson petunias was held up by a little dry shrub, to keep them from trailing their silk dresses on the ground below, and there, perched on one of its bare twigs, a little bunch of greeny-gold feathers, sat a young humming-bird. I softly came nearer and nearer, expecting every moment that he would fly away; but the little thing seemed chilled or sleepy, and I at last took him in my hand. He did not seem to flutter, but gasped a little, and I thought him dying. I kept him in my warm hand, and sending for a lump of loaf sugar and a tiny glass of water, I took him indoors. I patiently held him in one hand, warming him, while with the little finger of my right hand I held a drop of the sweetened water to his bill for some minutes, and was finally rewarded by the little bill opening and the wiry little tongue sipping the sweet from my finger, running about under the nail of it, as if it were a flower. He soon grew lively, flew around the room, and perched on some flowers on my dresser. Then he took longer flight, and grew so tame that when he was hungry he would fly down to me from the top of a picture or mirror frame, and alight on a little twig which I would hold out, where he would sit and sip his sugar and water from a teaspoon or the end of my finger. Three drops satisfied his desire for the time, and away he would fly again, always alighting with a little chirp, or rather squeak, for it sounded precisely like a little mouse. Once I varied his food with diluted honey, but he seemed to prefer the sugar. I gave him the range of two rooms, and having no cage, I fastened a spray of fuchsias by my window, where he slept at night, with the tiny head under the wing, never moving until the dawn came, when he became uneasy until he had his sip of sugar and water.

What completely won my heart was the fearless confidence of the little thing. One day, I remember, he had alighted on the edge of the dish of honey, and losing his balance, he smeared his breast with the thick honey. I cleaned it as well as I could, but some of it dried and stuck the small feathers together. The next day I tried again to moisten and clean them out with some soft article and tepid water. He was sitting on a twig held in my left hand, and as I rubbed a little hard, he scolded and moved a trifle along on the twig, as much as to say, "Work away, but please be more gentle."

Another thing he delighted in was to be held on his twig over a large spoonful of soft water, and dip in his beak and splash water over his little body.

I did not have him long; indeed, how could I rob him of the outdoor, happy August days, which were passing so rapidly out of his brief life? So, I said to myself every morning, while I surrounded his window with fresh flowers, and still kept the glass closed between him and freedom; but the little thing awakened an almost human love in the heart with his own trusting confidence and his rare gem-like beauty.

Finally, on one evening, when he seemed settled on his twig for the night, I opened an outside door to the room for a brief moment, and just as I was closing it again, there came a little whirr over my head, a dash of golden green, and he was gone.

That night it blew and rained. I could not sleep, for it seemed to me there was a tender baby out in the chilly rain. But I have seen many humming-birds since then, still flying about the petunias and late summer roses, so we will trust that my little pet was soon sheltered and companioned among his own relations, and ready to start with them on the long aerial journey southward. But to me he was like a visitant from fairy land.—*Vick's Magazine for February.*

"Stop My Paper!"

We don't know where this funny piece originated, but we lately came across it in the *Modesto News*. A country editor was made to writhe in keenest humiliation of spirit on receipt of the following scathing criticism on the conduct of his paper by a subscriber:

DEAR SIR: I hereby offer my resignation as a subscriber to your paper, it being a pamphlet of such small consequence as not to benefit my family by takin' it. What you need in your shete is branes and some one to rassel up news an' rite eddytorials on live topics. No mention has been made in your shete of my butcherin' a poland china pig weighin' 369 pounds, or of the gaps in the chickens out this way. You stenjully ignore the fact that the tater bugs an' eatin' things up out here, and say nothin' bout Hi Simpson's durham bull calf breakin' its legs fallin' down a well, or of grandma sippin' havin' the sore leges. Two important weddin's here has been utterly ignored by your columns, an' a two-kolum obituary writ by me on the death of grandpa Henry, was left out of your shete, to say nothin' of a alphabetical poem beginnin' with "A is for Andy and also for Ark," writ by my darter. This is why your shete is unpoplar here. If you don't want eddytorials from this place and ain't goin' to put in no news in your shete we don't want said shete. Yours in disgust,

HIRAM DOAKS.

P. S.—If you print that obituary in your next isoo I may sign again for your shete.

PACIFIC COAST WEATHER FOR THE WEEK.												
[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]												
DATE.	Portland.				Eureka.				Red Bluff.			
Mar. 1-7.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.
Thursday.....	.12	48	E	Fr.	.06	44	S	Ry.	.18	38	S	Ry.
Friday.....	.00	46	E	Fr.	.96	49	SE	Cy.	.56	46	S	Cy.
Saturday.....	.00	46	S	Cy.	—	—	—	—	.11	44	S	Fr.
Sunday.....	.00	48	E	Cy.	—	—	—	—	.71	36	S	Sy.
Monday.....	.08	40	S	Ry.	—	—	—	—	.56	50	S	Fr.
Tuesday.....	.26	50	S	Cy.	—	—	—	—	.04	50	SE	Fr.
Wednesday.....	.10	44	NW	Cl.	.57	48	NE	Ry.	.T	52	S	Cy.
Total.....	.56								2.16			

EXPLANATION.—L for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature, wind and weather at 12:30 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING FEBRUARY 28, 1888.

- 378,762.—LOCOMOTIVE SMOKESTACK—P. J. Brown, Winslow, A. T.
- 378,826.—PAINT—H. Burnett, East Portland, Oregon.
- 378,576.—CORSET-STEEL PROTECTOR—Ellen Cushing, S. F.
- 378,581.—HARVESTER—M. P. Farnham, Germantown, Cal.
- 378,833.—FIRE ESCAPE—Gavin, Cromer & Cromer, Eureka, Nev.
- 378,834.—WRENCH—Gavin, Cromer & Cromer, Eureka, Nev.
- 378,589.—ADVERTISING CLOCK—G. Hoisholt, Watsonville, Cal.
- 378,590.—HYDROCARBON BURNER—H. L. Howse, S. F.
- 378,450.—ORE-CRUSHER—S. Kendall, S. F.
- 378,455.—CRIB BEDSTEAD—Carrie Morse, S. F.
- 378,520.—MANUFACTURE OF PAPER—Pearce & Beardsley, Oakland, Cal.
- 378,556.—MAGAZINE GUN—E. E. Redfield, Linkville, Ogn.
- 378,721.—MEANS FOR PREVENTING THE CREEPING OF RAILS AND RAIL JOINTS—J. J. Reilly, Spokane Falls, W. T.
- 378,528.—CORRECTING DEVICE FOR SHIPS' COMPASSES—L. Sirieix, S. F.
- 378,809.—RAILWAY SWITCH—W. H. Stowell, Eureka, Cal.
- 378,819.—STOCKING—Frank Wilcomb, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

TIMBER FRAUDS IN CALIFORNIA are drawing notice at the East. The *N. Y. Herald* had a long article a few days ago about the 20,000-acre "grab" in Mendocino county. It avers that in the two counties of Mendocino and Humboldt, which are at present chiefly given over to the timber and lumber business, nineteen-twentieths of the pre-emption and commuted homestead entries in the timber belt are fraudulent and were made solely for the purpose of clearing off the timber, and finally calls on Congress to take action in the premises.

A FINE FRUIT EVAPORATOR.—L. W. Parsons of San Jose has patented a fruit evaporator, which, he claims, is constructed on really scientific principles. His premises and reasonings appear sound, and the testimonials he shows from many people here in California, who have bought and used the machine, are thoroughly satisfactory. His advertisement may be found in this paper, and he has issued an illustrated pamphlet describing the apparatus.

In the Conservatory.

Not long ago we gave an interior view in the conservatory at Golden Gate park, S. F., and some general facts about the building and its contents. On page 214 is another view, showing a warm corner in which is a wealth of vegetation from distant climes. All visitors to the city should plan to give a day to a leisurely examination of the park and its appointments.

THE ALCOFFS, FATHER AND DAUGHTER, have passed on. A. Bronson Alcott, the well-known teacher, philosopher, and conversationalist, died on the 4th inst., at the ripe age of 88, and his daughter, Louisa M., the famous writer, survived him only two days. In their lifetime they both brought light and cheer to many a human soul and "their works do follow them."

WHO are the Anarchists? What is their doctrine? Why would they overthrow society and government, and what do they wish to substitute?—are questions frequently asked by thoughtful citizens. An article by Z. L. White, in the March number of the *American Magazine*, will answer such inquiries.

A BOILER WITHOUT RIVETS.—A German manufacturer is now making a boiler in which no rivets are used. The joints are all welded, and the cost is said to be but slightly in excess of rivet work.

DR. J. D. B. STILLMAN died at his home in Lugonia, San Bernardino county, on Friday evening, March 2d. He was a native of Schenectady, N. Y., and educated at Union college. He came to California in '49, was for a time surgeon on one of the P. M. Co.'s steamers, and afterward practiced medicine in Sacramento and San Francisco. He retired from practice several years ago and made a home at Lugonia, where he owned considerable property. Dr. Stillman had traveled quite extensively, and was the author of many articles on scientific and general topics, and a book entitled "In Search of the Golden Fleece." He was genial, magnanimous and honorable, and had the love and respect of a wide circle of friends. He leaves a widow—his second wife—four sons and two daughters.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

A NEW FIRM.—Many readers will recognize old friends in the names of a new firm which opens business in the agricultural implement line in this city, as advertised in this week's *RURAL*. The firm is Burge & Donahoo, and their location is 26 Beale St. Mr. S. S. Burge made wide acquaintance while manager of the Grangers' Union at Stockton, and Mr. Donahoo has also been prominent in important enterprises. The firm have other goods besides those mentioned in their advertisement this week which they will set forth in their future announcements.

Inducements to Subscribers.

To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, if requested the following articles (while this notice continues), at the very greatly reduced figures named at the right:

- 1.—The Agricultural Features of California, by Prof. Hilgard, 138 large pages, illustrated, cloth, with colored maps (full price \$1).....\$0.25
- 2.—World's Encyclopedia, 794 pages, 1250 illustrations; (exceedingly valuable).....50
- 3.—Dewey's Patent Elastic Binder (cloth cover), name of this paper stamped in gilt.....50
- 4.—Niles' Stock and Poultry Book for Pacific Coast, pamphlet, 120 pages, illustrated.....25
- 5.—Kendall's Treatise on the Horse and Diseases, 89 pages, instructive illustrations.....05
- 6.—To New Subscribers, 12 select back Nos. of the *RURAL PRESS*, "good as new".....Free
- 7.—Any of Harper's, Frank Leslie's and most other first-class U. S. periodicals, 15 per ct. off regular rates.
- 8.—Pacific Coast and Eastern Dailies, Books and Periodicals, except special publications, we can usually give 10 to 15 per cent off advertised retail rates.
- 9.—March of Empire, by Mallie Stafford.....25
- 10.—Life Among the Apaches, 322 pages, stiff cloth.....25
- 11.—\$1 worth of choice seeds, to be selected from a list of 107 flower and 82 garden seeds, as previously published, or which list we will send on application.....25
- 12.—Dewey's Pat. Newspaper Fileholder (18 to 36 in.).....25
- 13.—European Vines Described, 63 pages.....05
- 14.—Webster's Dictionary, 634 pages, with 1500 illustrations; very handy and reliable.....50
- 15.—Architecture Simplified, 60 pages.....05
- 16.—Mother Bickerdyke's Life with the Army; patriotic and ably written; 166 pp., cloth, \$1.00.....50
- 17.—Ropp's Easy Calculator, cloth, 80 pp.....25
- 18.—How to Tell the Age of a Horse.....05
- 19.—Percheron Stud Book—French—bound in leather, 192 pages (full price, \$3).....1.00
- 20.—What Every One Should Know; a cyclopedia of valuable information; 510 pp.; cloth; (full price \$1).....50
- 21.—Knitting and Crochet, by Jennie June; 144 pp., 200 illustrations.....25
- 22.—Needle Work, by Jennie June; 128 pp., 200 illustrations.....25
- 23.—Ladies' Fancy Work, by Jennie June; 152 pp., 700 illustrations.....25
- 24.—The Way to do Magic; illustrated, 60 pp.....10
- 25.—The Taxidermist's Manual; illustrated, 64 pp.....10
- 26.—Beautiful Poetic Review, entertaining and instructive; 35 pages (a handsome and pleasing present).....25

NOTE.—The cash must accompany all orders. Address this office, No. 252 Market St., S. F. Inform your neighbors about our offers and paper. In writing correspondence, items of information, or on other business, please use a separate sheet. Sample copies of this paper mailed free to persons thought likely to subscribe. Send for free circular describing most of these premiums, and any further information desired.

The Driven-Well Patent.

It may be recollected that on the 14th of November last the U. S. Supreme Court, in an opinion by Judge Blatchford, declared the "driven-well patent" invalid, and affirmed the decree of the lower court in favor of the alleged infringer, Hovey.

The scheming owners of the patent, however, were raking in too much money, in the shape of royalty from farmers, to submit to this just decision, until the last effort to overthrow it had been put forth, so they applied for a rehearing—with what result is told in the following dispatch, of a fortnight since:

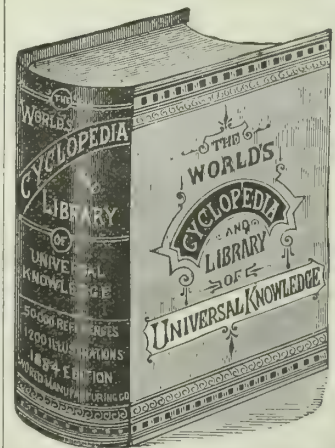
A decision was rendered in the United States Supreme Court to-day upon the application for a rehearing in the case of Wm. D. Andrews and others against Geo. Hovey, which is widely known as "the driven-well case." This court held that the patent issued to Nelson W. Green in 1871 for improvement in the method of constructing artesian wells was invalid, because the invention covered by it was in public use more than two years before Green applied for the patents. The court, after an exhaustive review of the whole case, denies the application for a rehearing.

This probably settles the case for good, relieving the farmers in a large extent of country from what they have long regarded as a burdensome exaction, and giving them and all lovers of justice reason to rejoice.

"THE ERTEL VICTOR," a baling press, manufactured by Geo. Ertel & Co. of Quincy, Ill., forms the center of a handsome engraving, 18x30 inches, around which are tastefully grouped a portrait of the head of the firm, a view of their extensive works and cuts explanatory of devices used in their machines.

EXTRAORDINARY OFFER!

This Valuable Book for 50 Cents!



To every one who subscribes to this paper, it contains 50,000 Separate and Distinct References; 1200 Engravings illustrating various topics. Accurate and concise information on Art, Science, Philosophy and Religion, including learned essays by the compiler, Prof. H. L. Williams and several hundred other authors. The articles on Anatomy, Architecture, Agriculture, Astronomy and the Fine Arts, are full and explicit. Botany, Chemistry, Engineering, Geography, Geology and History are each treated ably and explicitly. The article on Engineering is still further amplified by a full description, illustrated with plates and diagrams of the Great Brooklyn Bridge; Mechanics with plates illustrating Mechanical Motions. Mineralogy, Medicine, Law, Languages and Governments, are so clearly treated, that every one who reads can understand. In addition to the full and complete Cyclopædia, arranged in alphabetical form, we have bound up in the volume, a Complete Library of Knowledge, including a Guide to Correct Speaking and Writing; Book-keeping, a complete guide to business; Chronological History; Mythology; AN INDEX TO THE HOLY BIBLE; a complete brief Biographical Dictionary; full and complete statistical history of the United States, corrected down to 1884. The Interest, Banking, Usury, Insolvent and Homestead Laws of the United States, are for the first time gathered together in one volume. A LIST OF COUNTERFEIT NOTES WITH RULES FOR DETECTION OF COUNTERFEITS. Separate Dictionaries of Musical, Nautical, and Geographical terms; a carefully prepared treatise on Pronunciation, giving rules and examples whereby every one can become his own teacher. AN APPENDIX OF THE ENGLISH DICTIONARY, giving hundreds of words not contained in the ordinary dictionaries. FLAGS OF ALL NATIONS beautifully illustrated by colored plates. In fact the book is a library in itself. It has 800 pages, and is more profusely illustrated than any other Encyclopedia at the price, and contains a mine of information on almost every subject known to man. Every one of the many departments is worth more than the cost of the book. As "knowledge is power," this Cyclopædia will be a source of wealth to thousands in all ages and conditions in life. This handsome octavo volume is printed on good paper, and handsomely bound in cloth embellished with gold. Without guaranteeing all that is said above by the Eastern publishers of the work, the proprietors of this paper consider the book a valuable one, and in the absence of a more costly publication) very desirable in most households, and worth several times the cost mentioned above. In fact, we will refund the cost, with postage added, if any subscriber chooses to return the Cyclopædia to us within thirty days after receiving it. Address the publishers of this paper. While this notice appears, the WORLD'S CYCLOPEDIA will be sent to any subscriber (old or new) who orders it, and pays his subscription 1 year in advance and 50c additional.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

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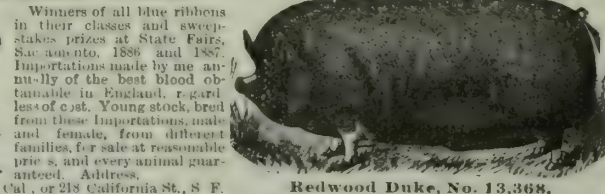
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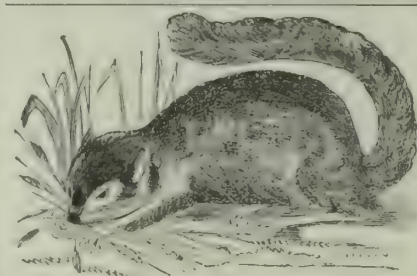
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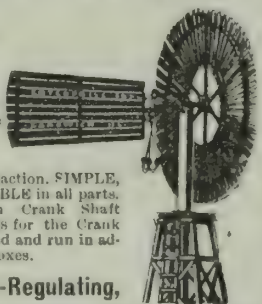
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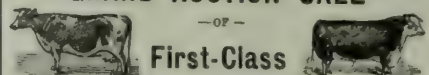
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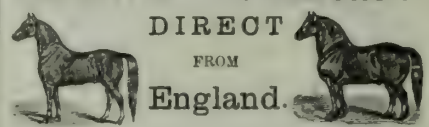
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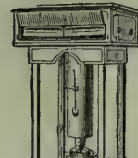
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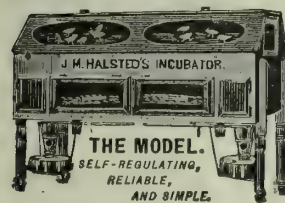
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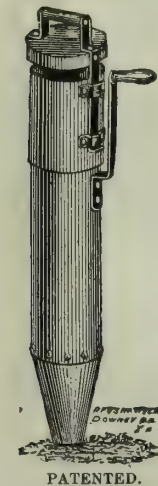


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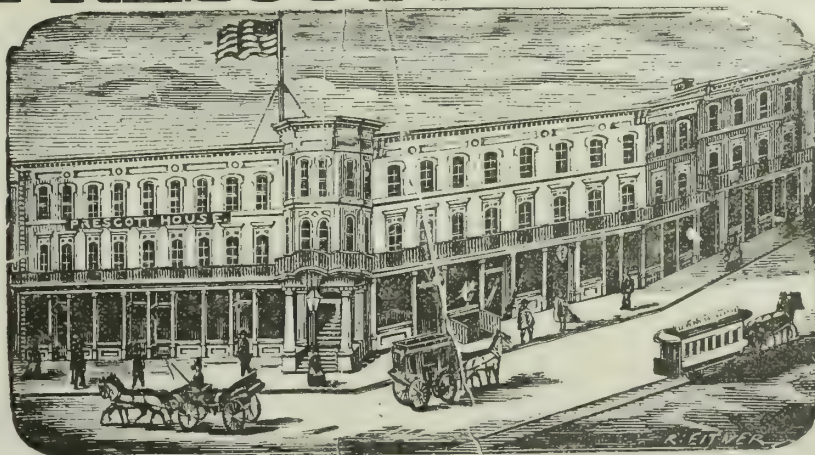
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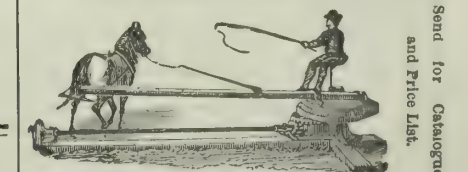
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DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, March 7, 1888.

Rains the past week were opportune, and being general will do much in giving a large outturn of all kinds of crops. Trading has been fair notwithstanding the rains. Many lines of produce were taken for shipment to the East, so as to take advantage of the present freights. Eastern and European wheat markets ruled firm throughout the week. To-day's cable is as follows:

LIVERPOOL, March 7.—Wheat—Quiet but steady. California spot lots, 6s 6d@6s 9d; off coast, 33s 9d; just shipped, 33s 6d; nearly due, 33s 9d; cargoes off coast and on passage, quiet but steady; French country markets, turn dearer; wheat on passage to Continent, 230,000 qrs.; wheat and flour on passage to U. K., 1,753,000 qrs.

Foreign Review.

LONDON, March 5.—The *Mark Lane Express* says: Provincial markets record a slight advance in native wheats. In London the market does not improve. Flour is dull but values are maintained. Foreign wheat is lifeless. Large arrivals of flour from America act as dead weight on the home market. Corn is dull and oats 3d dearer.

California Products in Chicago.

CHICAGO, March 3.—Oranges remain firm. A very good demand exists. Florida oranges are getting scarce, the bright fruit already being pretty well gone. There are fair arrivals of California and they sell moderately, and Messina are in very good demand, with the supply of them good. Sales covered just about the former range of prices: California Riverside oranges, \$3.50; other kinds, \$2.75@3; Riverside Navel, \$5.50@6; other Navel, \$4.50@5. In California dried fruits moderate business was reported. Sales are mainly of small lots. Prices are generally steady, and the supply of the several descriptions fair but not heavy. We quote: Peaches, sun-dried, in sacks, 1 lb. 11@12c; do evaporated, unpeeled, in sacks, 1 lb. 13@15c; do, boxes, 1 lb. 14@16c; do, peeled, in sacks, 1 lb. 17@22c; do, in boxes, 1 lb. 22@25c; apricots, sun-dried, in sacks, 1 lb. 10@12c; do, evaporated, in sacks, 1 lb. 12@16c; plums, pitted, in sacks, 1 lb. 12 1/2@13 1/2c; prunes, small, 1 lb. 8@10c; do, fancy large, 1 lb. 13@14c; nectarines, according to quality, in sacks, 1 lb. 5@12 1/2c; raisins, loose Muscatis, 2-crown, 1 box, \$1.45@1.50; do, 3-crown, 1 box, \$1.60@1.80; do, London layers, 1 box, \$2.30@2.40.

Good to choice grades of hops are meeting with a fair demand. The feeling in the market is quite firm for such grades, owing to moderate supply. Trade has not been of sufficient magnitude, however, to cause any advance for low grades. The market remains dull, for there is an ample supply. Pacific Coast, choice, 1 lb. 12@14c; common to prime, 9@12c.

Beans are ruling firm. During the latter part of this week more business has been done and trade can be said to be picking up again. There are few straight lots of good domestic beans offered, the supply consisting mainly of imported goods. Quotations are: California, according to quality, \$2.25@2.85.

Oranges at New York.

NEW YORK, March 5.—The fact is announced to the trade through the *Commercial Bulletin* that Strong & Co. of Los Angeles will begin free shipments of oranges to the East at once, sending forward the first train to-morrow. The market reports to-day show that last month Florida sent 32,400 boxes of oranges to this city, the total to date for the season being 198,100 boxes.

Wool.

NEW YORK, March 5.—The dealing in wool is chiefly to manufacturers, with no great volume of sale. The tariff does not at the moment appear to affect trade. The following are the sales for the week: 3,000 lbs. Spring California C, 19c; 900 lbs. scoured, 45@55; 10,000 lbs. do, 45@52; 18,000 lbs. medium Oregon, 25; 20,000 lbs. Territory, 20; 25,000 lbs. Colorado scoured, 35@47; 20,000 lbs. fall Texas, 15 1/2; 15,000 lbs. do, 16; 20,000 lbs. quarter blood-washed combing, 36@60; No. 1 washed, 35; 3,000 lbs. coarse, 34; 3,000 lbs. No. 1 washed, 27; 20,000 lbs. XX and above, 33; 30,000 lbs. XX, 32; 25,000 super-pulled wool, 35 1/2; 15,000 lbs. combing, 36 1/2. About 22,479 bales of East India, 28,000 lbs. Bagdad and 500 bales of Cape were sold on private terms.

Philadelphia reports an active market for fine qualities, with sales of 921,000 lbs.

In Boston it was the duller week of the year, with sales of 4,400,000 lbs. of domestic.

There are 25,320 bales of Australian wool on the way to America.

Miscellaneous.

NEW YORK, March 6.—Some movement is making in California prunes.

Dried and canned fruit unchanged.

Lima beans are up to \$2.85. White are strong.

There is nothing new in business. State range from 8 to 14, Pacific 4@12. The bids for export are too low to lead to business. Some prime Washington Territory are quoted at 11. German is unchanged. Raisins are steady and firm.

Eastern Grain Markets.

CHICAGO, March 7.—Wheat easy and lower; cash, 75 1/2c; April, 75 1/2c; May, 80 1/2c. Corn, easier; cash, 48 1/2c; April, 48 1/2c; May, 52 1/2c. Oats, steady; May, 31 1/2c.

NEW YORK, March 7.—Wheat, 92 1/2@92 1/2c for cash, 90 1/2@90 1/2c for March, 91 1/2c for April, 91 1/2@91 1/2c for May, 91c for June and 90 1/2c for July.

Local Markets.

BAGS—Rains the past week cause a strong tone but at unchanged quotations. June-July delivery is quotable at 7 1/2@8c for Calcuttas.

BARLEY—Heavy shipments of the more choice to the East have created a scarcity of bright grades. Some localities oversold and will probably have to draw from this city. The market is strong. On Call there is a better feeling in futures with large

buyers taking all sold. To-day's sales are reported as follows:

Morning Session: Buyer season—600 tons, 83 1/2c. Afternoon Session: Buyer season—100 tons, 83 1/2c. Buyer 1888—100 tons, 92 1/2c; 100, 90 1/2c 1/2 ctl.

BUTTER—The market continues to sag under free receipts and only a fair demand. The lower prices, with still lower values expected, have stopped the importation of Eastern.

CHEESE—New mild is very firmly held at full figures, owing to light supplies.

EGGS—The market, under lighter receipts and no Eastern coming in, strengthened some, closing firm at quotations.

FLOUR—The market is steady, with a good trade call ruling.

WHEAT—The market is firm under a scarcity of the better grades. On Call, futures have ruled firm and higher throughout the week. The impression prevails that a still higher range will obtain next month. At to-day's Call the sales reported are as follows:

Morning Session: Buyer season—200 tons, \$1.38 1/2; 200, \$1.38 1/2. Afternoon Session: Buyer season—400 tons, \$1.38 1/2 1/2 ctl.

(COMMUNICATED.)

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to Mar. 5, '88.	July 1 '87 to Mar. 3, '88.
Flour, qr. sks.	3,229,760	2,564,108
Wheat, cts.	10,322,212	6,527,518
Barley, cts.	1,911,223	1,833,268
Oats, cts.	114,606	140,929
Potatoes, sks.	681,060	800,197
Corn, sks.	73,391	166,191
Kye, sks.	19,658	15,693
Buckwheat, sks.	5,342	2,746
Beans, sks.	395,130	362,057
Bran, sks.	339,926	352,202
Hay, tons.	72,927	86,545
Salt, tons.	16,333	11,640
Wool, bls.	45,287	39,891
Hides, No.	75,321	71,778
Raisins, 20-lb boxes.	135,253	104,006
Quicksilver, flasks.	12,268	20,709
Hops, bls.	12,663	14,742

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to Mar. 5, '88.	July 1 '87 to Mar. 3, '88.
Flour, sks.	166,757	186,727
Wheat, cts.	437,452	768,185
Barley, cts.	5,149	75
Oats, cts.	284,752	168,995
Corn, cts.	78,306	12,590
Wool, bales.	9,063	7,370
Bran, sks.	27,918	49,798
Hops, bales.	754	373
Hides, No.	22,985	23,600
Rye, cts.	2,765	2,765
Potatoes, sks.	67,830	39,901

Cereals.

The quantity of wheat on passage for Europe Feb. 23, 1888, was 14,040,000 bu., comprising 12,704,000 bu. to the United Kingdom and 1,336,000 bu. to the continent of Europe. The quantity of wheat on passage to Europe a year ago was 22,104,000 bu., comprising 17,360,000 bu. to the United Kingdom and 4,744,000 bu. to the continent of Europe, being a decrease this year as compared with last of 8,064,000 bu., comprising 4,656,000 bu. less to the United Kingdom and 3,408,000 bu. less to the continent of Europe, but was 1,264,000 bu. larger than a week ago. The quantity of maize on passage to Europe Feb. 23, 1888, was 3,600,000 bu., including 2,776,000 bu. to the United Kingdom and 824,000 bu. to the continent of Europe. The quantity on passage a year ago was 3,232,000 bu., including 2,648,000 bu. to the United Kingdom and 584,000 bu. to the continent of Europe. The quantity was in the week augmented 808,000 bu., and was 340,000 bu. larger than at the corresponding date in 1887, and was 128,000 bu. more to the United Kingdom and 240,000 bu. more to the continent than one year ago.

Oregon advises report that the bulk of the surplus wheat has been placed, and as the demand is good choice grades are more firmly held. Last month's export aggregate to foreign countries 792,302 bushels of wheat and 72,448 bbls flour. Reducing flour to wheat and the total export aggregates 1,163,542 bushels. Crop advices are favorable, for the weather has been good for growing crops. The reseeded of farms wherein the plant was killed by the unfavorable weather in January has been finished. Eastern Washington advices are favorable, for so far as can be ascertained the plant did not suffer in last January.

In this State rains the past week were of incalculable benefit to the growing wheat, and with the usual spring rains a large outturn to the acre can reasonably be expected. The plant is generally reported to be well stooled and rooted. The acreage seeded is not much larger than last year, but so far the outlook is more promising. Trading the past week was fairly active considering the light available supply of the better grades. Sales of strictly No. 1 white shipping were made at \$1.35, but good sold at \$1.33 1/2, while fair No. 1 sold at \$1.32 1/2. What is now called strictly No. 1 white shipping was called barely No. 1 white shipping the fore part of the season. It is claimed that the quantity of the better grades in the State will not meet the requirements up to June next, while all the better grades of shipping will be cleaned up before that time.

The barley market ruled firm throughout the past week for the better grades, and this too in the face of heavy rains well distributed throughout the State. A falling off in the stock in the warehouses last month, notwithstanding heavy receipts, caused buyers to feel more confident and also caused them to take hold more freely, but not at much higher figures. The overland shipments will probably cease after this week, but shipments of choice Chevalier by sea will continue for a short time longer. The crop prospects are good, but then there is a lessened

acreage, while the consumption is not only very large but increasing throughout the State. The bulk of the barley held here and in the country is off grade, that in this city of good to choice feed, is held against Call Board contracts.

Choice oats are scarce and wanted at full figures, but poor grades are in liberal supply and only placed with difficulty except at concessions on ruling quotations. The stock here is light while the receipts are moderate.

In rye and buckwheat there is nothing new to report.

Feedstuff.

Receipts of bran and middlings are only fair, and as there is, for the season, a good demand, prices keep well up. Ground barley continues to go out freely for the season. The market for all kinds of ground feed closed steady.

Hay is strong at full prices for choice wheat, first quality oats and the best wheat and oats. Other kinds are firm, but the three named are scarce and wanted. The supply of alfalfa is good. There has been an unusual free buying in a small way of alfalfa seed this winter, presumably for pasture and hay.

Live-Stock.

The market is shading off for bullocks and mutton sheep under freer offerings and only a fair consumption. Distant points have been feeding the market, but with improved pasturage the near-by points are beginning to offer more freely. The condition of the stock is good, but not up to the usual average in March. Spring lambs and calves are scarce and fetch good prices. Some large-sized three-quarter Southdown came in and fetched over \$10 a head—although only a few months old they average more in weight than do the general run in sheep, and being young sold at a high price. More attention is being paid to breeding sheep for the carcass, as it pays better than breeding for wool. In horses and milch cows there is nothing new to report—last week's report covering this week's market.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-feed, and one-half from the price of grass-fed, that is, animals running at large).

HOGS—On foot, grain-fed, 6 1/2@6 3/4c per lb.; dressed 9@10c per lb.; soft, 5 1/2@6c per lb.; dressed, 7@10c per lb. Stock hogs, 3 1/2@5 1/2c per lb. BEEF—Stall-fed, 8c per lb.; grass-fed, extra, 7 1/2@ — per lb.; first quality, 7c@ — per lb.; second quality, 6 1/2@ — per lb.; third quality, 5@6c per lb.

VEAL—Choice, 12 1/2@15c per lb.; fair to good, 8@10c per lb.

MUTTON—Wethers, 9@10c per lb.; ewes, 9@9 1/2c per lb.; lamb-spring, 15@17 1/2c per lb.

Fruits.

Apples are slow, being out of season. Oranges meet with a good demand, particularly good keepers to fill northern orders. Since the completion of the railroad to Oregon, the trade with that section has more than doubled. Receipts so far this year are less than for the like time last year, as are the shipments overland. The market is firm at quotations.

There has been a good inquiry for dried fruits the past week, the call from the East being chiefly for peaches and apricots. For apples, the coast has taken quite freely in a small way. Stocks of all kinds are quite light, as are the stocks of canned fruits.

In raisins there is nothing new to report. The demand is good for the season, but the supply is light.

All private advices are confirmatory that the prospect for a large fruit crop this year was never better, although some varieties will be later than usual, owing the backward season. Berries are very backward, but the present weather is pushing the vines forward at a remarkable rate, and when they do begin to bear, it will probably be in large quantities. The only unfavorable outlook at present for horticulturists is the high overland freights. Dealers here think that horticulturists should make a more determined effort to fight for lower overland freights and also better transportation facilities. The switching off on the Government tariff it is thought is rather unfortunate for the high freight tariff, and poor shipping facilities is what keeps the industry down.

Vegetables.

The rains of the past week followed by warmer weather have given garden truck quite a vigorous start, and soon spring truck will be in abundance.

Asparagus is coming in more freely, but the high price restricts free sales, still the market cleans up well. The same remarks apply to green peas, new potatoes, rhubarb and green peppers. Very few tomatoes came in the past week.

Potatoes ruled fairly steady throughout the week, due mainly to the rainy weather lessening receipts. There is a good call for choice. It is claimed that considerable coming in have a dry rot.

The market the past week for onions ruled easy, except for good-sized, hard well-conditioned. Small-sized and also those that will not keep long were weak. Cut onions are slow.

In cabbages, the market is steady. Very few new are coming in, but free receipts are expected soon.

Miscellaneous.

Poultry ruled very high throughout the week under light receipts and a good demand.

Beans are very strong in sympathy with the East, where a still higher range of values is expected to rule before the close of next month, owing to scant supplies.

In honey there is nothing new to report. The trade call is only fair owing to light supplies.

Alfalfa seeds have been going off quite freely in a small way at from 8 1/2 to 9 cts. In other seeds the movements have only been fair.

Hops are more strongly held, owing to light supplies abroad, at the East and also on this coast; but then many brewers use substitutes to a very great extent.

In wools the market is reported quiet, due chiefly to the poor assortments and dealers waiting for the new clip.

Last year's wool clip of Great Britain aggregated 135,750,000 pounds and sold on an average at 19 cents per pound to the grower—that is, it netted him 19 cents per pound.

The United Kingdom crops for three years past are officially given as follows:

	1887.	1886.	1885.
	Bush.	Bush.	Bush.
Wheat	76,224,940	63,347,885	79,635,769
Barley	69,948,266	78,309,607	85,721,632
Oats	150,789,416	149,376,088	160,440,907
Beans	8,473,007	10,490,447	9,122,028
Peas	5,623,226	5,873,317	4,339,260
	Tons.	Tons.	Tons.
Potatoes	7,134,296	5,835,487	6,374,242
Furnishes	22,466,877	33,987,415	24,062,608
Mangolds	5,878,328	7,785,811	5,960,523

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way	365,585	206,816
In port, disengaged	68,372	122,059
In port, engaged	34,361	17,311

Totals 468,318 345,186

To obtain the carrying capacity, add 60 per cent to the tonnage.

San Francisco, March 7, 1888.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 7, 1888.

Apples, br. com.	50 @ 75	Nectarines	8 @ 11
do choice	1 00 @ 1 75	do evaporated	12 1/2 @ 18
Apricots, lb.	— @ —	do pared	— @ —
Bananas, bunch	2 50 @ 5 00	do evaporated	20 @ 25
Blackberries, cr.	— @ —	Pears, sliced	4 @ 7
Cantaloupes, ch.	— @ —	do whole	11 @ 12
Cherries white br.	— @ —	do evaporated	11 @ 12
do black br.	— @ —	Plums, evapo'd	11 @ 12 1/2
do Royal Ann.	— @ —	do unplitted	4 @ 7
Cherry plums	— @ —	Prunes	7 @ 10
Crabapples	— @ —	do French	8 @ 11
Cranberries	10 @ 12 00	Zante Currants	8 @ —
Currants ch.	— @ —		
Gooseberries lb.	— @ —		
Figs, black br.	— @ —	Dehesa Clara, fcy	3 25 @ 3 50
do white br.	— @ —	Imperial Cabin-	— @ —
Grapes, white	— @ —	et. fancy	2 00 @ 2 25
do black	— @ —	Crown London	— @ —
do Rose Peru.	— @ —	do Layers	1 80 @ 2 00
do Muscat	— @ —	do Loose Mus-	— @ —
do Tokays	— @ —	catels, fancy	1 80 @ 2 00
Isabel	— @ —	do Loose Mus-	— @ —
Wine, Zinfandel	— @ —	catels	1 60 @ 1 75
do Mission	— @ —	Cal. Valencia	1 60 @ 1 80
Limes, Mex.	— @ —	do Layers	1 50 @ 1 61
do Cal. box	— @ —	do Sultanas	1 60 @ 1 75
Lemons, Cal.	1 00 @ 3 00	Dried, sacks	5 @ 6
do Sicily, box	4 00 @ 5 00	Fractions come 25, 50 and 75	
do Australian	— @ —	cents higher for halves, quar-	
Nectarines box	— @ —	ters and eighths.	
Oranges, Com. bx	1 50 @ 2 00		
do Choice	2 50 @ 3 50		
do N. A. vels	— @ —		
do do Com.	5 00 @ 6 00		
do do Com.	3 00 @ 4 00		
do Panama	— @ —		
Plums lb.	— @ —		
Peaches, br.	— @ —		
Oranworts, bx	— @ —		
do choice	— @ —		
Pears br.	— @ —		
do choice	— @ —		
do Bartlett, bx	— @ —		
Persimmons	— @ —		
Jap. bx.	— @ —		
Pineapples, doz.	2 00 @ 4 50		
Pomegranates	— @ —		
Prunes lb.	— @ —		
Quinces br.	— @ —		
Raspberries ch.	— @ —		
Strawberries ch.	— @ —		
Watermelons	100 @ —		
Apples, sliced	5 1/2 @ 6	do sweet cr.	— @ —
do evaporated	9 1/2 @ 10 1/2	do large box	— @ —
do quartered	11 @ 12 1/2	Green Peas, lb.	8 @ 10
Apricots	8 1/2 @ 10 1/2	Sweet Peas lb.	— @ —
do evaporated	15 @ 17	Letatoes, doz.	— @ —
Limes	12 1/2 @ 15	Green Beans	— @ —
Blackberries	18 @ 25	Mushrooms, lb.	10 @ 30
Onions	9 @ 10	Rhubarb lb.	10 @ 20
Pigs, pressed	5 @ 6	Cucumbers, doz	1 00 @ 2 50
Figs, loose	3 @ 4		

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 7, 1888.

NOTATIONS.		WEDNESDAY, March 7, 1880.		
BEANS AND PEAS.				
Barley	2 25 @	2 50	Paper shell..... 15 @ 12	
Butter.....	@	@	Peasants..... 4 @ 16	
Poa.....	3 75 @	4 25	Peanuts..... 4 @ 6	
Red.....	2 20 @	2 50	Pilberts..... 10 @ 12	
Pink.....	2 20 @	2 50	Hickory..... 5 @ 6	
Large White.....	3 50 @	4 25		POTATOS.
Small White.....	4 00 @	4 25	Burbank..... 1 @ 1 25	
do.....	2 25 @	3 00	Early Rose..... 90 @ 1 00	
Wild Peas.....	2 00 @	2 10	Cuffey Cove..... 80 @ 95	
do green.....	2 00 @	@	Petaluma..... 80 @ 95 1	
do Niles.....	2 10 @	@	do..... 85 @ 95	
BROOM CORN.				
South uperton.....	60 @	60 00	River radi..... 65 @ 80	
North's portion.....	10 00	60 00	Jersey Blues..... 85 @ 1 00	
CHICKENY.				
California.....	6 @	7	Hempbold..... @	
German.....	7 @	8	do..... @	
DAIRY PRODUCE, ETC.				
BUTTER.				
Cal. fresh roll, lb.	24 @	27	Peachblows..... 90 @ 1 00	
do Fancy br's.....	28 @	29	do..... 95 @ 1 00	
Pickle roll.....	@	@	do Oregon..... 90 @ 1 00	
Firkin, new.....	@	@	Peerless..... 90 @ 1 10	
Eastern.....	22 1/2 @	23	Salt Lake..... @	
CHEESE.				
Chese, Cal. B.,.....	16 @	18	CORN, HAY AND OATS.	
Eastern style.....	16 @	17	Hens..... 8 00 @ 10 00	
EGGS.				
Cal., ranch, doz.,.....	21 @	22	Boosters..... 8 00 @ 12 00	
do store.....	20 @	@	Brothers..... 7 00 @ 9 00	
Ducks.....	@	@	Ducks, tame..... 11 00 @ 14 00	
Oregon.....	@	@	do Mallard..... 3 00 @ 4 00	
Eastern.....	20 @	@	do Sprig..... 1 00 @ 1 50	
FEED.				
Bran, ton.....	15 00	@ 16 00	Geese, pair..... 2 00 @ 2 50	
Feed meal.....	23 00	@ 23 00	do Wild, do..... 1 50 @ 4 50	
Gr'd Barley ton.....	18 50	@ 19 00	Turkeys, B..... 17 1/2 @ 20	
Feed meal.....	11 00	@ 11 00	do Dressed..... 21 @ 23	
Middle.....	17 00	@ 18 00	Turkey Feathers,.....	
Off Cal. Meal, 32.....	50 @	@	tail and wing.....	
do new process.....	25 @	@	Snipe, Eng., doz..... @	
Straw, base.....	50 @	65	do..... @	
FLOUR.				
Extra, City Mills.....	4 @	4 35	Doves..... @	
Extra, City Mills.....	3 75 @	4 00	Quail..... @	
Superfine.....	3 25 @	3 50	Kabbits..... 1 25 @ 1 50	
GRAIN, ETC.				
Barley, feed, ct.,.....	70 @	85	Hare..... 1 25 @ 1 75	
do Brewing.....	95 @	1 15	Venson..... @	
Chevalier.....	1 25 @	1 15		PROVISIONS.
do Coast.....	1 75 @	2 25	Cal. Bacon..... 10 @ 11	
Burnside.....	1 25 @	1 30	Medium..... 11 @ 11 1/2	
White.....	1 27 1/2 @	1 30	Light..... 11 @ 12 1/2	
Yellow.....	1 25 @	1 30	Extra Light..... 12 @ 13 1/2	
Small Round.....	1 30 @	1 32 1/2	Lard..... 9 @ 11	
Nebraska.....	1 20 @	@	Cal.SmokedBeef..... 12 @ 14	
Oats, milling.....	1 55 @	1 60	Hams, Cal..... 12 @ 15	
Choice feed.....	1 45 @	1 47 1/2	do Eastern..... @	
do good.....	1 30 @	1 40		MEATS.
do fair.....	1 30 @	1 37 1/2	Alfalfa..... 8 1/2 @ 9	
do black.....	1 30 @	1 40	Oatmeal..... 3 @ 4	
do Oregon.....	@	@	Clover..... 11 @ 12	
Rye.....	2 25 @	2 75	White..... 20 @ 22	
Wheat milling.....	@	@	Corn..... 2 @ 3	
Gilt edged.....	1 40 @	@	Hemp..... 4 @ 4 1/2	
do Choice.....	37 @	@	Italian Eye Grass..... 10 @ 11	
do fair to good.....	1 35 @	@	Perennial..... 7 @ 9	
Shipping choice.....	1 35 @	@	Millet, German..... 5 @ 6	
do good.....	1 32 1/2 @	@	do Common..... 3 @ 4	
do fair.....	1 30 @	1 34 1/2	Mustard, white..... 2 @ 2 1/2	
			Brown..... 3 @ 3 1/2	
			Rape..... 14 @ 3	
			Ky. Blue Grass..... 15 @ 17	
			Mal quality..... 13 @ 15	
			Sweet V. Grass..... 75 @ 10	

HIDES.			Orchard.....	17	18
Dry.....	12 1/2 @	13	Red Top.....	9	10
Wet salted.....	5 1/2 @	6 1/2	Hungarian.....	8	9
HONEY, ETC.			Lawson.....	20	40
Beehive, lb.....	21 @	25	Mosquit.....	8	9
Honey in comb.....	12 1/2 @	16	Timothy.....	7	8
Honey in comb, fancy.....	16 @	19	TALLOW.		
Extracted, light.....	6 1/2 @	7 1/2	Crude, lb.....	2	4 1/2
do dark.....	5 1/2 @	6 1/2	Refined.....	6	—
HOPS.			WOOL, ETC.		
Oregon.....	8 @	15	FALL—1887		
California.....	8 @	15	Humboldt and	15	18 1/2
ONIONS.			Mendocino.....	12 1/2 @	15
Pickling.....	— @	—	Sacramento valley.....	15 @	18 1/2
Red.....	— @	—	Free Mountain.....	15 @	18 1/2
Silverskins.....	1 50 @	1 70	N. H. defective	— @	—
Cut.....	25 @	75	do mountain.....	10 @	14
NUTS—JOBBER.			do valley.....	12 @	15
Walnuts, Cal. A.....	8 @	10	Oregon Eastern.....	14 @	20
do B.....	8 @	10	do valley.....	16 @	21
Almonds, bshl.....	5 @	7	Southern Coast.....	9 @	14
Soft shell.....	12 @	13			

MACHINERY BY TRAINLOADS.—The first special through train of agricultural implements that has ever crossed the continent arrived here yesterday for the Bull & Grant Farm Implement Co., making the unusual quick time of nine days from Madison, Wis., by way of the Chicago, Milwaukee & St. Paul, and Union and Central Pacific railroads. This trainload, consisting of 20 cars, of Red, White and Blue mowers, and Bonanza and Star Sulky hay-rakes, is valued at \$48,000, and is said to be the largest single purchase and shipment ever made by any one importing house on the Pacific Coast. It is to be followed in about two weeks by another special through train of 20 cars of the Rushford tubular steel axle farm wagons. As the implement business is more directly connected with the agricultural industries of the State than any other, such a shipment made by one of our largest importing houses must show to a great extent the feeling of confidence placed by the trade here in a prosperous season and increasing business.—S. F. Examiner, March 2d.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

F. B. LORAN—Santa Clara Co.
JOHN G. H. LAMPADUS—Monterey and S. L. Obispo Co.'s
G. W. INGALLS—Arizona Territory.
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—WITH—
Remedies for their Extermination.

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Carriages.

We are receiving 10 carloads of Carriages, Buggies and Wagons from the Briggs Carriage Company of Amesbury, Mass., which will be sold at prices that will be satisfactory, considering style and workmanship. Quality of material guaranteed the best.

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STOCKHOLDERS' MEETING.
GRANGERS' BUSINESS ASSOCIATION.

The Annual Meeting of the Stockholders of the Grangers' Business Association (a corporation) for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 105 Davis street, San Francisco, California, at 10 o'clock A. M., Wednesday, April 11, 1888.
I. C. STEELE, President.
CHARLES WOOD, Secretary.

PETITE PRUNE D'AGEN
(FRENCH PRUNE).

One year old, stocky, well rooted trees, grown without irrigation, \$25 per 100.
HUNGARIAN and GERMAN PRUNE, \$18 per 100.
BARTLETT PEAR, one year old, \$10 per 100; two year old, \$15 per 100—Nursery prices. One-year-old Apple, \$10. All orders for the country carefully packed to secure them against weather, etc.
A. D. T. CORLEY, Nurseryman, East Oakland, Cal.

Rural Seed Offering—1888.

Great Inducements for New Subscriptions.

To encourage gardening and further extend the circulation of the PACIFIC RURAL PRESS, we will offer, while this notice remains in our columns, to furnish to all old or new subscribers the following seeds on the favorable terms named below:

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83 Varieties.

In Papers, postpaid. Cts.

1 Early Blood Turnip.....	10	33 Antirrhinum Majus, fine-t mixed.....	5
2 Early Extra Bassano.....	10	34 Cactalia Coccinea (Tassel flower).....	5
3 White Sugar.....	10	35 Cavy, panula Speculum, (Venus's Looking Glass).....	5
4 Yellow Sugar.....	10	36 Caudyut, white fragt.....	5
5 Early Long Dark Blo'd.....	10	37 Centaurea Cynus (Bachelor's Button).....	5
CABBAGE.			
6 Early York.....	5	38 Clarkia, fine mixed.....	5
7 Early Wakefield.....	5	39 Convolvulus (Morning Glory) mixed.....	5
8 Early Wakefield.....	5	40 Fouglove, mixed.....	5
9 Early French Oxheart.....	10	41 Gilla, mixed.....	5
10 Large Late Drumhead.....	10	42 Globe Amaranthus.....	5
11 Red Dutch (pickling).....	10	43 Gynophila Elegans.....	5
CELERY.			
12 White Solid.....	10	44 Ice Plant.....	5
CAULIFLOWER.			
13 Early Paris.....	10	45 Larkspur, finest mixed.....	5
14 Early Paris.....	10	46 Linum Grandifl (Flax).....	5
CUCUMBER.			
15 Extra Early Forcing.....	10	47 Love-in-a-mist.....	5
16 Long Orange.....	5	48 Marigold, db French.....	5
17 Early Horn.....	5	49 Marigold, African, dbl.....	5
18 White Belgian.....	5	50 Mignonette, Sweet.....	5
19 Half Long Danvers.....	10	51 Nasturtium.....	5
CUCUMBER.			
20 White Spine.....	10	52 Nolana.....	5
21 Early Cluster.....	10	53 Portulaca, mixed.....	5
22 Early Frame.....	10	54 Poppy, Double, mixed.....	5
23 Long Green.....	5	55 Sweet Pea, mixed.....	5
24 Eng. Ghekin, Pickles.....	10	56 Sweet William, mixed.....	5
LETTUCE.			
25 Early Curled Silesia.....	10	57 Sweet Pea, White.....	5
26 Early Drumhead.....	5	58 Sweet Pea, Crimson.....	10
27 Prize Head.....	10	59 Sweet Pea, mixed.....	5
28 White Paris Cas.....	10	60 Sweet Pea, mixed.....	5
29 Hanson.....	10	61 Sweet Pea, mixed.....	5
30 Boston Market.....	10	62 Sweet Pea, mixed.....	5
MELONS.			
31 Large Yel. Canteloupe.....	10	63 Sweet Pea, mixed.....	5
32 Extra Fine Nubmeg.....	10	64 Sweet Pea, mixed.....	5
33 Casaba melon.....	10	65 Sweet Pea, mixed.....	5
34 Montreal Nubmeg.....	10	66 Sweet Pea, mixed.....	5
35 Cuban Queen Watermelon.....	10	67 Sweet Pea, mixed.....	5
36 Mt. Sweet Watermelon.....	10	68 Sweet Pea, mixed.....	5
37 Iron Clad Watermelon.....	10	69 Sweet Pea, mixed.....	5
38 Scalp Bark do.....	10	70 Sweet Pea, mixed.....	5
39 Black Spanish do.....	10	71 Sweet Pea, mixed.....	5
40 White Imp. or Lord do.....	10	72 Sweet Pea, mixed.....	5
41 Georgia Katesnake do.....	10	73 Sweet Pea, mixed.....	5
ONION.			
42 Early Red.....	10	74 Sweet Pea, mixed.....	5
43 Red Wetberfield.....	10	75 Sweet Pea, mixed.....	5
44 Yellow Danvers.....	10	76 Sweet Pea, mixed.....	5
45 W. Porgal or Sil. Skin.....	10	77 Sweet Pea, mixed.....	5
PARSNIP.			
46 White Dutch.....	10	78 Sweet Pea, mixed.....	5
RAISIN.			
47 Mammoth California.....	10	79 Sweet Pea, mixed.....	5
48 Olive Shaped Raisin.....	10	80 Sweet Pea, mixed.....	5
49 Early Scarlet Turnip.....	10	81 Sweet Pea, mixed.....	5
50 Blk Spanish or Wint'r.....	10	82 Sweet Pea, mixed.....	5
51 Long Scarlet.....	10	83 Sweet Pea, mixed.....	5
SCUALL.			
52 Early Scotch Bush.....	10	84 Sweet Pea, mixed.....	5
53 Early Sun.....	10	85 Sweet Pea, mixed.....	5
54 California Field.....	10	86 Sweet Pea, mixed.....	5
55 Marbled head.....	10	87 Sweet Pea, mixed.....	5
56 Boston Marrow Wint'r.....	10	88 Sweet Pea, mixed.....	5
57 New Hubbard Winter.....	10	89 Sweet Pea, mixed.....	5
TOMATO.			
58 The Conqueror.....	10	90 Sweet Pea, mixed.....	5
59 Early Red Smooth.....	10	91 Sweet Pea, mixed.....	5
60 Trophy.....	10	92 Sweet Pea, mixed.....	5
61 Canada Victor (earliest).....	10	93 Sweet Pea, mixed.....	5
62 Acme.....	10	94 Sweet Pea, mixed.....	5
63 Favorite.....	10	95 Sweet Pea, mixed.....	5
TURNIP.			
64 Cow Horn.....	10	96 Sweet Pea, mixed.....	5
65 Early Rutabaga or Sw'dth.....	10	97 Sweet Pea, mixed.....	5
66 Early White Flat Dutch.....	10	98 Sweet Pea, mixed.....	5
67 Long White French.....	10	99 Sweet Pea, mixed.....	5
68 Imp. Lat. Rutabaga.....	10	100 Sweet Pea, mixed.....	5
69 Red Top Strap Leaf.....	10	101 Sweet Pea, mixed.....	5
SPINACH.			
70 Round Leaf.....	10	102 Sweet Pea, mixed.....	5
71 Large Flandrs.....	10	103 Sweet Pea, mixed.....	5
PEAS.			
72 Extra Early.....	10	104 Sweet Pea, mixed.....	5
73 Champion of England.....	10	105 Sweet Pea, mixed.....	5
74 York-hire Hero.....	10	106 Sweet Pea, mixed.....	5
75 Rural New Yorker.....	10	107 Sweet Pea, mixed.....	5
BEANS.			
76 Black German Wax.....	10	108 Sweet Pea, mixed.....	5
77 Refugee.....	10	109 Sweet Pea, mixed.....	5
78 Red Valentine.....	10	110 Sweet Pea, mixed.....	5
79 China Red Eye.....	10	111 Sweet Pea, mixed.....	5
MISCELLANEOUS.			
80 Kohlrabi.....	10	112 Sweet Pea, mixed.....	5
81 Scotch Kale.....	10	113 Sweet Pea, mixed.....	5
82 Curled Parsley.....	10	114 Sweet Pea, mixed.....	5
83 Sage.....	10	115 Sweet Pea, mixed.....	5
84 Thyme.....	10	116 Sweet Pea, mixed.....	5
85 Tobacco.....	10	117 Sweet Pea, mixed.....	5
86 Blue Gum.....	10	118 Sweet Pea, mixed.....	5
87 Monterey Cypress.....	10	119 Sweet Pea, mixed.....	5
FLOWER SEEDS.			
88 107 Varieties.....	10	120 Sweet Pea, mixed.....	5
89 Acroclonium.....	5	121 Sweet Pea, mixed.....	5
90 Alonosa, Grandiflora.....	5	122 Sweet Pea, mixed.....	5
91 Alyssum, Sweet.....	5	123 Sweet Pea, mixed.....	5
92 Amaranthus Abyssin.....	10	124 Sweet Pea, mixed.....	5
93 Ageratum Laseauxii.....	10	125 Sweet Pea, mixed.....	5
94 Adlumia Cirrhosa.....	10	126 Sweet Pea, mixed.....	5
95 Ambronja Umbellata.....	10	127 Sweet Pea, mixed.....	5
96 Amaranthus Caudatus (Love-lies-bleeding).....	5	128 Sweet Pea, mixed.....	5
97 Nemophila, fine mixed.....	5	129 Sweet Pea, mixed.....	5
98 Prillia Narkineus.....	5	130 Sweet Pea, mixed.....	5
99 Saponaria Multiflora.....	5	131 Sweet Pea, mixed.....	5
100 Scabiosa Atropurpurea.....	5	132 Sweet Pea, mixed.....	5
101 Scarlet Runners (Climbing).....	10	133 Sweet Pea, mixed.....	5
102 Schizanthus, fine mixed colors.....	5	134 Sweet Pea, mixed.....	5
103 Myrsiphyllum Asparagoides (Smilax).....	25	135 Sweet Pea, mixed.....	5

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For \$1.00 we will furnish new subscribers the PACIFIC RURAL PRESS for three months, and \$1.00 worth of the above seeds. For \$1.75 the RURAL six months and \$1.00 worth of seeds. For \$3.25 the RURAL 13 1/2 months, and \$1 worth of seeds. (When preferred, a due bill for seeds to be furnished at any time within 12 months will be given.) The seeds will be carefully forwarded, post paid, from some one or more of our leading and reliable seedsmen, whose name will accompany the package. In ordering, write on a separate sheet the number only of each article wanted as numbered, together with your address.

Old subscribers can advance payment so that their subscriptions will be paid the same length of time in advance and receive the same terms as above. Those who have remitted since this offer was made can send the additional amount which would have entitled them to a premium, and receive the same by stating which numbers they prefer.

For other kinds of seeds, or for seeds in larger packages, patrons are referred to reliable seedsmen advertising in this paper. We wish to aid in increasing the planting and cultivation of gardens.

We are not going to embark in the regular seed business, and have not time to investigate or answer many questions of private interest only, nor respond to orders received without remittances.

Subscribers will please notify neighbors who do not take this paper of this offer, and the merits of the RURAL.

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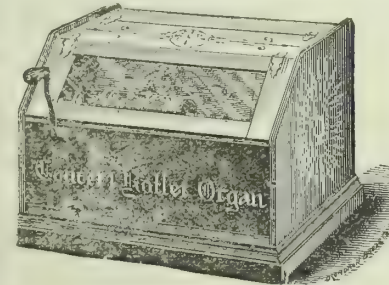
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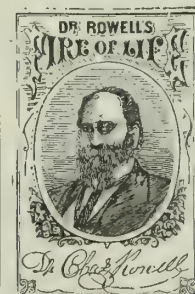


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I am now prepared to furnish fine, large, first-class Orange Trees for the season of 1888, at the following prices:

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5,000 Winter Nelis Pears,

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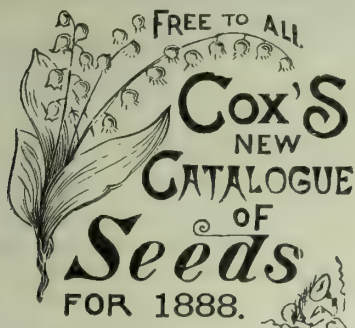
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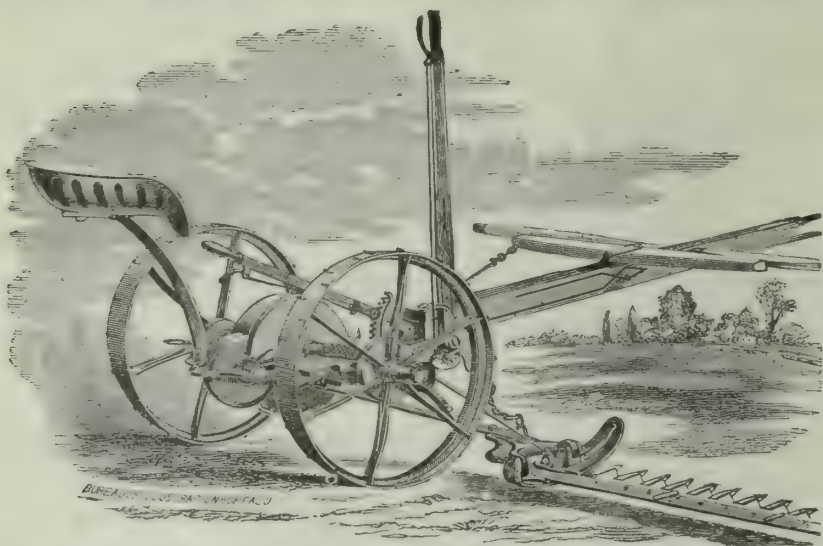
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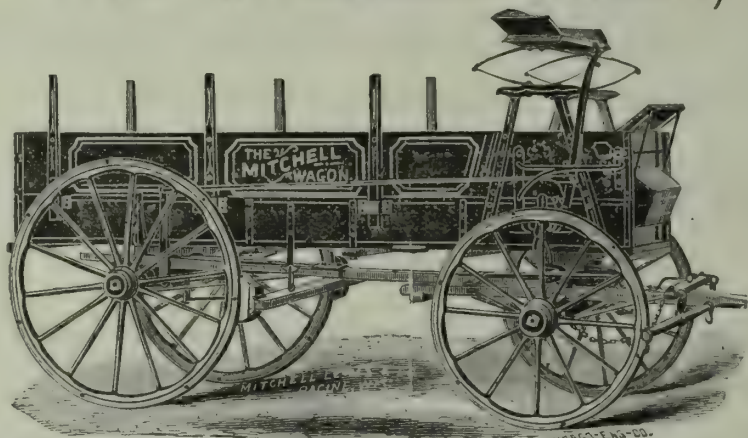
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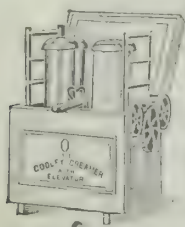
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PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 11.

SAN FRANCISCO, SATURDAY, MARCH 17, 1888.

\$3 a Year, in Advance
SINGLE COPIES, 10 CTS.

A Flowing Well.

Artesian wells are proving such an important factor in agricultural production in some parts of the State, and promise so much more in the development of our arid regions, that it is appropriate that we should give prominent place to an engraving of a flowing well with the latest improved appliances for directing and regulating its flow. The engraving is made for the RURAL PRESS from a photograph of a well in Miramonte Colony, in Kern county, and though the engraving may have few artistic features, it has the superior advantage of truth to nature in its representation.

We have given so much attention to artesian wells, chronicling faithfully almost from week to week facts about their location, cost, strata traversed and flow attained, that our regular readers do not need a review of the subject. It will be interesting, however, for the casual reader or for those who have not given much attention to the subject to mention a few general facts. Probably the oldest large group of wells in the State are those of the lowlands of the Santa Clara valley, where small fruits and vegetables have been grown with artesian water for a generation. The lowlands of Los Angeles county follow in point of time, and yet it is a score of years since those in the neighborhood of Anaheim became famous. Within the last 10 years wells have been bored singly or in groups in large numbers in nearly all parts of the State, and though there have been instances of exceeding depth of penetration and high expenditure without much aqueous return, it is safe to say that as a rule California artesian wells are comparatively shallow, very cheap and exceedingly profitable, in many cases yielding their borers in actual value of water and enhanced value of real estate hundreds of times the expenditure required to secure them. We have not time to review the wells of the State; an interesting volume could be written on the subject. Perhaps the most famous artesian localities developed during the last decade are the San Bernardino valley, including the new Gage wells for the irrigation of an extension of Riverside, the Ontario and Pomona wells, and others in Los Angeles county, the vast artesian districts of the San Joaquin valley and the interesting mountain artesian district of Sierra county. Besides these there are gas wells, oil wells and water wells here and there which an auctioneer would describe as too numerous to mention.

As the well shown in the engraving is located in the rapidly developing region of the upper San Joaquin valley, it will be proper to speak especially at this time of that neighborhood. A few years ago we gave a map of the artesian

wells of Tulare county, and we have given enumerations since then, but the well-borers work so fast, and the land-owners like flowing water so well, that any enumeration rapidly becomes old. A writer in the *Chronicle* last week apparently, after considerable research, gives the number of wells in the San Joaquin valley at 350, with a flow of 100,000,000 gallons every 24 hours. Of these Tulare county claims, according to the *Valley Record*, 120 wells flowing upward of 25,000,000 gallons each 24 hours. Kern county, according to a recent enumeration by Mr. George A. Raymond, had 41 wells

choking the pipe and the jamming of the casing. It may safely be calculated that the cost of a completed well will be from \$500 to \$800.

As might be expected, the lower levels yield the cheapest and the best flowing wells. Mr. Raymond, whom we have just cited, says the artesian district of the San Joaquin valley may be defined by the line of 300 feet elevation. This line "curves in and out around the valley, and nearly incloses its greatest area." Many wells bored above this elevation have not been flowing wells, but have to be pumped. There are, of course, exceptions, and flowing wells

colony, one of whose wells we show, there is another enterprise, the Smyrna colony, which has a well with a daily flow of 2,000,000 gallons and many more in prospect. These wells and the enterprises based upon them bid fair to transform a vast arid region into thickly settled and prosperous farming communities.

Cheap Papers.

Once in a great while some reader writes us that he thinks the price of the RURAL too high because he can get cheaper papers. To such we

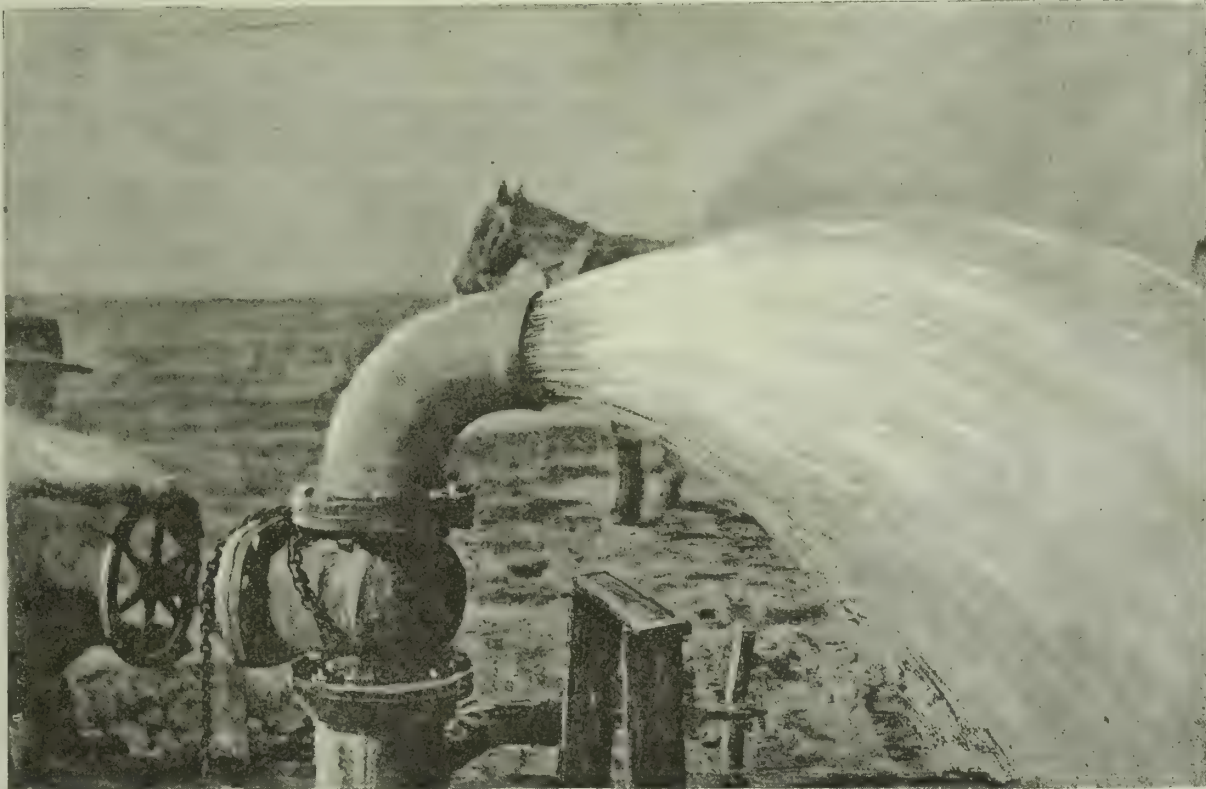
generally write that the experience of those who try the cheap papers is not favorable to them, and after the trial they inform us that they conclude that, judging cheapness to mean much value for the money, the RURAL is cheapest of all. The so-called cheap papers are found to be expensive either because (if their moral tone be good) the information they give does not meet California conditions, or else, besides this lack of practical and useful information, they are so full of reprehensible matter that they have to be hidden away from the children, and their influence is undesirable even upon older readers.

It is impossible to make the RURAL so that it will compete in price with the flash papers, or with some of the cheap Eastern agricultural papers which are about as worthless here as their price would indicate. It costs much money to make a first-class, clean, valuable paper

anywhere, and especially here, where expenses are high and the field of circulation limited. No successful farmer farms here as he did or would in Eastern soil and climate, and he knows that Eastern experience and progress is not what he wants to know. If we could make the RURAL as good and useful as it is, and still cheaper, we would do it. As it is, our most thoughtful readers tell us they cannot get the same information at any price elsewhere.

FARMING BY THE MOON.—The latest phase of moon farming is one of the most interesting we ever heard of. It is related that at a recent lawsuit in Texas 13 expert cattle branders swore that when cattle were branded in the "dark of the moon" the brand will never get larger than the first impression, no matter how much the animal may grow. But if the branding-iron is applied in the "light of the moon" the scar will spread, and the lighter the moon the larger will be the spread.

AGRICULTURAL EXPERIMENT STATIONS.—On another page of this issue may be found a University Bulletin, giving the report of Prof. Hilgard to the Board of Regents concerning the establishment of outlying culture stations.



PHOTOGRAPHIC VIEW OF FLOWING WELL IN THE MIRAMONTE COLONY IN KERN COUNTY.

with a daily flow of 48,000,000 gallons. This statement, with mention of each well, was published in the RURAL PRESS of January 7th last. Mr. Raymond has taken the utmost pains to verify his estimate of the flow of these wells in Kern county. The fact that fewer wells in Kern yield more than a larger number in Tulare is accounted for by the fact that the Kern wells are all of recent boring, and a much larger diameter is now secured than was sought for in the earlier Tulare borings. Ten-inch wells are now common, while two and four inch was the earlier size.

The upper San Joaquin is an ideal region for well-boring, as no rock tools are required. The bore encounters layers of sand and clay, sometimes well compacted, but still easily penetrated. The usual rates for well-boring in this region are given as follows: For the first 100 feet, \$50; for the second 100 feet, \$75; for the third 100 feet, \$100, and a proportionate increase for each 100 feet. The casing ordinarily costs from 35 to 50 cents per foot, and the owner of a well is expected to board three men while the work is being done, which takes from three to five weeks, according to the number of accidents that happen during the work, these accidents arising mainly from quicksand

have been secured at a higher point, but these are believed to have struck the flow from a natural reservoir higher than that which feeds most of the valley wells.

Our engraving shows a well in the Miramonte colony, and is typical of the best flowing wells. The arrangement for capping is that shown in detail, with sectional drawings in the RURAL PRESS of Sept. 3, 1887. It has an anchor underground which securely holds on the capping device, and thus by turning the valve, which the man is represented as doing in the picture, the flow may be stopped or regulated at any point from zero to a full flow. There is a law that all wells shall be capped when the water is not in use, and this should be done for two reasons—first, because it has been shown that artesian streams can be diminished by excessive draught upon them, and second, that water-soaked soil is not desirable either from a producing or sanitary point of view.

The effect of artesian wells is to rapidly develop the region in which they are obtained. Such is the fact in Tulare county, of which frequent mention is made in our columns. Kern county also is being enriched by a number of colony enterprises and the incoming of large numbers of colonists. Besides the Miramonte

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Pen Sketches of Mendocino County.

EDITORS PRESS:—Having been a resident of this county for nearly 30 years, I thought I might by your aid become, to a limited extent, a public benefactor, especially to the home-seeker. I propose to give to the readers of your valuable home-builder a general idea of the topography, soil, climate, health and resources of Mendocino county.

To begin with, the oldest settlement was made in Anderson valley by Walter Anderson in the year 1851. He came to California in 1846, being one of the typical pioneers of the mighty West. Mr. Anderson resided in Anderson with his family till 1862. Then, becoming old and feeble, he removed to Ukiah to live with his son-in-law—L. B. Lamar, cousin of our distinguished L. Q. C. Lamar, late Secretary of the Interior—where he died in 1866.

Anderson Valley

Is one of the picturesque and lovely valleys that nature seems to have favored. It is situated 30 miles northwest of Cloverdale, 20 miles west of Ukiah City—the county-seat of Mendocino—and 18 miles east of the Pacific ocean. The Navarro river, which heads about 16 miles north of Healdsburg and runs about 50 miles nearly parallel with the ocean and then empties into it, drains the watershed of Anderson township. This river and its tributaries drain about 180,000 acres of Mendocino's best lands, including about 60,000 acres of as fine redwood, tanbark, oak, laurel, madronya, fir, chestnut oak, white and black oak, etc., as is grown in California.

The valley is about 18 miles in length by, say, from $\frac{1}{2}$ to 2 miles wide, settled by as thrifty, hospitable people as can be found anywhere. It is bounded on the west by a high range of hills covered with a heavy growth of fine redwoods, tanbark oak, etc. On the east are open, grassy alluvial hills on which herds of fine-wooled sheep find abundant pasture summer and winter and produce the wools of California which always command the highest prices in the San Francisco market. This is the principal industry of this township. We also raise a great many hogs, which usually find plenty of acorns and are grown at a trifling cost. Wheat, oats, barley, rye, hops and corn and all kinds of garden vegetables are grown in abundance, and the land is well suited for apples, pears, peaches, plums and prunes. Our crops are grown without irrigation, our rainfall being never less than 20 and generally 30 inches and frequently more, which insures us against drouth and makes us independent of canal rates or riparian rights. Hardly a quarter-section but has from 1 to 6 springs of the best of water. Our flouring-mill is run by one of the mountain streams.

As to the adaptation of our locality for a fruit country, I refer the reader to Dr. S. F. Chapin, who was State Inspector of Fruit Pests. He visited our locality about three years ago. His address is Auburn, Cal. A great deal of the timber lands when cleared is the most productive and grows the finest of fruits. I have known of parties slashing down the timber and in the fall burn it out and sow down in the ashes without plowing or harrowing and raise fine crops of grain.

There is no healthier place on the face of the earth, in proof of which I submit the following: No case of diphtheria or smallpox or scarlet fever was ever known in this valley. Not more than three cases of typhoid fever; less than 12 children under 15 years have died, and but three young men and about the same of young women.

It seldom snows in the valley and never falls more than about three inches and usually melts away in a few hours. Being just out of the fog belt, and yet near enough to the moist Pacific air, gives us a climate free from excessive heat and cold. Our resources are yet undeveloped, but we expect to grow into one of the finest areas of olive, French prune, Bartlett pear and plum and peach producing portions of California.

Hitherto we have been too far from railroad or water transportation for any other products than stock and wool, so that our resources have been lying dormant and undeveloped, but with the S. F. & N. P. railroad building within 17 miles, and the prospect for the Santa Rosa & Benicia railroad extending into our valley where they can reach 150,000 cords of the finest of tan bark and two billion feet of the coming house-finishing lumber of the world, the future of this locality should attract home-seeker and money-maker as well.

In the valley are five school districts. Booneville, the principal village, has two general stores, hotel and livery stable, two blacksmith-shops, postoffice and express office, and contains good church and schoolhouse, and about 150 inhabitants. The U. S. mail and express departs each way every day except Sunday.

Valley land can be bought at from \$50 to \$100 per acre; hill land, from \$7 to \$20, owing to locality and productiveness. Considerable good land is still subject to location. It is mountainous and mostly covered with brush and timber, but a great deal of it, if the proper energy and judgment were exercised, would make comfortable homes. Game abounds and the streams afford fine sport for the fisherman, there being plenty of mountain trout. T. J. McGIMSEY.

Booneville.

Los Gatos Notes.

EDITORS PRESS:—It has been a long time since I last wrote you from this rich and flourishing locality. March came in according to the old legend "like a lion." The clouds came and the county is blessed with a copious, life-giving rain, and it falls upon the just and the unjust. The chronic croakers are well drenched; they have retired, closed their doors, and are now mourning in sackcloth and ashes, because their gloomy prophecies of a dry year have failed. If I meet one of them going to town for a few groceries, I hail him thus: "How are you to-day, Mr. Brown? How does this look for a dry spring?"

"Well," he says, "you know I told you that this rain would come, and we are in a pretty fix. It will ruin all the fruit blossoms, make the hay rust, turn the grain to chess, and we can't get on our orchards to work them till they are all covered up with weeds. I am going to leave such a disagreeable country and go to Egypt, where it never rains and everything grows without cultivation," and I mentally say, "Go! for the country is better off without you."

We have had a very fine rain, and this morning the adjacent mountains are white with snow. The air is pure, crisp and bracing, but not frosty. The orchards are in bloom, and have been since the middle of February. The air is redolent of perfume and the ear is filled with music from the happy feathered songsters. The prospects for all kinds of fruit except the Moorpark apricots have never been better, and all kinds of fruit raised in this locality have few rivals and no superiors. The canneries and driers of this county take the lead in both quality and quantity.

New-comers.

Our incoming population is of the very best from all other localities. They bring with them generous hearts, social habits and well-filled purses to add to our rapidly growing community, and they come to stay. The boom has reached us and land is changing hands every day at enhanced values. Los Gatos is building up very fast. I was told yesterday that contracts were let to build 100 houses in East Los Gatos. They have a lot of practical pushing men there that are bound to win. The syndicate has bought the Hildebrand tract of 40 acres in Los Gatos, opened streets, built houses, and have already sold a large portion of it. The Johnson tract is also open and is being rapidly settled up. On the west side the syndicate has the McCullah tract which will be thrown on the market as town lots and small homes. Then there is the Almond Grove addition. First on this list comes Mr. John Bean, formerly of Springfield, Ohio, where he has his bicycle, tricycle and novelty factory. He came here for his health, and I am happy to say has gained it since coming here. He has invented, patented and brought to perfection his automatic air-pressure spraying pump for fruit trees. It is a grand thing, and is the protector and friend of every fruit-grower. He is offering his place in town lots. Then come Mr. Wilder, Mr. Nicolson and Mr. Tait. All have good lots and offer good inducements to home-seekers.

Leaving Los Gatos and coming toward Saratoga, we again find the syndicate. They have bought several fine tracts of bearing orchard and vineyard land close to Saratoga that will make splendid small homes for families. From one to five acres here makes a fine home for a family. If they have any children the driers and canneries will give them all that they can do, and as they do piece work they have a good chance to make high wages. Then there is any amount of fruit to pick. Then come the grapes to gather, pruning to do and brush to gather up and burn. All this work girls and boys can easily do except the pruning, and we all prefer to have girls and boys instead of Chinamen. I will here say to all good, honest, industrious families, if you wish to raise your children under healthy moral influences away from the slums and hoodlums of the large towns and cities, come here and buy a small home such as you feel able to get, and settle down and give your girls and boys a chance.

The young people have a merry time when the evaporators are running. As they are paid by the box for their work, they hardly stop long enough to eat their meals. It is light, pleasant work in a large, open building, with the cool, pure air all around them, and the rich, golden fruit before them. Delicate young ladies from the large towns and cities soon become robust experts pitting and preparing the delicious California fruits.

Spring Work.

Pruning, burning brush and spraying are about all done in this locality, and the orchard and vineyard men are now very busy cultivating and plowing. We have no need of irrigation here. Thorough cultivation furnishes us with plenty of moisture for all kinds of crops.

Grain and hay crops are looking remarkably well and promise a heavy yield. Wood and coal have been very high this winter. I have burned the brush from my orchard and the peach and apricot pits from my evaporators for fuel. They are excellent. The pits, when kept dry, are fully equal to coal and a great deal cleaner to handle.

Fertilizers.

Several of my neighbors and myself are using the California bonemeal chemical fertilizer this year. I have a flat, four-time spading fork, and with this I spade up the ground thoroughly

around the tree, then I apply the bonemeal at the rate of one pound to each year the tree is old and work it in well with the fork. We use the "high-grade fertilizer," for hay and grain from 300 to 600 pounds to the acre; for vineyards from 300 to 1200 pounds per acre, according to the age of the vines. It is a new thing here, but my friends from the East say that it doubles the yield of everything back there, and I hope that it will here.

Mr. J. R. Whitney of San Francisco, whose place joins mine, is building a large summer-house on a very slightly elevation that gives him a grand view of this beautiful valley and adjacent mountains and Bay of San Francisco. Your canvasser, Mr. Logan, called here, and he is doing good work in this valley. I will close by extending a hearty invitation to call and see me at the Fair View Farm evaporating establishment and see our beautiful country.

A. N. VAN FLEET.

SHEEP AND WOOL.

The Sheepmen and the License.

We gave recently the decision of the Supreme Court affirming the legality of the sheep license imposed by the supervisors of some of the mountain counties of California. The Lassen Mail of last week gives the following statements by sheepmen concerning their ideas of the local effects of the measure:

A Mail representative has talked with a couple of the most extensively engaged wool-producers in Lassen county—Bob Elwood and J. H. Gilman. These gentlemen say that while the ordinance adopted at the last meeting of the Board of Supervisors was intended to protect in a measure the local sheep-owner, it will work a great hardship to him.

"Each sheep-owner of this county," said Mr. Gilman, "will be compelled to pay a total tax of 11 cents per sheep. We will pay in Lassen four cents tax, two cents license, while in Plumas we will have to pay a license of five cents. You understand that nearly every sheep-owner in this county ranges his sheep in the mountains of Plumas in the summer months. After paying herders, cost of shearing, boarding herders and shearers, and other expenses, we have an insignificant margin left as profit. The ordinance adopted in Plumas and Lassen counties is the same as that now in force in Mono county. The sheep-owners of Mono tested the ordinance before the Supreme Court, and that tribunal affirmed the legality of the measure. The judge, in deciding the question, stated that it was clearly the intention of the framers of the New Constitution to place in the hands of supervisors the power of adopting ordinances licensing business of every kind, and unless it could be clearly shown that an ordinance was prohibitory in its effects and not regulating, it would have to stand; so you see it is useless for us to carry this matter again to the attention of the appellate court, unless we can show beyond doubt that the ordinance is prohibitory in its working. I for one stand ready to contribute to a fund to test the matter, but in view of the late decision I cannot see any benefit to be derived. We could, of course, carry the matter up to the Supreme Court of the United States, but that would entail a cost of thousands of dollars, and we might possibly have to pay the license after all.

"There's another point," continued Mr. Gilman, "that I desire to bring to the attention of the people, and that is the benefit sheep-owners are to the county. There are at the present time several men in the sheep business. I can call to mind Messrs. Perkins, Elwood, Forkner, Bull, Smith, Lawson, Wheeler, Rideout and myself. These gentlemen own from 14,000 to 15,000 head of sheep, and I venture the assertion that every sheep costs \$1 per year for its keep. That means \$15,000 in coin that is put in circulation by us each and every year. John Long, I am satisfied, has put \$40,000 into the pockets of the people of Lassen in the past 15 years. Take my last season's business as an indication of what benefit the sheepmen are: From my sheep I took at least \$5000. This money was all used in Lassen, and each individual received benefit, either directly or indirectly, from it. There are 10 or 12 men engaged in the sheep business; we will say that each man takes on an average \$3000 from his band, we have a grand total of \$30,000 that is put into the pockets of the people of this county. This amount is scarcely noticeable at the present, but drive the sheep interest from the county, then you will realize the loss."

"What do you think will be the result of the enforcement of the sheep-tax ordinance, Mr. Gilman?"

"I think it will result in killing out the sheep interest entirely. Owners will seek other climes and 'pastures new.'"

Bob Elwood was next sought, when the following conversation took place:

"Mr. Elwood, what will be the effect of the supervisors' tax ordinance upon the sheep business?"

"What will be the result?" answered the gentleman, energetically, "huh! it will result in breaking the back of one of the county's chief industries; that's what it will do, sir. It is a shame and an outrage, and the sheepmen will remember that supervisor from a northern district who wanted it known that he was in favor of the ordinance and that he voted for it. We will try and remember him. We can-

not pay the license and tax and live while we only receive 11 cents for our wool."

"Was the ordinance not intended to assist resident sheep-owners by taxing lower country bands that are driven up here every year to eat up the ranges?"

"It may have been, but my impression is that it will have an opposite effect. Those men who drive their flocks up here are not compelled to pay a four-cent tax in the valley counties where they live. As a general thing, they own the ranges upon which their sheep feed in this county. All the tax that Cone and others pay into our treasury on their sheep is two cents, while they 'slap it to us' to the tune of 11 cents; of course, this includes the five-cent license of Plumas county. Is this what you call protecting home industry? The valley sheep-owner has as good a thing as he wants. He is generally rich; he steps up to the captain's office, pays his little old two cents per head, then stands back and laughs at us squirming under the 11-cent load which the supervisors so kindly levy upon our flocks to 'protect the owners.' This is protection with a vengeance. Why is it that cattle-owners are not compelled to pay a license for the privilege of raising stock? Have they any more rights guaranteed to them by our organic law than we have? In my opinion, the tax-on-sheep ordinance was conceived in the minds of cattle-men to kill out the sheep interest. They want the world, but we will stay with them awhile, anyway. Cattle-men say that sheep and cattle will not range together. Let us see whether they will or not. I have a range in this valley to-day that I defy the most experienced cowboy to tell whether it is a cattle or sheep range by the manure that is upon it. It is a mistaken idea to say that sheep and cattle will not range together."

"In view of the strong public sentiment that is now existing in this county against the sheep interest, and from the further fact that the Supreme Court has sustained a similar ordinance to the one in force here, I suppose we will have to stand it; but I am firm in the conviction that it will result disastrously to the sheep-owners of Lassen. The law, instead of being regulating, will be prohibitory. It's a tough deal."

The interviews above are written from memory and are not in the exact language used, but the ideas of the interviewed are there.

THE DAIRY.

Cheese and Cheese-Making.

EDITORS PRESS:—My husband having been asked many questions in regard to cheese-making, in which business he has been engaged during more or less of the summer months for the last eight years, I have thought a few items on the subject might not be unwelcome in your columns, as there are, no doubt, many in other localities in the State, as well as in this mountain region, who would be glad to turn their dairies into something more lucrative than butter-making. Many not wishing to make cheese themselves take a lively interest in it owing to having some knowledge of the subject.

No doubt our methods are more simple than those in large factories, but the result to be obtained is the same—to put on the market a first-class article of cheese.

Milk is a complex and delicate compound composed of about 87 parts of water and 13 parts of solids. The solids are about $\frac{3}{4}$ parts of casein, $\frac{3}{4}$ parts of fat, 5 parts of sugar and the remainder mineral and albumen. The sugar in the milk mostly runs off in the whey, if it is drawn when sweet. It is the object of the cheese-maker to separate as much of the remaining solids as possible, and save them in the form of curds. The figures given may not be scientifically correct, but nearly enough so for general use. Good cheese it is said should be one-third casein, one-third fat and one-third water. To bring about this result is often difficult, as notwithstanding the most careful handling more or less cream occasionally shows itself in the whey. It is said on good authority that the best cheese-makers cannot always succeed as they desire. Everything may appear right on the surface, but there may be something in the milk or in the conditions and surroundings which may escape one's observation.

My husband was first taught to make cheese by a man who had carried on a Wisconsin cheese factory, and who thoroughly understood his business. But he has learned from experience that the dry climate of our high altitude makes some changes necessary. "Willard on Dairy Husbandry," written by the late X. A. Willard of New York State, and also the writings of Prof. L. B. Arnold, form good guides for any cheese-maker.

We began cheese-making with only such apparatus as we could conveniently secure, but we soon found to make a uniformly good article of cheese the best implements were necessary, and accordingly procured a self-heating vat (a Union Dairyman) and other tools.

There are several things about which my husband is very particular in his cheese-making: one is perfect cleanliness, not giving his tools warm-water scalds, but using water boiling, sizzling hot. Another thing is not guessing about time, temperature, quantity of salt, etc., but being guided by the clock, thermometer and scales. A third thing is, he does not prepare

his own rennets, as with all the care one can give them, there are many chances of leaving too much animal matter in rennets, which will breed taints. Certainly where men make a business of preparing them it can be done more satisfactorily than by the cheese-maker. "Chris Hansen's Rennet Extract" is acknowledged to be a superior article.

Many inquiries are made in regard to the profit of cheese-making, which may be answered by the result of our last three years' experience. In the summer of 1885, my husband sold 4254 pounds of cheese, the product of 117 days' work; in 1886 he sold 5129 pounds from 126 days' work, and in 1887, 6142 pounds from 168 days' work. This being the amount sold over and above much consumed in our family. The highest number of cows milked during this time was 26, though much of the time less. One summer we owned only 22 cows, and frequently some of them had been giving milk a number of months when the cheese-making began. The cheese has netted from 14 to 15 cents, butter during the time being sold for from 16 to 18 cents and often as low as 14, and it being hard to dispose of it at those figures. The milk which would make one pound of butter would make two pounds or a little more of cheese. It usually requires about nine pounds of milk to make one pound of green cheese. It may be there is more loss in curing in this dry climate than at a lower altitude. This mountain region gives us a fine market, surrounded as we are by mining towns. Much of our cheese has been marketed in Sierra City, Johnsville, La Port, St. Louis and other towns, some also in Reno and Quincy, while last year we received orders for 1000 pounds from Bodie. Most of the merchants in this vicinity have patronized us largely, some refusing on account of being able to purchase the cheese made in factories at a lower figure. Others have bought from us, paying more than they could have bought other cheese for, saying they could well afford to do so, as our cheese gave the best satisfaction to their customers. Cheese-making, of course, requires more work than butter-making, as when the mechanical process of the latter is completed the butter is ready for market. But with the former the chemical changes are continually going on until the cheese is cured and constant care is demanded, the cheese having to be rubbed, turned and greased daily, which, with the keeping of the shelves in a state of perfect cleanliness, and maintaining the proper temperature in the room, requires not only much labor but painstaking care.

Beckwith, Plumas Co.

THE VINEYARD.

The Grape-Growers' Convention.

The convention of grape-growers, held under the auspices of the Viticultural Commission, opened in this city on Wednesday, March 7th, Arpad Haraszthy presiding. The convention was full of interest and we make the following extracts from the proceedings, reserving other matters for future mention:

Mr. Haraszthy's Address.

At the afternoon session President Haraszthy made his opening address. After briefly narrating the circumstances which led to the holding of the Sixth Annual Viticultural Convention, he dwelt upon the good effects which all interested in vine-growing expected would arise from mutual intercourse and the exchange of ideas. He then compared the soil and climatic conditions of California with those of European wine-producing districts, and said that it would be best not to imitate the peculiar flavor or taste of any given European wine, but to produce wines of character essentially their own, possessing all those pleasing qualities that would make them desirable in point of strength, color, flavor, body, bouquet and general attractive fruitness of taste.

Development of the Grape Interest.

He then took up the subject of vine-growing in California from the time of the first vines planted by the old missionary fathers, previous to 1770. He said that little progress had been made in vine planting until 1858, when an interest was awakened throughout the State, until in 1862 a general enthusiasm arose, which lasted about three years. Grapes at that time were grown for table use only, and in 1870 the interest began to flag. In 1876 the prospects became so discouraging that vineyards were entirely uprooted and either trees or grain planted in their stead.

"In 1880," said Mr. Haraszthy, "a new impetus was given the planting of vines, from the fact that new markets had been formed for our wines, such as they were, in the Eastern States, and the people began getting used to the peculiar taste and character of the wines of California."

He then referred to the gradual introduction of foreign varieties of grapes which gradually supplanted the old inferior Mission grape, introduced by the padres. To the inferior wine obtained from the latter grape, he traced the bad reputation California wine formerly had in the East. He spoke of the appointment of the State Board of Viticultural Commissioners in 1881, and reviewed the actions of that body since its creation. At that time there was estimated to be 35,000 acres of vines planted in the

State, 20 per cent being foreign varieties and the remainder Mission.

At present, the speaker said, the Viticultural Commissioners believe that there are planted not less than 150,000 acres in vines, of which possibly 90 per cent are of foreign varieties.

After some general remarks on the subject of grape-growing and winemaking, Mr. Haraszthy went into statistics. Taking the vine acreage of California at present at 150,000 acres, he estimated by increase in value and after making all allowances for cost of improvements, etc., that within seven years the viticultural investments had increased \$50,000,000.

Increase in production was next taken up, the following being Mr. Haraszthy's estimates: Vintage of 1881, 12,000,000 gallons; vintage of 1882, 9,000,000 gallons; vintage of 1883, 8,000,000 gallons; vintage of 1884, 16,000,000 gallons; vintage of 1885, 11,000,000 gallons; vintage of 1886, 18,000,000 gallons; vintage of 1887, 17,000,000 gallons.

The speaker considered it difficult to make a close estimate of the wine consumed on this coast annually, but considered that about 2,000,000 gallons are consumed in this city and Oakland, about 3,000,000 gallons in the interior of the State, and that about 6,500,000 gallons were exported East, making a total demand of 11,500,000 gallons for the year. Taking the dry with the sweet wines the approximate value of the quantity named would be \$4,000,000. This would not include the brandy used on the coast or exported, which would swell the amount by about \$700,000.

Value of the Grape Product.

Taking as his basis that 150,000 acres of vines are at present planted, Mr. Haraszthy apportioned the area employed in growing raisins, table grapes and grapes for wine-making, and estimated that the value of the products within the next three years will be as follows:

1,500,000 boxes raisins at \$2.....	\$3,000,000
40,000 tons table grapes at \$30.....	1,200,000
50,000,000 gallons wine at 20 cents.....	10,000,000
1,500,000 gallons brandy at \$1.40.....	2,100,000

Total.....\$16,300,000

"The prices paid for wines during the past year," said the speaker, "ranged most discouragingly low. There seemed to be a regular stampede among the producers and a corresponding fever among the merchants that the prospective vintage of 1887 would turn out enormously large. This, however, not being the case, prices have taken an upward turn, and while wines of 1886 could have readily been bought at from 13 to 14 cents a gallon in August last, all that stock has long since been exhausted and the new wines of 1887 now command from 17 to 20 cents for the ordinary qualities, and notably higher for the finer grades."

"The following are the average prices paid a ton during the vintage of 1887 for the prominent varieties of wine grapes: Cabernet, \$25 to \$30; Petit Winot, \$25 to \$30; Black Burgundy, \$18 to \$20; Merinier, \$18 to \$20; Riesling, \$18 to \$20; Metaro, \$16 to \$18; Zinfandel, \$14 to \$16; Carbone, \$13 to \$15; Malvoisie, \$8 to \$9; Mission, \$7 to \$8."

Mr. Haraszthy then referred to the fact that the reputation of California wines was becoming established both at home and abroad, and this he traced to the laudable ambition which existed among growers to increase their knowledge of fermentation and other processes, as well as their desire to have the choicest varieties of wines.

Increase in Exports.

He presented the following table of exports by rail and sea, so as to show the increase during the period extending from 1882 to 1887 inclusive:

Years.	WINE EXPORTS.		
	Sea, Gallons.	Rail, Gallons.	Total, Gallons.
1882.....	1,305,177	1,451,515	2,816,692
1883.....	1,290,373	1,899,794	3,190,167
1884.....	1,210,455	2,313,644	3,524,099
1885.....	1,196,797	3,059,927	4,256,724
1886.....	763,999	4,428,224	5,192,223
1887.....			6,442,223

Showing an estimated increase in five years of 3,625,531 gallons.

Regarding national legislation for the protection of the purity of wines, Mr. Haraszthy said the State Board of Viticultural Commissioners had considered the matter and communicated the results of their deliberations to both Congressmen and Senators, and bills had been submitted, which, if passed, would cover the point effectually.

Following Mr. Haraszthy was an essay on raisin-making by T. C. White of Fresno and on table grapes by Dr. W. S. Manlove, which we desire to give in full, and therefore reserve for a following issue.

Grafting Vines.

Leonard Coates of Napa read a paper on the "Best and Cheapest Methods of Obtaining a Grafted Vineyard on Resistant Stocks." The writer made his points as brief as possible, dwelling only on those of most practical value to grape growers of California. He made three divisions: "Why we graft," "What we graft," and "How to graft."

First, "Why we graft." Grafting is an operation practiced for thousands of years, and is an art concerning which very little, if any, advancement has been made. If we believe Pliny, a tree was grafted in the garden of Lucullus which was made to bear apples, pears, almonds, plums, figs, grapes and olives. This must have been but an ingenious deception, for without a close relationship or structural

analogy no union could take place. Grafting in the case of the grape is performed to render that plant more hardy, to lengthen its life and to enable it to better withstand attacks of mildew rot, climatic changes, extremes of drouth and moisture, heat and cold, and, most of all, the phylloxera and all other insect pests. The question of the influence exerted by stock on scion or graft, or vice versa, is a complex one, but worthy of close study. The stock influences the graft only, so far as we know, in retarding or increasing the vigor, usually bringing the vine earlier into a bearing state.

It is now an accepted fact that there are certain species of American grapevines which are more or less under certain conditions capable of resisting effectually the attacks of disease, of which the most dreaded is the pest phylloxera, and it certainly would now be a waste of time to bring forward arguments to show that this is a fact. There are those, however, pessimists or egotists who would have us believe something else.

The next heading, "What to graft," is an arbitrary one, and cannot be correctly enlarged upon, literally. It will serve the purpose of classification. We want to consider "upon what species of vitis shall we graft in order to render our vineyards permanent?" What to graft on so-called resistant stocks is not within the province of this paper.

The recent report of the French expert, Professor Viala, was referred to, but that expert recommended vines for only limestone formation. Mr. Coates, out of some 30 distinct species of American grapes, would select three or four only, and out of 50 modes of grafting, one. He reduced the question of what stocks to best resist phylloxera in California to a very simple one. Vitis Riparia will about cover the ground, and Vitis Nuevo Mexicana may prove equally as good. There are in use here as resistant stocks Vitis Riparia and some of its varieties, Clinton Taylor and Lenoir, V. Rupestris, V. Californica, V. Arizonica, V. Estivalis, with several varieties. Objections to Rupestris are its aptitude for suckering and difficulty in rooting cuttings and receiving grafts. California is not really resistant, except in some few instances, when it seems hardy. Estivalis requires rich soil or it will not thrive. Arizonica is not adapted to a great variety of soils. Riparia is objectionable only because of its small wood, and where that objection is insuperable the Lenoir may be used. The Riparia thrives in cold clay or bedrock as well as in richer valley lands. Vineyards grafted to this stock six or seven years ago are to-day healthy, the union being complete in every way. Plant Riparia in rich valley land or shallow soils with clay subsoil and Lenoir in light soils or hill vineyards, but in thin poor soils or purest "adobe" don't try to raise a vineyard at all.

As to "How to graft," there is but one method fit to be applied to the vine, and that is the "English cleft" or "whip-tongue graft," applied either to stocks the size of a lead pencil or those two or three inches in diameter. The practice of splitting the stock and inserting a wedge-graft should be entirely done away with. The method of grafting recommended was described in detail. In a plowed vineyard of Riparia, one-year-old rooted cuttings, a gang of 10 men will graft 700 vines a day. The work of such a gang was outlined. If weather is dry, grafts should be kept in a can with a little water. Then first dig earth from vines for about 18 inches diameter and 10 inches deep, using spades. The grafter first cuts off any small surface roots, and then selecting the side having the straightest edge, he cuts obliquely from below, the slope being about 1½ inches long. The "tongue" is then made by cutting down a little across the grain to prevent splitting, and two-thirds of the distance from the bottom of the slope, the tongue being about one-half to two-thirds of an inch long. The graft or scion, about five inches long, with two or three buds, is cut precisely the same way and fitted or dove-tailed into the stock, by being pushed down as firmly as possible without breaking, the outer edge being made to be exactly parallel with the outer edge of the stock, on one side. It is useless to try to make the edges correspond on both sides. Others follow with calico strips ten inches long, one inch wide, and bind firmly around the graft. The importance of tying securely cannot be overestimated. Stakes are then driven on the southwest side of each vine and earth is then shoveled back and pressed down. Grafting three or four inches below the surface is necessary. Grafting should begin as early in March as weather will permit. Planting Riparia cuttings in nursery rows was recommended. Cuttings should be from 9 to 12 inches long—never longer. Leave above ground only enough to make the cuttings visible. Such cuttings, in a year, may be grafted where they stand and not put in the vineyard until the year following, thus saving labor.

Other Matters.

We have given but a few of the early subjects of the convention at this time. Other topics will be taken up later.

TO PREVENT MOISTURE IN SALT.—To prevent salt from becoming moist and caking so as not to sift freely from the cellars, a house-keeper recommends the use of a little cornstarch with the salt; a saltspoonful of cornstarch to about two salt-cellars of salt. The starch absorbs the dampness and the salt sifts more easily.

THE BOTANIST.

Botany for Farmers.

John Trimble, Secretary of the National Grange, is doing an enterprising thing in sending out bulletins from his office containing the papers read before Potomac Grange. A recent issue gives two paragraphs on agricultural botany which we publish as follows:

By Dr. Geo. Vasey, Botanist U. S. Department of Agriculture.

The inquiry may be made, of what importance is botany to the farmer? We will briefly attempt to answer this question. Botany investigates all forms of vegetation from the simplest to the highest, inquires into their structure and their affinities, into their development from the earliest germ to the mature plant, into the processes by which they are nourished, built up and propagated, as well as into their uses and properties. One of the highest traits of humanity is the ability to inquire into the laws of nature and to bring those laws to serve good purposes. In this, man shows his superiority to the brute. The farmer can study the laws of vegetation in the growth of the corn, wheat and other grains and plants with whose cultivation he is constantly occupied. He can watch the germination of his wheat or corn and observe that they develop but one seed-leaf. He may note the germination of his beans, peas or pumpkins, and he will note that they develop two seed-leaves. He will thus see one of the fundamental distinctions between two of the great classes into which plants are divided, viz., the monocotyledons and the dicotyledons.

He has the best opportunities of studying into the nature and kinds of roots, of leaves, of flowers and fruit, as they fall every day under his observation.

Just so far as he improves his opportunity in this direction, and learns all he can about the plants which come in his way, so far he is a botanist. There are, indeed, too many who never care to observe and investigate, and who know little more of the plants they cultivate than the horse who plows the corn. But the inquiring and observant farmer will find intellectual development. His corn and his wheat will have a new interest to him as they display their beauty and the marvel of their growth and their life histories. He can look beyond the plants which are the especial objects of his labor, and see new forms of beauty and of interest in the trees of his fields and in the wild plants which spring up everywhere around him. And he will be astonished to learn what a large field of vegetable life is before and around him. He may make the acquaintance of several hundred kinds of plants on one small farm. He may learn their names, relationship and qualities. This is practical botany, and it will improve his mind, elevate and ennoble his labor, and open to him new and satisfactory sources of pleasure and knowledge.

By A. A. Crozier, Assistant Botanist.

A farmer cannot know the name of every plant he sees, but he will find it convenient, as well as a source of satisfaction, to know the botanical as well as common names of the plants he cultivates, and of the most troublesome weeds, and of some of the more common trees and flowers. All this can be learned by an intelligent boy or girl before reaching the age of 18, if a parent or teacher has the knowledge, and now and then an enthusiastic young botanist will gain much from books alone.

Besides a knowledge of the names of plants, there are other interesting and important facts regarding plants which every young farmer should know, and those of which are hardly thought of as botany. He ought to know that the rots and molds upon fruits, and the souring of milk and other foods in the kitchen, are due to the growth of peculiar plants, some of them invisible to the unaided eye, and that these can be prevented as truly as weeds can be kept from a garden, if by any means the germs can be excluded or killed. Thus the canning of fruits preserves them by killing the germs which are present by means of scalding, and by preventing the access of other germs by sealing the can.

The young farmer ought also to know something about the production of improved varieties and how to maintain their standard in cultivation. The farmer cannot afford to buy new improved seeds for every crop, and still less can he afford to grow inferior varieties. He must get the best and endeavor to keep them so. But some varieties cannot be maintained in their perfection in all localities; many, such as oats, are better if imported every few years from a more northern source; some, as potatoes, are benefited by an occasional change between light and heavy soil. But most of our cultivated plants can, by proper cultivation and selection, be not only maintained but improved upon the farm. And here comes the importance of a knowledge of the sexes of plants, for plants have sex as well as animals. In some plants, as the willow and poplar, the sexes are on separate individuals; in others, as Indian corn, they are on separate parts of the same plants, while in ordinary cases they are on different parts of the same flower. In the improvement of plants these facts must be borne in mind. In the improvement of corn, for instance, it is not sufficient to select the best ears, for these may have been fertilized by pollen from inferior plants in other parts of the field.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Present Tariff.

It may be recollected that some time ago the N. Y. Tribune invited an expression of opinion by individual farmers, agricultural societies and Granges as to the influence of the tariff upon the agricultural industry and the changes in the tariff desired by farmers; that this drew out thousands of letters, which were submitted to a committee of prominent persons, ex-Sen. Warner Miller of N. Y. being chairman, who were charged with the work of making up a consensus of the views of the farmers of the country as shown by the letters. The report of this committee, made a few weeks ago, was accompanied by the following petition (embodying their findings) which farmers and farmers' organizations are invited to sign and transmit:

To the Speaker of the House of Representatives: The undersigned respectfully pray that agriculture may be more effectually protected by preventing fraudulent importation of cattle on pretense that they are for breeding only; by a duty of 20 cents per bushel on barley, with a proportionate increase of the duty on malt; by duties of 25 cents per bushel on potatoes and onions, \$2 per 100 on cabbages, \$3 per ton on hay, 10 cents per pound on hops, 20 per cent on beans and peas, 5 cents per dozen on eggs, 30 per cent on fowls and poultry and on vegetables in their natural state, or in salt or brine, not otherwise provided for, with no removal or reduction of duties on market-garden products now dutiable; by such increased duties on flax and on woolen goods as will effectually encourage the preparation of the fiber and the manufacture of goods; by abolishing all duties on sugar, with a bounty to home producers; by permitting the imports of leaf tobacco suitable for wrappers at the duty imposed on other leaf tobacco and repealing all internal taxes on tobacco, and by restoring to wool-growers the substantial protection enjoyed under the tariff of 1867, modified so as to meet later forms of foreign competition and of invasion.

To render the subject easier of apprehension and promote its intelligent discussion, we present below a table of importations of agricultural products into the U. S., for the year ending June 30, 1886, with rates of duty imposed and amount of duties collected on each article. For these data we are indebted to a much more extensive document, compiled from Government reports and published last year by the N. Y. Tribune.

Importations for Year Ending June 30, 1886.

ARTICLES.	Rate of Duty Under Tariff of June 30, 1883.	Quantities Imported in Year Ending June 30, 1886.	Duties Collected in Year Ending June 30, 1886.
Animals and their Products.			
Animals, live—			
Cattle, No.....	20 p. c.	52,996	\$136,271
Horses, No.....	20 p. c.	37,282	\$93,205
Sheep, No.....	20 p. c.	379,968	\$94,992
Others, \$.....	20 p. c.	67,421	13,483
Animals for breeding purposes, cattle, hogs, horses, sheep, No.....	Free.	78,124	
Animals, others, including teams of immigrants, \$.....	Free.	199,936	
Birds and fowls, \$.....	Free.	213,493	
Bladders, \$.....	Free.	3,492	
Bones, horns and hoofs, crude, \$.....	Free.	817,831	
Bristles, lbs.....	15c lb.	999,887	149,981
Candles and tapers, lbs.....	20 p. c.	18,809	3,761
Catgut and strings, \$.....	Free.	178, 82	
Feathers and down for oods, \$.....	Free.	246,142	
Furs, leather skins, Furs, not dressed, \$.....	Free.	2,275,335	
Furs, dressed, \$.....	20 p. c.	2,753,138	550,773
Goat skins, \$.....	Free.	5,652,641	
Hides and skins, raw or uncured, not included above, \$.....	Free.	21,047,553	
Bend, belting, sole, \$.....	15 p. c.	106,240	15,936
Calf skin, tanned or dressed, \$.....	20 p. c.	1,802,152	360,430
Skins for gunn, tanned, \$.....	10 p. c.	1,972,415	197,241
Hide cuttings for glue, \$.....	Free.	338,537	
Upper leather, etc., \$.....	20 p. c.	2,864,354	572,870
Not otherwise provided for, \$.....	15, 20 p. c.	66,822	121,560
Glue, lbs.....	20 p. c.	4,195,600	839,120
Grease for soap, lbs.....	Free.	1,570, 62	
Grease, other, lbs.....	10 p. c.	5,687,868	568,786
Guano, tons.....	Free.	19,677	
Hair, unmanufactured, lbs.....	Free.	16,011,574	
Hair, hogs, lbs.....	Free.	5,882	
Hair, human, raw, \$.....	20 p. c.	58,663	11,732
Do, clean, but not manuf'd, \$ 30 p. c.		52,952	15,885
Quills, \$.....	Free.	758	
Reynolds, \$.....	Free.	81,232	
Total.....		82,825,295	
Provisions.			
Beef, \$.....	1c lb.	315,936	\$3,159
Pork, \$.....	1c lb.	132,875	1,328
Butter and substitutes, \$.....	4c lb.	178,534	7,141
Beeswax, lbs.....	20 p. c.	21,811	4,362
Cheese, \$.....	4c lb.	6,282,077	251,283
Eggs, dozen.....	Free.	15,092,492	
Honey, gallon.....	25c gal.	4,118	1,029
Meats, not elsewhere referred to, \$.....	p. c.	445,872	\$6,218
Milk, fresh, \$.....	10 p. c.	2,007	
Milk, preserved or condensed, \$.....	20 p. c.	660,145	132,029
Sausage, \$.....	Free.	37, 44	
Tallow, lbs.....	1c lb.	16,844	168
Do, from Sandwich Is., lbs.....	Free.		
Other provisions, \$.....	Various rates.	591	116
Total.....		84,892,255	
Vegetables, Fruits, Nuts.			
Acorns and other substitutes for coffee, \$.....	2c lb.	5,799	\$1,159
Almonds, lbs.....	5c lb.	2,732,348	136,617
Almonds, shelled, lbs.....	7c lb.	1,462,538	102,378
Broom corn and rice root for brooms, \$.....	Free.	125,029	
Chicory root, lbs.....	2c lb.	4,046,100	80,922
Currants, lbs.....	1c lb.	22,623,171	226,231

ARTICLES.	Rate of Duty Under Tariff of June 30, 1883.	Quantities Imported in Year Ending June 30, 1886.	Duties Collected in Year Ending June 30, 1886.
Vegetables, Fruits and Nuts.—Continued.			
Figs, lbs.....	2c lb.	9,988,642	199,772
Filberts and walnuts, lbs.....	3c lb.	8,978,577	269,357
Fruits and nuts, free, \$.....	Free.	3,920,702	
Fruits, preserved in their own juices, \$.....	20 p. c.	215,825	43,165
Fruits and nuts not provided for above, \$.....	Var. rates.	805,952	273,790
Grapes and limes, \$.....	20 p. c.	399,771	79,954
Ginger, preserved, \$.....	35 p. c.	16,264	5,692
Hay, tons.....	\$2 ton.	92,175	1,843
Hops, lbs.....	8c lb.	2,723,971	217,917
Opium, crude, containing 1 p. c. anhydrous morphia, lbs.....	\$1 lb.	31,133	351,193
Opium for smoking and other preparations, lbs.....	\$10 lb.	49,733	497,333
Lemons and oranges, per case, \$.....	4,475,062	800,170	
Pineapples and pineapples, lbs.....	1c lb.	64,257,265	642,572
Pecans and walnuts, not provided for, \$.....	35 p. c.	321,709	112,598
Peanuts, lbs.....	1 & 1c lb.	117,430	1,174
Potatoes, bush.....	15c bush.	1,945,028	291,754
Raisins, lbs.....	2c lb.	37,994,306	759,886
Starch, corn or potato, lbs.....	2c lb.	414,121	8,282
Starch, rice, or other, lbs.....	2c lb.	14,993	299
Straw, manufactured, \$.....	Free.	49,969	
Sun-dried, ground, lbs.....	3 10c lb.	16,656,906	166,569
Teasels, \$.....	Free.	3,143	
Vegetable, in natural state or in salt or brine, not provided for, \$.....	10 p. c.	977,574	97,757
Yam, galls, \$.....	Free.	356, 1	7,170
Yams, \$.....	Free.	3,340	
Total.....		85,480,222	
Cereals, Seeds, Oils.			
Buckwheat, bush.....	10 p. c.	75,447	\$7,544
Barley, bush.....	10c bush.	3,975,068	397,506
Do, patent, \$.....	1c bush.	7,963	79
Do, pearled or hulled, \$.....	1c bush.	7,963	79
Barley, malt, per bu. of 32			
Do, bush.....	2c bush.	333,091	6,661
Breadstuffs, not specified, \$ Var. rates.		1,5 630	27,118
Corn, Indian or maize, bu.....	10c bu.	15,907	1,590
Corn, meal, bu.....	10c bu.	1,993	199
Farina, ou substances, \$.....	Free.	690,183	
Grain, seed, \$.....	20 p. c.	212,000	42,400
Hemp and rape seed, lbs.....	1c lb.	4,116,259	41,162
Linseed or flax seed, bu.....	10c bu.	1,07,200	10,720
Oats, bu.....	10c bu.	51,836	5,183
Oat meal, lbs.....	1c lb.	1,068,146	10,681
Oil, flax seed, gallon.....	25c gal.	1,885	471
Oil, hemp or rape seed, 10c gallon.		70,732	7,073
Oil cake, \$.....	Free.	2,775,8 4	
Oil, beans and other legu- minous seeds, bu.....	10 p. c.	319,744	31,974
Rice, cleaned, from Ha- waiian Is. and, lbs.....	Free.	6,802,900	
Rice, cleaned, lbs.....	2c lb.	43,446,323	868,926
Rice, uncleaned, lbs.....	1c lb.	5, 94,065	5,940
Rice paddy, lbs.....	1c lb.	144,334	1,443
Rice, flour and meal, \$.....	20 p. c.	627, 02	12,540
Rye, bu.....	10c bu.	108	10
Split beans, bu.....	20 p. c.	58,753	11,750
Seeds, tropical, \$.....	Free.	1,563,439	
Wheat, bu.....	20c bu.	4,961	992
Wheat, flour, 5b.....	20 p. c.	1,375	275
Total.....		82,611,260	
Textile Fibers.			
Cotton, lbs.....	Free.	5,072,359	
Flax, not huddled or dressed, \$24 ton.		2,566	\$61,357
Flax, huddled, known as "dressed line," tons.....	\$40 ton.	1,120	44,834
Flax or hemp tow, tons.....	\$40 ton.	2,867	114,680
Hemp, Manila or istian, not substituted for hemp, not provided for, tons.....	\$25 ton.	27,448	686,201
Jute, tons.....	20 p. c.	16,077	3,215
Jute, butts, tons.....	\$ 10 ton.	74,757	747,570
Silk cocoons, lbs.....	Free.	4,07,797	
Silk waste, lbs.....	Free.	22,948	
Silk, raw or reeled from cocoons, lbs.....	Free.	1,611,718	
Sea weed and moss for beds, Free.		4,754,831	
Sisal and grass and other vegetable substances not provided for, tons.....	\$15 ton.	33,459	501,885
Tampico, sisal or istian, not substituted for hemp, not provided for, tons.....	\$25 ton.	33,459	836,425
Wools of the first class, 10 & 12c lb.		23,321,758	2,332,175
Wools of second class, 10 & 12c lb.		4,872,739	487,273
Wools of third class, 21 & 5c lb.		79,716,031	2,192,916
Woolen rags, shoddy, etc., lbs.....	10c lb.	2,696,517	269,651
Total.....		87,237,440	
Wood, Plants and Products.			
Bark, hemlock, cords.....	Free.	4,896	
Charcoal, tons.....	Free.	4,842	
Cabinet woods, \$.....	Free.	1,435,351	
Firewood, cords.....	Free.	170,1 0	
Hop-poles, \$.....	Free.	12,511	
Oiler or widow for baskets, \$ 2 p. c.		15,161	\$3,032
Plants, trees and vine, \$.....	Free.	212,148	
Reed, \$.....	20 p. c.	185	37
Railroad ties, \$.....	Free.	377,443	
Katkins, reeds, cane and umbrella sticks, unmanu- factured, \$.....	Free.	621,924	
Timber, hewn and sawed, cubic feet.....	20 p. c.	66,204	13,240
Timber, squared or ridged, not provided for, cu. ft., 1c cu. ft.		2,831	283
Timber in logs and other round, unmanufactured timber, not provided for, \$ Free.		459,842	
Timber in the rough, \$.....	Free.	192,233	
Timber unmanufactured, not above provided for, \$ 20 p. c.		25,847	5,169
Total.....		89,345	
Tobacco, Spirits and Beer.			
Tobacco in leaf, unmanu- factured and not stemmed, 35c lb.		13,950,306	\$1,395,030
Tobacco, stemmed but not manufactured, lbs.....	Free.	42,264	
Alcohol, containing 91 p. c. anhydrous alcohol, gals.....	82 gal.	832	68,126
Alcohol compounds, other, \$4 gal. 25 p. c.		298	7,450
Distilled spirits containing 50 p. c. anhydrous alcohol, \$1 gall.			
Chamagne and all other sparkling wines, \$.....	3,002,400	1,595,834	
Still wines, in casks, \$.....	50c gal.	3,751,071	1,875,535
Still wines, in bottles, \$.....	Free.		
Brandy and other spirits, manufactured or distilled from grain or other materi- als and not provided for, gals.....	\$2 gall.	1,409,404	2,818,808
Preparations of which dis- tilled spirits are chief value, not spec. gals.....	2 gall.	10,406	20,812
Ale, porter and beer in bot- tles and pugs, gals.....	3c gall.	939,573	28,187
Other wine than in bts, gals.....	20c g. l.	1,281,853	256,370
Ginger ale, ginger beer, " 20 p. c.		221,000	44,200
Natural mineral waters, " Free		1,521,442	
Prune wine, \$.....	20 p. c.	24,807	4,961
Cider, gals.....	20 p. c.	5,108	1,021
Total.....		82,137,719	
Sugar.			
Candy and confectionery, \$ Var. rates.		23,194	\$2,319
Sugars, etc. 11, 14 & 10 to 3c lb.		2,508,287,699	50,165,539
Sugar for San which Is. Free		191,733,175	
Molasses, galls.....	4 to 8c gall.	37,532,030	1,501,384
" fr. Sandwich Is., galls.....	Free.	61,127	
Sugar cane, \$.....	10 p. c.	642	64
Sugar draughts, \$.....	20 p. c.	26,372	5,274
Grape sugar, or glucose, lbs.....	20 p. c.	2,004,702	400,940
Total.....		85,179,322	

Value of articles imported free, except sugar and wool.	Duty.
Value of spirits, etc., and tobacco.....	\$86,682,390
Value of sugar and molasses.....	14,580,335
Value of wool.....	85,993,214
Value of other articles.....	14,713,084
Total.....	\$243,756,391
For ten months ending April 30, 1887, there was an increase over 1885 in the imports of breadstuffs and cereals, hay, sugar, vegetables and wool; a heavy falling off in hops; and an importation of other articles about the same as during the same ten months of the preceding year.	
* Viz., cocoa nuts, Brazil nuts, olives, tamarinds, bananas, pine apples, plantains and some other tropical fruits.	
1 30c box, 16c half box, \$2 thousand	
2 50c box, 10c half box, \$1.00 thousand, 55c barrel	
3 For shipbuilding and handle bolts, stave bolts and shingle bolts.	
4 per doz. qt. bottles, \$3.50 per doz. pt. bottles, \$1.75 per doz. 1-pt. bottles, \$2.25 per gallon on excess of quarts.	
5 \$1.61 per case of doz. qt. bottles, 5c. per pt. on excess.	
6 Including tank bottoms, syrups of cane or beet juice, Melada, conc ntrated molasses, etc.	
Bohemian-Oats Swindlers Worsted.	
The Supreme Court of Michigan has lately rendered a decision of great interest and importance to agriculturists in the case of McNamara vs. Gaggett, which is thus reported by the Detroit Farmer:	
It appears that on Oct. 21, 1885, Gaggett, the defendant, purchased of A. A. Griffith, superintendent of the Lenawee, Clinton & Gratiot Bohemian Oat Association, 25 bushels of oats, agreeing to pay \$10 per bushel therefor. Gaggett paid \$125 in cash and gave a 14 months' note for the balance. Griffith, as superintendent, gave Gaggett a bond, agreeing to sell for the latter 50 bushels of oats at \$10 per bushel on or before Oct. 21, 1886. Within ten days after the note was given, McNamara, the plaintiff, purchased the note, giving full face value therefor, with the knowledge, however, of what the note was given for and of the terms of the contract between the parties. Suit was brought in the Gratiot circuit by McNamara to recover, and the defendant pleaded the general issue and gave notice that he would contend that the note was given without consideration; that it was procured by deceit and fraud; that the consideration of the note was void on the grounds of public policy, and that it was an impossible consideration and could not be legally carried out without a breach of law and by perpetrating a fraud, etc. Judge Hart ordered judgment for the plaintiff for the face of the note with interest. The Supreme Court's decision, as written by Justice Chas. D. Long and unanimously concurred in by the other judges, says:	
"There is no statute in this State authorizing the incorporation of any such company, and the representation made by Griffith to the defendant that this so-called Bohemian Oat Association was an incorporated company was false and untrue, and known by this superintendent (Griffith) to be false at the time of procuring this note; and it was a material representation and one of the inducements to defendant to make his note and take this bond; and the court finds from the evidence produced on the trial that the defendant would not have made the purchase but for the bond or obligation mentioned—that is the bond of a corporation which Griffith * * * falsely induced defendant to believe was an incorporated company. * * * This fact would have defeated the recovery of the payee upon the note; and these facts all being known to plaintiff before he paid a dollar for the note, must be held to defeat his recovery.	
"Is this contract also void on the grounds of public policy? The carrying out of this obligation on the part of Griffith meant the finding of another victim within one year who would take 50 bushels of Bohemian oats at \$10 per bushel upon giving to him a contract to sell for him the next year 100 bushels at \$10 per bushel, and so on, <i>ad infinitum</i> . * * * The court cannot shut its eyes to the fact that this is only one of thousands of similar contracts made within the State within the last few years. * * *	
"The very scheme itself bears evidence upon its face that it is a fraud and a snare, and yet so cunningly devised that in the hands of sharp, shrewd and designing men hundreds of the unwary have been defrauded, and the courts should set their seal of condemnation upon it and pronounce it, as it is, a contract void on the grounds of public policy. It is upon its face a gambling contract. * * * The argument that holding such contracts void on the grounds of public policy annuls a contract already concluded has no force if the contract is at war with the established interests of society and in conflict with the morals of the time.	
The fact that individuals may suffer can in no manner affect the question, as the interests of individuals must in many cases be subservient to the public welfare. These oats were worth no more than any other oats, and could not be sold legitimately for more. Had the note gone into the hands of	

a bona fide purchaser, who had no notice of the consideration for which it was given, the principles here laid down would not apply; but we have taken the note and bond together as forming a contract between the parties, and construing them together, as though written upon the same piece of paper, and as between the original parties and those purchasing with notice, we hold such contracts void. The judgment of the lower court is reversed and judgment entered here in favor of defendant, with costs of both courts."

Farewell, Bohemian oats, red-line wheat, hullless barley, and kindred frauds! Our farmers have had a costly experience with them, but the experience ought to be of some value.

The Anti-Debris Protest.

The Sutter Farmer of last week acknowledges the receipt of the following communication:

SACRAMENTO, March 6, 1888.
Geo. Ohliger, Manager of the Anti-Debris Association of the Sacramento Valley—DEAR SIR—I am instructed by our Board of Supervisors to communicate with you in reference to your communication on the debris matter and the Biggs bill now in Congress. Your request was unanimously complied with, which I return to you. You have the assurance and favorable consideration on behalf of the noble work in which the Association is engaged, and will always meet with the hearty co-operation of our Board. Trusting that favorable results will follow your efforts in Congress on behalf of our grand old Sacramento valley, Very respectfully,
WM. B. HAMILTON, Clerk of Board.

In addition to Sacramento's Board of Supervisors, the Supervisors of Yuba, Sutter, Colusa and Yolo have indorsed the protest referred to, so far as known up to going to press.

Postal Telegraphy.

Advices from Washington are that the House Committee on Commerce, by a vote of 7 to 6 has authorized a favorable report on Rayner's bill for a system of postal telegraphy. The bill appropriates \$8,000,000 and places the general supervision of the system under a Fourth Assistant Postmaster-General, the work of establishing lines to be done under the direction of the Secretary of War. The tariff for 20-word telegrams is 10 cents for 500 miles or less; 20 cents for 500 to 1000 miles, and proportionately increased rates for longer distances. Postal money orders by telegraph are charged for at existing rates, plus telegraph tolls. The report accompanying the bill claims that the service will be self-sustaining, defends the Government's right to build and operate telegraph lines, and maintains that public opinion, good faith and justice do not require the Government to purchase the property and franchises of the Western Union.

Stockton Grange.

Some time since we mentioned the fact that Stockton Grange had voted to meet twice a month instead of weekly. We have since learned that some good members would not give it up so easy, and at the following meeting it was agreed that on the Saturday when no Grange meeting was to be held they would have an open meeting and social time. So far the attendance has been best at the social meetings.

A STATE PICNIC.—Is there not some enterprising section of this State that wants a 5000 Grange and farmers' picnic this summer or a three-days' Grange camp-meeting? Don't all speak at once! We believe, however, the day is coming when such grand gatherings will be held annually in this State and Oregon, and for the public good, too.

WEINSTOCK, LUBIN & Co.—The appendage to the well-known name Weinstock & Lubin (Sacramento) signifies that the style of the firm has been changed and a corporation formed under the laws of California. The following are the officers: H. Weinstock, President; D. Lubin, Vice-President; A. Bonheim, Secretary and Treasurer; E. Bonheim, Assistant Secretary; H. Weinstock, D. Lubin, Wm. Steels, A. Bonheim, Charles Philip, Directors. In addition to the old names, we recognize among the new ones some at least who have long been with the firm and have become thoroughly imbued with

FRUIT MARKETING.

Shall the Fruit be Sold at Auction?

The following communication shows that the directors of the Fruit Union cannot decide whether or not to declare in favor of the auction method of sale in Eastern markets, and they solicit the decision of those who will ship the fruit, and are therefore most interested in the question. We commend the subject to the attention of all:

At the last annual meeting of stockholders of the California Fruit Union, a resolution was passed, recommending to the Board of Trustees that the auction plan be tried in Chicago the coming season.

In compliance with this recommendation, the trustees are now considering the matter, but as there is a division of opinion among them concerning the wisdom of selling our fruits in Chicago by auction, it has been suggested that, before any decision is arrived at, the opinion be learned of leading fruit-growers and shippers who are members of the union.

With this purpose in view, I now address you, and ask that you carefully consider the following, and give the Board of Trustees the benefit of your judgment at the earliest possible date. There is to be a meeting of the directors within two weeks, at which meeting this question is to be definitely settled. Your prompt attention is therefore earnestly requested.

In order that you may understand the matter more thoroughly, it may be well to state briefly the reasons offered by those who look with disfavor upon introducing the auction plan in Chicago, and the reasons also that are set forth by those who are in favor of such plan.

An Adverse View.

Among those who doubt the success of selling by auction in Chicago are several shippers, and also Porter Bros. of Chicago. It is held by these, and especially by Mr. Porter, that there are strong probabilities of combinations being formed among Chicago buyers, so as to get our fruits at their own figures, and that the system of selling by auction in Chicago would be a much slower one than selling at private sale. It is claimed that by the latter method much of the fruit is sold in advance of arrival, and that a large part of the receipts of fruit are immediately reshipped, so that the fruit reaches the consumer with the utmost promptness.

Whereas, they claim that if sold by auction it would first have to be unloaded from the cars, arranged according to brand, and, after being sold, then reshipped to other points, involving at least one day's delay, which must seriously affect the value of the fruit.

It is furthermore claimed that, while the auction plan has been successful in Boston, New York, and other Atlantic cities, it has been tried in Chicago on bananas and other tropical fruits without success; and that while the auction plan may succeed in Chicago during the earlier part of the season, it would be an assured failure during the height of the season, when great quantities of fruit were being poured into Chicago from all directions.

They furthermore say that, though large quantities of California fruits were successfully sold by auction last year in Boston and New York, this is no proof that the method will continue to be a success in those markets, claiming as one reason for the increased demand, the fact that the Eastern fruit crop was largely a failure last year; and further, that while 50 carloads were sold by auction in New York, aggregating in sales about \$55,000, Porter Bros. claim to have sold at private sale to Dudley, Clapp & Doe of New York \$140,000 worth of California fruit during the same season.

Per Contra.

In reply to these objections, those who have faith in the success of the auction plan make the following answer: They say that, so far as combinations being formed among bidders is concerned, such a thing, thus far, has been impossible at the sale of fruits in any of the Eastern cities; and that while it might be done among such few Chicago dealers as now handle California fruits, their number thus far being limited to four or five, that such a thing would be impossible with the hundred or more Chicago fruit-dealers, who would at once take hold of California fruits and push them with every energy if they were placed on an equal footing with the few now in the trade.

As proof of this fact, they point to the experience in Boston during the past season. Prior to 1887 there were but three or four wholesale fruit-dealers in Boston who handled California fruits, but as soon as the auction plan was adopted, which gave all an equal chance, nearly all the dealers of any note in Boston became interested, and toward the close of the season California fruits were, for the first time, to be found in the hands of dozens of fruitmen. This resulted in greatly increasing the consumption, and largely explains why it is that 40 carloads were received there this year as against one solid carload the year previous; the remaining shipments to Boston prior to 1887 having been made through Chicago, and, as a rule, in small lots. Though the consumption in Boston as compared with previous years was very large, the agents there say that, "as long as they can sell these fruits at prices within the reach of the multitude, their market can take

much larger quantities than the 40 carloads received last year."

The advocates of the auction plan therefore maintain that its adoption in Chicago will be followed by the same results, and for every dealer who now handles California fruits in Chicago, there will be 20 who will come in and help distribute and popularize it, in this way vastly increasing the demand.

The Auction Superior.

In answer to the point made that fruit cannot be sold by auction as speedily as by private sale, it is held that for small lots fruits may be distributed more rapidly by private sale than by auction; but that experience everywhere has shown that for large quantities of fruit the auction is the only method by which the business can be made expeditious. As proof of this, the experience in Mediterranean fruits, Florida fruits, as well as California fruits, is pointed to.

Entire shiploads of lemons and oranges, that would take many days to dispose of at private sale, are sold within an hour in the auction-room. On this point the New York agents, Sgobel & Day, say as follows: "Five cars of fruit sent to any commission merchant in New York could not be sold in a day, as we sell it by auction. A large share of it must simply lay over until the next day, or even the day following; and where would apricots, peaches and other such perishable fruits be under these circumstances?"

Blake & Ripley of Boston, in speaking of the difference in expedition in selling California fruits by auction, as compared with private sales, say: "We could never hope to handle several carloads of California fruit at any one time, and successfully distribute it at private sale, without much loss by decay. It would simply be impossible to do it, and our experience this season has made that point clear. On one morning we received six carloads of California fruits, this being a regular shipment, and a delayed shipment, both of which reached us at the same time. Had we been selling at private sale, such a quantity of California fruit coming at one time would have snowed us under. We would have been utterly helpless, and before we could have reached the last lot in the last car, much of the fruit would have become worthless; but selling it as we did by auction, the six carloads were sold within an hour after the bidding began, and within two or three hours more it was scattered in all directions, and within 24 hours the money for this fruit was on the way to the growers and shippers in California."

Why It Would Win in Chicago.

Concerning the failure of selling tropical fruits by auction in Chicago, it is held that such failure was owing to the fact that bananas and the other foreign fruits offered in this way were not sold exclusively by auction in Chicago, and to make the auction plan a success, such as it has been in Atlantic cities, the auction must be the chief source of supply and not a mere side issue.

But since it is the intention, if the auction plan is adopted in Chicago, to sell all California fruits in that way, the plan cannot be otherwise than a success, since all who deal in California fruits must attend the sales to get supplies, which in itself will insure a success.

It is admitted that, if great quantities of California fruits are sent into Chicago when the market is glutted with domestic fruits of a similar character, then satisfactory prices cannot be hoped for at auction, nor can satisfactory prices be looked for under any other system if the market is glutted.

It is held that no plan can be devised whereby fruit will bring a first-class price with an overloaded market, but the advocates of the auction system claim that, even with an overloaded market, more can be realized by auction than if the fruit is gradually sold at private sale.

In answer to the fact that nearly three times as much fruit was sold by private sale through Porter Bros., in New York City, than was sold by auction, Sgobel & Day, the New York agents, answer as follows: "The capacity for receiving California fruits in New York was not at all tested. Some fifty cars came, but a hundred could have come just as well as the fifty, and would have done equally well provided the kind of fruit was sent such as we wanted."

Those who favor the auction plan say, in conclusion, that it is evidently the determination of certain parties to cripple the auction plan in New York and Boston, and to do this a guerrilla warfare was opened by them against the auctions last year in New York and Boston. Supplies were got from Chicago, and on the days of auction sales the same brands of fruits that were being offered in the auction-room were quoted by these parties at private sale at from 75 cents to \$1.25 a box less than on other days, so that it was a frequent occurrence that the same brand of fruit was to be found in the auction room direct from California and also in private hands through Chicago, thus resulting in the depression of prices at auction.

The advocates of the auction plan, therefore, maintain that if the markets of Boston and New York are to be protected and preserved for the California grower and shipper, this guerrilla warfare must be stopped, and the adoption of the auction plan in Chicago will be a complete and, in fact, the only check, since it will compel those who have been waging this war against the auctions to buy at public sale, thus cutting off all possibility of favoritism, and compelling them to pay more for their fruit

than others are willing to give before they can get it.

Unless the auction plan is adopted in Chicago, it is held that desperate efforts will continue to be made against the success of the auction in the New York and Boston markets, which, while it may cost the parties conducting this warfare great sums of money, is liable also to discourage those sending to the far Eastern markets, and may ultimately end in bringing about the condition so much desired by the Eastern auction opponents, namely, limited supplies for Atlantic cities at fancy prices.

Stockholders Must Decide.

The query, "Shall the auction plan be adopted for Chicago?" being the "burning question of the hour," it is of the highest importance that the matter receive the earnest thought and consideration of all concerned. Whichever way this question is decided, it must have a great influence upon the future of California green fruits in the East, and I therefore trust that you will give this matter your careful consideration and forward your conclusions at the earliest moment.

Yours respectfully,

H. A. FAIRBANK, Secretary.

Bench-Show of Dogs.

The Pacific Kennel Club has long been planning to give a bench-show here this spring, and the exhibition will take place in the Mechanics' Pavilion, opening on Wednesday, April 4th, and continuing throughout the week. All entries must be made by Tuesday, March 27th, on blanks which can be had on application to Supt. J. F. Carroll, 624 Market street, S. F. An entry fee of \$3 will be charged for each dog entered, and covers care and feed of the animal during the show. A free season ticket will be issued to each exhibitor, for his or her individual use only. Rules and premium lists can be had of the superintendent, as above. The show will be governed by the revised rules of the American Kennel Club.

The Premium List

Includes mastiffs, St. Bernards, Newfoundland, German mastiffs or Great Danes, deerhounds, greyhounds, fox-hounds, pointers, English, Irish and black-and-tan setters, spaniels of several varieties, collies, dachshunde, beagles, bulldogs, retrievers, Dalmatian or coack dogs, terriers of different sorts, pugs, poodles, etc. The prizes in each class are usually \$10, \$5 and diploma for 1st, 2d and 3d of each sex, with \$5 and \$3 for puppies under 12 months; but there are some exceptions. There is also a special prize-list—\$10 each for the best pointer, best English setter, best Irish setter, best black-and-tan, best greyhound, best fox terrier, best bull terrier, best kennel (three) of greyhounds, best kennel of pointers, best kennel of English setters, best kennel of black-and-tan setters and best kennel of Irish setters.

The following additional specials are offered: For best pug Will & Finck offer a set of alligator harness valued at \$7.50; for best hound a fancy collar worth \$10 will be given by the Golden Rule Bazaar; for best dog in the largest class the John Wieland Brewing Co. will donate \$20; for the best dog exhibited by a lady O. A. Tulle will present a silver collar worth \$5; Wm. Schreiber offers \$20 for the best greyhound; James E. Watson offers \$10 for the best trick dog; Stuart Taylor offers \$10 for best Great Dane; A. W. Manning offers \$25 for best rough-coated St. Bernard dog or bitch; Marin County Gun Club offers \$12.50 for best pointer and \$12.50 for best setter; Dupont Powder Co. offers one 25-pound keg of Dupont's New Brand Summer-Shooting powder for the best Irish water spaniel in show; also, a similar prize for best setter in show.

The Southern Pacific Co. will transport free all dogs for exhibition, if accompanied by the owner or the owner's agent, and Wells, Fargo & Co. will carry dogs for the show and return them to their shipping-points at half-fare.

PROSECUTING THE TIMBER GRABBERS.—Besides taking steps to secure the cancellation of patents to timber lands in Humboldt county, procured fraudulently, the Secretary of the Interior has directed the Attorney-General to institute a joint civil suit against the Northern Pacific Railroad Co. and J. C. Jones & Co. of Portland, Or., and Williamsport, Pa. The Northwestern Lumber Co. of Knappton, W. T., and Samuel France and the Northern Pacific Lumber Co. are also defendants. The suits are for the value of pine timber estimated at \$219,000, alleged to have been unlawfully cut from public lands in Washington Territory.

STALLION SHOW at San Luis Obispo Agricultural park, Saturday, March 24th. All horse-owners are invited to make arrangements to join the show, and will please communicate with H. Moskowitz, San Luis Obispo.

ANTEO, the well-known trotting stallion, has been sold to a Kentuckian for \$20,000. He is a half-brother of Antevolo and has a record of 2:16½. He was sired by Stanford's Electioneer, dam by Columbia.

THREE physicians have left Paris for Australia, taking with them germs of chicken cholera. The Australians are about to adopt Pasteur's plan of destroying their rabbits, in the face of a very strong opposition.

News in Brief.

PEOPLE will have to pay higher prices for canned salmon this year than they did last.

THE Fire Underwriters intend to enforce strict rules for the use of petroleum as fuel.

THE citizens of San Diego are making efforts to drive the criminal element away from that city.

SALINAS CITY has voted \$25,000 bonds to improve the local bridges, culverts, roads and streets.

A SPECIAL election will be held in Benicia, April 9th, to decide whether or not to issue \$30,000 bonds for water works.

NEW YORK, Washington and surrounding regions had this week the most severe storm ever experienced in those latitudes.

HENRY BERGH, the founder and president of the Society for the Prevention of Cruelty to Animals, died in New York on Monday last.

THE State Jute-Mill, at the San Quentin prison, commenced this week to run night and day. The electric-light plant was started up on Sunday night.

LOBSTERS are to be sent here this year by the U. S. Fish Commission, and the experiment of raising them in Pacific waters will again be tried.

THE Lick Observatory is hereafter to be known as "The Lick Astronomical Department of the University of California," by resolution of the Regents.

THE Italian laborer is making considerable trouble for the French laborer in France. There are said to be not less than 250,000 Italians at work there now.

THE 12 firms controlling the borax output of this coast have an association known as the Borax Board of California, and prices are now kept up so that the business is profitable.

MRS. CHARLES CROCKER has given \$10,000 to purchase a lot for the building site of a home for young women. The home will be built by the Young Woman's Christian Association.

THE United States Attorney-General has been ordered to bring suit to secure the cancellation of patents issued on certain timber entries in the Humboldt (California) Land District.

REPORTS received at the Navy Department show that very satisfactory progress is being made with the work of building up the navy. The Charleston, building in this city, is the most advanced of her class.

GOVERNOR STEVENSON of Nevada has issued a proclamation making the 6th of April "Arbor Day," and recommending that school children and others plant trees, vines, shrubs and flowering plants on that day.

It is thought that the River and Harbor bill this year will appropriate for Oakland harbor, \$150,000; Wilmington, \$75,000; Humboldt bay, \$100,000; San Joaquin river, \$40,000, and other places on this coast smaller sums.

THE mortality in 80 cities and towns of the State, containing 722,500 inhabitants, last month was 1084, of which 517 deaths occurred in San Francisco. The percentage of deaths was 1.5 per 1000, against 1.8 for the previous month.

THE storage capacity of the South Yuba Canal Co. is 600,000 inches, or 960,000,000 gallons. This supply is available for most parts of Nevada, and some parts of Placer counties. This is one of the largest, if not the largest, water storage system on the continent.

SINCE redwood has come into use for making furniture it has advanced greatly. A few years ago the kind used for furniture could be bought for \$10 a thousand, and now it is \$90 to \$100. The burls or knobs which appear like excrescences on the trunk are worth \$250 per thousand.

THE Sacramento Bee says: It is said on good authority that the large railroad machine-shops are to be enlarged to twice their present size. As soon as sufficient cars can be obtained to haul the material here, work will be commenced. The new addition will join the old shop. Room will be made by the removal of two or three buildings near the machine-shop.

THE following roads have agreed to transport exhibits free of charge to and from the next Mechanics' Fair in this city: San Francisco & North Pacific and North Pacific Coast. Valuable concessions in regard to the carrying of exhibits have been made by the Southern Pacific. The Pacific Coast Steamship Company have also agreed to carry all exhibits to and from San Francisco without charge.

SOME time since, a number of Columbia-river canners agreed to pay one cent a case on the spring pack to the State Fish Commissioners, the proceeds to be applied for the benefit of the State Hatchery at Clackamas and the enforcement of the law protecting salmon. The spring pack was 354,000 cases, and if all paid in the amount realized would have been \$3540. So far the amount collected is \$2000.

THE buildings of the new Chicago Packing and Provision Co. on the bay shore, outside of Oakland, are being rapidly pushed forward. The following officers have been elected: President, William Selover; Vice-President, J. S. Emery. Directors—F. K. Shattuck, G. W. Grayson, W. W. Camron, A. J. Snyder and B. Hinckley; Secretary, Robert Grayson, and Confidential Agent, J. P. McElroy.



Home! Sweet, Sweet Home!

Written for the RURAL PRESS by H. L. K.

Home! home, sweet home! no sweeter sound
In all the tongues of earth is found.
It speaks of peace, of soft repose,
Of gathering in, when labors close,
'Round the warm hearth, where kith and kin
Open their hearts and peep within,
Where man presides and woman loves,
The nest of prattling turtle-doves.

Home! Oh, how many flit before
My lingering gaze, as things of yore,
Home here! Home there, oh, which, and where,
Is the sweet home that's shadowed there?
How many homes have faded quite!
And which is this, my home to-night?
Full many a step makes up the stair,
Beginning, when? and ending, where?

'Tis home indeed on mother's breast,
Where our first infant life is blest;
Peace, plenty, rapturous joy is there,
With none to rupture what to share,
There, near her heart, and nearer still
To nature's fountain, at our will,
We draw the nectar, smile and nod,
And dream her angel face is God.

The view dissolves, and others stand
Around her feet, and hand in hand—
Brothers and sisters, father, mother,
Why, this is home, sweet home, another.
There, there indeed was holy ground,
If ever such on earth were found.
What are the world's dark, evil ways
Compared to those gay youthful days?

And still another home looms up
To season life's full flowing cup—
My wife! my babe! my own sweet home!
At last to my fond heart has come.
Nay, this is home, the dearest, best;
For this I bargain all the rest.
My heart pours out its love as never
Can exceed, not for forever.

Still home must shift, move on as 'twere,
From the sweet first-born babe, and her;
Around me stand maidens and men,
And all my own, though eight or ten.
This group is home indeed to me,
Where I am king, and queen is she;
And these our subjects, loyal, true,
Till life is past and life is through.

Home! yes, for I am on the bed,
Where death demands this old gray head;
'Tis home indeed, for here are found
My own, my dearest, standing round.
Farewell! farewell, dear ones, farewell!
How many homes have we to tell?
Stand closer! all are fading fast,
And Heaven alone is home at last.

A Suggestion.

[Written for the RURAL PRESS by I. H.]

The house was such as one often sees in California, outwardly a mere shanty of rough red-wood boards nailed on perpendicularly with narrow battens over the seams to exclude the wind and rain, the door home-made, the windows small and the stovepipe passing out through a hole in the roof. Unmistakably it stood upon rented land, for there was neither vineyard nor orchard in sight, nothing but a wide stretch of grain-fields from which not even so much as a garden spot had been cleared.

Yet there was no look of barren poverty about the premises; the rough boards had lately received a fresh coat of whitewash, the small windows were spotlessly clean and fitted like the doorway with frames covered with mosquito netting to keep out the objectionable fly. Morning-glories and sweet peas climbed up to the low roof, and a wide shelf under the window held quite a dazzling display of scarlet geraniums, begonias and pinks.

Once inside you would easily forget the meager style of the building, so deftly had all the deficiencies been concealed. The walls were neatly papered and hung with pictures better chosen than those which may be seen in many a more pretentious dwelling. There was a pretty carpet on the floor and muslin curtains shaded the windows; the furniture, though simple and inexpensive, was all tasteful and appropriate, while little bits of artistic needlework in various devices adorned each possible nook and corner.

A peep through a half-open door into bedroom, dining-room or kitchen revealed a like condition of affairs; everything was neat, dainty and new. Yes, new, even to the mistress of the house herself. A slight girlish figure in a light calico dress and white apron, seated in a low rocking-chair reading; it required little penetration to discover here a bride and her belongings. Her companion, who sat at a small table writing, was an elderly woman with dark eyes and beautiful white hair. No one could see her once and fail to remark the mingled sweetness and dignity of her expressive countenance, the indescribable grace and ease of manner, which only come from life-long association with people of intellect and

refinement. To the younger woman she was a revelation.

But it is time to introduce them by name. Emily Archer, the mistress of the house, and her husband's aunt, Miss Hartwell, who was here on a visit purposely to make the acquaintance of the young wife of her favorite nephew. It had been a delightful visit; the two women who were so utterly unlike in every respect, yet finding each other exceedingly lovable and not a little interesting.

Emily was a California country girl, born and brought up on a ranch, educated at the district school, and entirely ignorant of what in the cities is called society. But she had known the best of all training, for her mother was a lady in thought, word and deed, and her father a man of decidedly literary tastes. In their companionship she had grown to womanhood, gentle and modest in voice and manner, and with an eager interest in everything that could tend to cultivate her mind and enlarge her opportunities of self-culture.

Miss Hartwell, on the contrary, had been from her cradle accustomed to the refinements of wealth and ease. She had lived in an atmosphere of intellectual ascendancy; she had traveled everywhere, had seen everything and everybody worth seeing; could speak half a dozen languages, draw and paint, and was a fine musician. It was the wonder of wonders to Emily that with all this she was so sweet, so unaffected and sympathetic, as ready to give a helping hand in all the household work, as though she had done nothing else all her life. Equally was it a matter of surprise to Miss Hartwell to find her nephew's "wild flower" so free from uncouthness or asperity of any kind.

Now and then she detected a little wistfulness in Emily's manner, as she asked some questions about the ways of that world of which she knew so little. But as yet the feeling which gave rise to it had not been fully expressed.

Now, however, as they sat together, there was a sudden exclamation from Emily, and the paper she held in her hand was dropped with a gesture of despair. Miss Hartwell looked up and seeing the flushed cheek and the eyes half-filled with tears, asked in unaffected concern:

"Dear child, what can be the matter?"

"Oh, nothing," said Emily with a still deeper blush for her self-betrayal. "I am very silly, and I have disturbed you at your writing."

"Not at all, dear; I have finished," said the other, folding her letter. But she did not repeat her question; she only looked kindly at her companion and waited.

"I will tell you then, Aunt Alice; but I don't know that you will understand me, you are so different. It was only this: An advertisement of a ladies' paper that professes to teach its readers not to say and to do things that will make folks wonder where you were born."

Then seeing that Miss Hartwell only looked puzzled, she added: "When I read that I felt as if some one were sticking needles and pins into me."

"But why?" asked the older woman, still unenlightened.

"Why? Because I am one of that class of women who is supposed to need such instruction, and to be told of it in that way hurts—"

"Well, my dear," said Miss Hartwell, gently, "it never would have occurred to me that you needed anything of the kind, or that you could think so."

"Indeed I do. You may not understand it, Aunt Alice, for you know just what to do and say at all times. You could accept an invitation to dine with a Queen or an Emperor and go and enjoy yourself, while I would die a thousand deaths at the very thought of it. And yet it is not my fault that I was born on a farm and know nothing about the etiquette of society. I suppose I am silly and oversensitive, but when John talks of taking me to the East, I feel a cold shiver creeping over me. I know I would shock everybody by my country manners."

"Did you ever shock me, dear?" asked Miss Hartwell.

"Oh, if every one were like you I wouldn't be afraid; but that is a little too much to hope for."

"I can answer for every one in John's home being like me in one respect, Emily, in readiness to give a loving welcome to his wife. But I think you are making yourself needlessly unhappy, my child, by ignoring the difference between good manners and etiquette—the latter changes; the former is the same at all times and in all places. When we get that invitation to dine with royalty we will both go without any misgiving, though, at the same time, we may need a little instruction in matters pertaining to the ceremony of courts."

Emily looked but half convinced. "It is very kind of you to talk so," she said, "but, after all, there is the advertisement, and it was evidently expected to be effectual in securing subscribers."

"Yes; for every one is not so easily wounded, and, though the expression is a little rough, there are those who will accept it as truthful. I think they are hardly like you, Emily. You have had a different training; but I have been in country homes where such a paper might be a great blessing to the chance visitor, at any rate, if not to the host and hostess."

"Yes," said Emily, "so have I. I suppose it would suggest the use of napkins, the removal of the meat and vegetables before the dessert. Perhaps it might teach people not to ask any one to take a piece of pie on the same

plate used for dinner. I have seen that done. But you see I am criticising my neighbors when I ought to ask to be criticised myself. Come, Aunt Alice," she said coaxingly, "now tell me honestly what mistakes I made last week when your friends, the Elliots, were here to dinner."

"Do you really mean it, Emily, and will you not be hurt?"

"Indeed I will not. I will take it as a great kindness."

"Very well, then, I will tell you; the dinner was perfect, everything well cooked and nicely served; the table was prettily arranged; the only fault any one could have found was in the seating of your guests."

"Why, Aunt Alice," exclaimed Emily in surprise, "the gentlemen all sat by their wives."

Miss Hartwell smiled.

"That was the trouble, Emily. It is a country fashion, and, of course, it seems all right, but if you will think a little, you will see why it is not the best plan. When you invite your guests, they are expected to enjoy each other's society as well as the good things you have provided. When they sit down to the table, if you seat each man by his wife, what are they to talk about? Their own private affairs? They have opportunity for that at home. They are not likely to exert themselves for each other's entertainment in the presence of other people, and so they subside into silence and eat their dinner with as few words as possible. If you had placed Mr. A. next to Mrs. B. and Mr. B. beside Mrs. A, they would have kept each other amused and entertained all the time. One of the great arts of a clever woman in society is the bringing together of the right people, who will need no further effort on her part to keep the ball of conversation rolling."

Emily sat for a few moments in silence, then she said: "Thank you, Aunt Alice. When I have read of brilliant conversation at dinner parties, I have sometimes wondered why it is that in the country people sit at the table as if they had not an idea in their heads. You remember the wedding we were at last week; everybody was laughing and talking in the parlor, but when we went into dinner we sat there in solemn silence. It was the hardest thing I ever tried to make a single remark. I did not understand it then, but I believe you have given me the explanation. The dullness of a country party comes from a mistake in the way of seating the guests."

(Is it possible that she was right?)

THE LOTTERY EPIDEMIC.—We suppose the subject of lotteries occupies the minds of more people in California to-day than any scheme of speculation. The Louisiana Lottery Company sells thousands of tickets every week of the year in this State, in fact we believe one of its best customers is the State of California. Twenty-six States of the Union forbid the Legislature to authorize them by constitutional provision. It is made a penal offense in this State to deal in lottery tickets, yet the traffic goes on and money to the extent of thousands of dollars weekly is sent from here to New Orleans for such tickets. There is no trouble found in purchasing tickets. A few prizes are drawn at intervals. These are published, and the luck of one individual out of 10,000 is paraded as inducement for the masses to buy. Lotteries are of ancient date. Almost all the modern States at one time or another employed lotteries as a means of revenue. Many charitable institutions have been founded from the proceeds of lotteries. But they have invariably been found to exert a mischievous influence upon the people. They are generally patronized by the poorer classes who cannot afford to squander money. And the hope of a sudden fortune has always had a tendency to divert them from persistent labor and patient thrift. The experience of the world is against the lottery form of gambling. Its devotees become demoralized and discouraged after years of disappointment, and lose all relish for the slow and sure way of making a fortune. They become habituated to imagining themselves rich when they are penniless and acquire habits their means of providing for are inadequate. The rule is that men do not win fortunes or the semblance of fortunes in lotteries. Better to invest the money spent on them in beefsteak.—*Nevada City Herald.*

CROWS CASTIGATE A CAT.—Two young men, who lately crossed the mountains from Santa Barbara to the Santa Ynez valley, witnessed a rare performance, which one of them describes in the *Independent* thus: A furious cawing and flapping of wings by a large flock of crows attracted our attention to a singular combat. A large wildcat, on the steep side of the mountain near the river, was surrounded by a flock of angry crows, who were flying and pecking at him in a furious manner. The cat, which was retreating, would pause now and then and strike viciously at his tormentors, but they were too quick for him. The fight continued for some minutes, and the crows were getting the best of it, when they were disturbed by our presence and flew complainingly away, while the cat made a gray streak up the side of the mountain and disappeared from view.

A HINT FOR THE COOK.—To test cake in the oven never insert a broom splinter, but draw it gently forward and put the ear close to the loaf; if it be not done there will be a little sputtering sound. When it is thoroughly baked there will be no sound.

Immortality.

Foiled by our fellow-men, depressed, outworn,
We leave the brutal world to take its way,
And "Patience! in another life," we say,
"The world shall be thrust down and we upborne!"

And will not, then, the immortal armies scorn
The world's poor routed levies? or will they
Who fainted in the heat of this life's day
Support the feivors of the heavenly morn?

No, no! the energy of life may be
Kept on after the grave, but not begun!
And he who flagged not in the earthly strife,
From strength to strength advancing—only he,
His soul well knit and all his battles won,
Mounts, and that hardly, to the eternal life.

—Matthew Arnold.

A Russian Peasant's Adventure.

Many years ago, when Peter the Great was reigning in Moscow and St. Petersburg was not yet built, a Russian peasant in a tattered sheepskin frock was cutting turf in a lonely spot on one of the great plains of Central Russia. It was a burning summer day, and his work had made him very hot and tired; but one could see by his downcast face and hanging head that some great trouble was pressing harder upon him than even this fatiguing labor.

Looking up in one of the pauses of his work, the turf-cutter saw a tall young man coming slowly over the plain to meet him. The newcomer wore the green gold-laced uniform of the Palace Guards, but the lace was so faded and the coat itself so threadbare that one would have judged this officer to be either a very careless man or a very poor one.

"He looks as if he had lost his way," muttered the peasant, as the stranger halted and glanced doubtfully around him. "I must see if I can't put him right. It's always a comfort when one's in trouble one's self to help somebody else out of it."

The young officer, however, did not look like a man who would need much help from any one. He was immensely tall—taller by far than any one whom the peasant had yet seen; and his broad chest and long, sinewy limbs showed signs of enormous strength. His smooth, handsome face wore a rather sad look, and he walked slowly, as if either tired or in deep thought; but there was an air of unconscious power in his upright bearing and in the firm set of his head as if he felt himself to be a match, and more than a match, for anything that he might meet with. Altogether, he seemed to be the sort of man whom one would much rather have for a friend than for an enemy.

"Hello, brother!" cried the stranger, in a deep, strong voice. "Am I far from the village of Volkhoff? I think I must have gone wrong, somehow."

"Your honor has gone wrong, indeed," answered the peasant, shaking his head. "It's a long way to Volkhoff from here. You must keep eastward till you come to a big tree standing all by itself, and then you must turn southward as far as a small lake. Then, after that, you'll make a big bend round to the right, and—"

"Oh, I shall never be able to remember all that," said the officer, laughing. "Suppose you come along with me and show me the way yourself."

"I'd do it gladly, your honor," said the peasant, hesitating; "but, you see, if I lose my day's work, then—"

"You shall lose nothing by helping me, be assured of that," said the young man, gravely. "How much do you earn in a day?"

"Twenty kopecks" (fifteen cents).

"Twenty kopecks!" echoed the stranger, looking down pityingly at the poor, tired man, quite a dwarf compared with him, who worked so hard for such scanty pay. "Well, here's half a rouble (thirty-seven cents) for you; and now come along. By the by," he added, "if we pass near your house you might carry your turf home at the same time."

"It would need two journeys to do that, your honor."

"Two? Why, these four baskets would surely hold it all."

"There's not a man in Russia, your honor, who could carry all four at once when they're full. The two smallest are quite enough for me."

"Not a man in Russia, eh?" said the young officer, scornfully. "We'll try that. Sling those four baskets over my shoulders and then fill them."

The laborer hesitated, but the young man spoke like one accustomed to be obeyed. As he stooped to receive the baskets, the peasant slung them over his shoulders, two before and two behind, and then piled in the turf till all four were full to the very top. Then it was a grand sight to see the great tower-like figure rise slowly to its full height under that enormous load, and stride away so briskly that the amazed peasant had hard work to keep up with him.

A short walk brought them to the wretched hovel that was the poor turf-cutter's only home; and while the latter was emptying his baskets, the stranger's keen eyes were noting the miserable and poverty-stricken look of the whole place. A few kind words spoken as they started again went straight to the poor peasant's overburdened heart, and the whole story of his grief came out.

Some years before, he had bought at a high

price, from a rich neighbor, a small patch of ground, that had proved to be worth hardly anything at all. Moreover, not being able to make up the full purchase-money at the time, he had got into debt; and the debt kept growing larger and larger, from the high rate of interest charged upon it, till he was almost driven to despair.

"It doesn't seem fair, does it?" he concluded; "but what can I do? He's rich, and I'm poor and friendless."

"Can such things be done in Russia?" muttered the officer, in a voice like the roll of distant thunder. "It is, indeed, time for a change!"

His great black eyes lighted up, as he spoke, with a flash of such terrible anger that the peasant shrank back in dismay. But the young man cooled again instantly, and asked as quietly as ever:

"Why don't you complain to the Czar?"

"The Czar?" echoed the laborer; "hasn't he changed our old Russian customs, and brought in foreigners to work for him instead of his own people? What would he care for a poor peasant?"

"It's worth trying, though," said the young man, earnestly; "for yours is really a very hard case. Come, I'll tell you what I'll do: I'm going to Volkhoff to meet the Czar and his officers, who will be there to-day, and I can get you a chance of speaking to him, for I belong to his body-guard."

"Me speak to the Czar?"

"Why not? He's only a man, like you and me. I've spoken to him myself, and I'm none the worse."

"But how shall I know him among all his officers?"

"All the rest will have their hats off, but the Czar will keep his on."

Half an hour later, just as they came in sight of Volkhoff, a group of richly dressed horsemen rode up, who the moment they saw the tall officer sprang from their horses and took off their hats.

The peasant's sun-burned face turned white as a sheet, and he glanced with a bewildered air from the officers to his tall companion, whose face wore a waggish smile.

"Well, brother," he added, "have you found out the Czar yet?"

"Well," said the peasant, staring as if his eyes would start from his head, "it must be either you or I, for all the rest have their hats off!"

"So it seems," laughed Peter the Great.

"Well, my lad, Prince Mentshikoff here will see you righted, and the rascal who cheated you punished as he deserves, and I hope you will never again think the Czar unmindful of the troubles of his people."—*David Ker, in Cosmopolitan.*

The Advent of March, 1888.

[Written for the RURAL PRESS by MALLIE STAFFORD.]

The advent of March was heralded with a spice of various kinds of weather. It came in like a lion. The last day of February warned us of its approach by a weak and diluted shock of earthquake, but earthquake for all that. It rattled the windows and made the timid ones look big eyes at each other, and in startled tones exclaim: "What's that?" "That's an earthquake." "Did you feel it?" "Did you hear the windows rattle?" etc.

On the first day of March we saw the ragged edge of our beautiful warm California winter-spring weather depart. It was devoured by a thick bank of vapory cold that blew across the mountains from lovely sunshiny Napa valley; it came like a blizzard and doubled up our springtime warm weather in just no time. It rained, it blew, it hailed, and then we noted with a smile that while our neighbor mountains across the gap were getting white with a few shovelfuls of Montana snow, our own side was still untouched by the cruelly beautiful.

But we hadn't long to exult. Some wise head remarked, as we all huddled around our pine cord-of-wood fire, "If the business keeps up this way, we'll have a big white blanket spread over the couch of Nature by morning."

I thought them idle words, but when I looked out in the morning I hardly knew whether I had evaded my mortal coil and had "gone up higher" in the night, or whether I was in a dream; anyhow, it was beautiful enough for the realm of the immortals, and surely there dawned on my bewildered vision the delectable mountains and the plains of Beulah. Every object was covered, the erewhile naked limbs and bare twigs of the desolate trees were softly clothed with the beautiful and the immaculate; and the green and stately pines, the redwood, the fir, the manzanita, each held on their spiral needles or in the hollow of their outspread palms their surface full of feathery flakes. Even the wee flowers of the early spring nodded under the fleecy weight. But it did not long continue. While still the picture remained intact I wrapped me in warm robes and walked up the mountain to take in a full view of the rare and radiant sight; radiant indeed, now that the sun rose lordly and majestically over the mountain's brow and burnished with his golden beams the silvery splendor of the landscape. With the advent of his warm and glowing beams, down dropped the silvery mantle from the trees, melted the soft robe from the green and moist bosom of nature, and lo! it vanished noiselessly and beautifully as it came. Was it a dream?

YOUNG FOLKS' COLUMN.

Fleas.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

Far, far beyond the briny seas,
I paid my fare to see a show,
And saw some wagons drawn by fleas,
Each going fast as it could go.

Two teams were three span, three were two,
Then came a two-wheeled cart with one;
Then came, my dears, 'twixt me and you,
A spiked team—a lead-flea on.

They had no roads nor trails to take,
But passed the showman's table o'er;
Each team its crossing had to make,
Or be unharnessed never more.

The wagons tiny coaches were,
Excepting one, the buggy cart,
Drawn by a bronze-black prancing pair,
That acted well their equine part.

They labored not at eight-hour work,
Nor used their Jehus whip or goads—
These fleas their job-work could not shirk,
So humped their backs to draw their loads.

Santa Barbara.

The Brown House on the Hill.

[Written for the RURAL PRESS by A LITTLE GIRL.]

In a little brown house, situated on a hill,
lived a lady and her five daughters. Mrs. Linton, for that was the lady's name, went out sewing by the day. Clare and Eva, being the two eldest, staid at home to take care of the house. Aileen was 16, and she was governess at Mr. Benton's, a wealthy gentleman living near them. Emma, aged 12, and Nell, the smallest, went to school.

Mr. Linton, as I have not yet stated, was in the war, but they were expecting him home for Christmas, and they hoped that he would not have to leave them again, and they were all expectant for him to return.

It is now September, and they are all very anxious for Christmas to come, as we will see by the conversation going on in the kitchen.

Clare is standing near the sink, her sleeves rolled up to her elbows, while Eva is wiping the dishes.

"Oh! I do hope father can come home and bring Aunt Nan and little Gladys to spend Christmas with us. And oh, what a jolly time we will have then!" said Eva, as she let one of the plates fall and broke it.

After the pieces were picked up, Emma and Nell came running in to tell about a runaway that had just occurred down the road. "Oh! there was the littlest girl and a pretty lady thrown out that you ever saw," said little Nell, shaking her head, "and some men picked them up and took them into Mrs. Kipley's house."

None of the girls had ever seen Aunt Nan but Aileen, who was not at home; but just as they were all talking, Aileen came in. Emma and Nell immediately started in to tell her of it, but before they had finished their mother came in. The girls were sure by the expression on her face that she had good news to tell them, as, indeed, she had. She said it was a letter from father, saying that Aunt Nan and Gladys, her six-year-old little girl, were coming to spend Christmas with them, and that he would be home in a few days.

The story of the runaway was repeated. It was found out that the lady and little girl were no others than their Aunt Nan and cousin Gladys. They were not seriously injured, and were able to be around in a few days, and you may know that it was a very Merry Christmas they all spent.

L. M. R.

Sebastopol.

A Visit to the Blind Children.

I want to tell the children of a visit I once made to the deaf and dumb and blind asylum, and of a few of the things I saw there. Perhaps these less fortunate children can teach us a lesson. The asylum is situated in Berkeley, facing the beautiful San Francisco bay; and here all the deaf and dumb and blind children in the State may be sent, and be taught the same things that you are learning every day at school. As we came up the broad walk leading to the girls' building, we saw some of the children at play. Such bright, happy faces; but what a silent play-ground! No shouting or talking, but the bright eyes were watching and the nimble fingers were busy making signs which we could not understand, but which to the children seemed quite intelligible. One dear little boy was hopping about on crutches, having lost a leg, and I saw that he was also deaf and dumb; yet he seemed happier than some little boys who have the use of ears, tongue and limbs. We ascended the steps of the large three-story brick building, were met at the door by the girls' matron, who, after learning our business, conducted us to the blind girls' schoolroom. Here several older girls were busy mending stockings—one of their regular duties. In an adjoining room one of the girls was taking a music lesson. We heard one little girl reading her geography lesson. What a blind girl reading! Yes, but instead of the black letters which you look at, her book contained white letters raised above the surface of

the paper, and she felt along the lines and read with her fingers. Her slate was also different from yours. She had little blocks, with raised signs on them, and these she set up in a frame as quickly and correctly as you could put the figures on your slate.

We now went upstairs into the dormitories. Here each girl had a little room partitioned off, containing a bed, a bureau and a chair. The beds were all neatly made, the bureaus without a speck of dust—nothing out of place; and these rooms are kept in order by the girls themselves. I think many girls might learn a lesson of neatness from the blind girls at Berkeley. We passed downstairs and across the yard to the dining hall. As it was almost supper-time, we waited to see the children march in, and here they come with clean faces and neatly brushed hair. The blind boys and girls occupy one long table, the deaf and dumb children occupy two others. Each child has a stool, and when all are in their places, they face the center of the room, where a teacher stands. The bright eyes are watching as, with his fingers, he asks God's blessing; then, at a given sign, each child turns to the table, and ample justice is done to the food before them.

I could tell you many more interesting things about these children, but my space is limited. Should you ever visit San Francisco, ask your friends to take you to Berkeley to see these children, and I know you will enjoy the visit very much. But if you cannot go to see them, you can think about them, and about your own favorable surroundings. You can say: "Not more than others I deserve, yet God has given me more." You can lift your hearts in gratitude to Him who has given you eyes to see and ears to hear, and you can use those eyes and ears and tongues for Him who has done so much for you.—*M. F. R.*

From One of the Boys.

[Written for the RURAL PRESS by E. DE L.]

EDITORS PRESS:—My father takes your paper and so I thought I would write for the young folks. I have never written to a paper before.

I don't think Aunt Susie's piece is very nice. She wants the boys to tack leather on her piece boxes and then call them names.

I used to live in Minnesota. I lived there 12 years. It is 58 below zero there now and snow two feet deep on a level.

My father brought some Pekin duck eggs from Minnesota, and they are some of the biggest that I have ever seen in the State of California. We used to raise poultry in Minnesota. I used to feed the young chickens. We raise fruit here, and my father has about 100 genuine White Smyrna fig trees just coming into bearing; he has also about 400 cuttings.

Newcastle.

DOMESTIC ECONOMY.

Something About Beans.

[Written for the RURAL PRESS by N. E.]

There is probably no other time of year when anything about beans would receive so much attention as now, when the scarcity of the more delicate vegetables makes this old and well-tried friend of the human family a frequent dish on most of our tables. Few of us know more about them than that they are much appreciated, both from a dietetic standpoint and from considerations of economy. Like the poor, this esculent is always with us in some form or other during the entire circle of the seasons, and is susceptible of various modes of preparation in the hands of the intelligent cook. We can trace the history of the bean to Egypt. As far back as the days of the Pharaohs, we find frequent mention of them. The variety cultivated by the Egyptians was the *vicia faba*, sometimes designated the horse bean or coffee bean in this country. Most of our common field beans are varieties of another species, the *phaseolus vulgaris*, which are of Eastern origin, and their appearance in history dates from the time when Alexander the Great, forcing his way to that quarter of the globe, saw them growing in a field in India and ordered them to be served for the royal repast. So much did he enjoy their flavor that he secured some of the seed and introduced the new article of food into his own country. A lover of the bean may well declare that in this act he accomplished a more lasting benefit to mankind than the aggregate of all his victories.

In spite of the extreme commonplaceness of the garden bean in our day, it was not without its romance in times past. The Roman consecrated it to the dead, while the Buddhist refused to eat them from the superstition that in doing so he was in danger of devouring some departed friend. Hippocrates had serious misgivings for the welfare of his patients during the blossoming period of the beanvines, and there was a day when no Roman or Grecian epicure considered his table complete without this vegetable. The celebrated Roman family of the Fabii are said to have derived their name from this plant. On the "Dreikonistag," or "Twelfth Night," of the Germans for generations past, a cake has been baked having a bean concealed inside, and the member of the company to whom it falls in the distribution of pieces is "Bean King" during the ensuing year. Nor is this dignity without its penalty,

for to the King falls the duty of providing next year's entertainment on "Twelfth Night." In Scotland, the bean-fields, with their acres of white and scarlet blossoms, filling the air with the most delicious perfume, are gracefully alluded to by Burns:

"The zephyr wanted round the bean,
And bore its fragrant sweets along."

But by no nation, old or new, is this most prolific of all the pulse family so highly esteemed as by the Mexican. The haricot or American garden bean is a national dish with them. It is from this people that the native and Spanish population of California derived their equal appreciation of the *frijole*. Several varieties are used by them, the most common of which is a brownish-red or small black bean. Seasoned with their favorite capsicum, with the addition of a *soupcon* of onion and a little lard, they are usually eaten with the tortilla, which is but another and more digestible mode, we fancy, of serving corn and beans than the traditional "pork and beans" and johnny-cake of the Americans.

Such heaps of shining seeds are threshed out in the fall on every *rancheria* and carefully stowed away for winter use under the swinging strings of bright red peppers pendent from the low-tiled roofs. Nor is the thrifty American farmer slow to discover the substantial and economic qualities of beans as an article of diet for the ubiquitous "hired man" whose appetite is proverbial.

In China they are also employed by the laboring classes, and are often eaten uncooked after allowing the seeds to germinate until quite sweet. In France and Germany the bean is highly valued for table use, but in England it has fallen into disfavor, probably because of the poor varieties cultivated there. The "Scarlet Runner," a really gorgeous-looking vine with its rich red flowers, is the best liked of the English species and is usually used as snap-beans, the pod being especially sweet and tender. Their roots are perennial, and if kept warm and dry during the winter they will come into bearing much earlier in the spring than if raised from the seed.

Though many varieties of the bean do well in California, our people generally prefer the wax bean, Early Valentine and Lima, when green, for summer use, and the latter when dried exceeds even the haricot and pea-bean as a favorite in the winter season. Our State is particularly fortunate in its abundant crops of Lima beans, which can always be had retail at from three to four cents a pound, while in New York they are thought cheap when they can be bought for 30 cents a quart. This most delicately flavored of all this family of esculents is used more extensively by our city population than any other variety. They are said to produce less flatulence than other beans, so are not as trying to weak digestions. Beans possess nearly the same proportion of ultimate chemical constituents as the cereal grains, and no other vegetable so nearly supplies the place of animal food. They are peculiarly adapted to the diet of those who exercise vigorously, being too nutritious to be largely employed by people of sedentary habits. Proper cooking, however, will render them easier of digestion. The boiling with corned beef or with pork, and especially the baking with the latter, renders them difficult to manage by weak stomachs.

Beans should be cooked in the water in which they are soaked. It is a mistake to drain them several times of their juices. Such a process is enough to rob anything of its sweetness and flavor. They should be thoroughly done but not boiled to pieces, and seasoned with butter, salt and pepper to the taste. It may not be out of place to give several recipes for their cooking, for where is the housekeeper that is not eternally revivifying the question in her mind, "What shall I get for dinner?"

Take two cups of Lima beans, wash thoroughly and put to soak in warm water several hours before dinner-time. Allow them an hour's gentle cooking, being careful to use no more water than is needed. Put in your tureen a cup of sweet cream, a lump of butter, some salt and pepper, and dip therein your hot beans. Stir them carefully without mashing, and let them go immediately to the table.

A winter succotash is very nice made with Lima beans cooked as above described, and adding thereto canned corn, with milk, butter and salt for seasoning.

A soup made of these same beans is an appetizing dish for these chilly days. When cooked the water should be drained off into another saucepan, the beans mashed and passed through a colander and returned to the broth. A pint of sweet cream, butter, salt and pepper are then added and the soup allowed to come to a boil before serving.

To bake beans without pork they can be dipped into a pan when nearly done, seasoned with cream, salt and pepper, and baked in a slow oven for an hour. The pea bean is the best for this purpose. A favorite method with New Englanders is to use a little molasses instead of pork, about two spoonfuls to one quart of beans.

A dish called the "macedoine of beans" is much relished by some epicurean tastes. Put in a stewpan one pint of stewed tomatoes, a spoonful of finely minced onion, a dash of capsicum, butter and salt to the taste, and add thereto a pint of boiled haricots, a half-dozen boiled potatoes chopped fine, and pour all into a nappy and bake one hour; serve hot. This is not very unlike the Spanish *frijole*, and few of us Californians but prefer the latter dish.



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The Week.

Perfect days have followed the rain storm and the utmost activity is discernible everywhere in the country. It has proved an exceptionally late season and orchard and vineyard work has kept step with the dilatory pace of nature. The result is a great rush to finish up pruning and plowing and even planting, for, though it is late for most parts, the trees are still being set.

Grass and grain are now starting forward nicely, but the growth is short so far. The hills and vales are carpeted with verdure, and the landscape is a round of beauty whithersoever the gazer turns his eyes. It is too early to judge much of the outlook for crops in general, but, though some fruits in some localities do not seem to be shaping right for large yields, the average promises to be a good one.

The weather sensation of the week is on the Atlantic seaboard, for a blizzard of the most pronounced Dakota type has visited the great cities of the East. Travel and communication have been so interrupted that even in New York City business was well-nigh abandoned.

People were even unable to get to and from their homes, and in the heart of the city a man was frozen to death in a snow-drift and a woman in a hallway. Oh winter, how merciless thou art! Happy are they who know thee only by mail or telegraph!

The Tariff Again.

The turn of the tariff kaleidoscope brings to view the bill introduced by Mr. Randall of Pennsylvania which opposes the bill of Mills, and the Ways and Means Committee to which we alluded last week. It proposes to reduce revenue and thus get rid of the troublesome surplus at the same rate per year as the Mills bill, by a reduction of about \$75,000,000 per year, but, while Mills makes a reduction of \$50,000,000 in export duties and \$25,000,000 in revenue taxes, the Randall measure takes \$25,000,000 off export duties and \$50,000,000 off revenue taxes. On the faces of the two measures Mills is two-thirds in favor of the foreign producer; Randall is two thirds in favor of the home producer; of course, there are other considerations involved, but this is merely the general numerical apportionment of the reduction in national income which each proposes.

The Randall bill is the measure which will commend itself to most California producers. The three great lines which have had most to say upon the tariff question in this State are, 1st, the producers of fruit and fruit products; 2d, the producers of wool; 3d, the producers of lumber.

We will first collect the statements which have been telegraphed concerning the provisions of the Randall bill as to fruit and fruit products, as compared with the provisions of the Mills measure.

Zante currants are placed upon the free lists in both the Randall and Mills bills. Mr. Randall fixes a specific duty of one cent per pound upon grapes instead of the 20 per cent ad valorem they now pay. The rates on dates, prunes, plums, figs and raisins are maintained at the existing rates by Randall, while they are largely reduced in Mills' bill. Limes, lemons and oranges are protected in Randall's bill at the existing rates, as are also preserved fruits. Mr. Randall's bill further provides that there shall be no allowance made for damaged goods, but the importer is given the privilege of surrendering to the Government all or any portion of his merchandise and escaping the payment of the duties upon such abandoned wares, provided that the portion so abandoned shall amount to 10 per cent or over of the total value of his invoice.

Randall's bill reduces the duty on almonds not shelled from 5 to 4 cents per pound, and on shelled almonds from 7½ to 6 cents per pound.

The duty on filberts and walnuts is reduced from 3 to 2 cents per pound. The rate is reduced on peanuts in the shell from 1 cent to three-quarters of a cent per pound, and on shelled peanuts the present rate of 1½ cents per pound is retained.

The wine schedule is the same as in the existing law with a provision that there shall be no constructive allowance for breakage, leakage, or damage on wines, liquors, cordials, or distilled spirits.

The duty on nut oil is fixed at 12 cents per gallon, it now being 25 per cent ad valorem. The duty on olive oil is made 35 per cent ad valorem; it is now 25 per cent.

The sugar schedule is not disturbed and beet-sugar seeds are retained on the free list.

The rates on wool are, if anything, increased by Randall's bill. The classification of wool is admirable, and the rates have been adjusted, so far as possible, to give equal protection to growers and manufacturers. Mills' bill proposed free raw wool. Randall keeps the duty on raw wool about where it is to-day.

Mr. Randall adopted the revised schedule on wool and woollens framed by the convention of growers and manufacturers which recently assembled in Washington, and it is this schedule which growers are asked to solicit in the formal petition to which allusion is made on another page of this issue.

The third division of Pacific Coast products which is striving for recognition at Washington is our lumber interest. Logs and lumber not further manufactured than hewn, squared or sided, last-blocks, wagon-blocks, gun-blocks, and all like blocks or sticks of wood rough hewn or squared only, are put upon the free list by Mr. Randall. This is as far as he goes in the direction of free lumber. Mills, on the other hand, puts all lumber, manufactured as well as unmanufactured, on the free list. Against this feature of the Mills bill, most strenuous effort is now being made by our producers. A long petition for a special hearing by the Ways and Means Committee was telegraphed to Washing-

ton on Tuesday of this week, and is being pushed by Mr. Morrow with the approval, it is believed, of the whole Pacific Coast delegation. One paragraph of this petition says: "The Mills Tariff bill gives to foreigners without cost the markets which our own people have created and our own people are able to supply, to the utter destruction on this coast of the American interests in lumber and coal, and especially in shipping."

There has been some interest among our fruitmen as to how the whole delegation stood, as the letters written in reply to the memorial adopted by the Horticultural Society did not draw forth any expression from some of them. It was telegraphed to the *Chronicle* on Wednesday morning as follows:

Representative Mills of Texas is endeavoring to win votes for his tariff measure. It is stated that he has offered certain concessions to the two California Democrats in the House if they would pledge their votes for his bill. Representative Biggs stated to Mills that if fruit and raisins were put back where they now stand he would take the chance of striking out the clause relative to wool on the floor of the House and would support the bill whether the wool clause was stricken out or retained. It is possible that Mills will endeavor to make some concessions to Thompson and Biggs if they will pledge their votes for the bill.

This may be only reporters' rumors, but it is satisfying to know that these members are on the right side as to local interests. This may have been known to their constituents, but we have seen no public statement of the fact.

It is reported that Congressmen are anxious to begin debate on these tariff measures, so as to get to a vote by the middle of May before the assembling of one of the national political conventions. One side wishes this; the other does not. It is possible that we shall see some of the grandest filibustering which ever graced the halls of Congress. This is about the measure of the whole business in the mind of the average politician, and it is rather more than likely that this is about all that will come out of the great sensations which are unsettling the industries of the country.

Real Estate Swindlers.

In our issue of January 21st we spoke briefly of the case of Francis M. Parker, the old farmer from Oregon whom two smooth sharpers, Pilcher and Hamberg by name, had befooled into giving all his spare cash and his home ranch up north for a sham deed of a piece of real estate in this city to which they had no title whatever.

The outrage was legally aggravated by the fact that when the scoundrels who had robbed the confiding rancher were arrested for their crime, they were allowed to bail themselves out (with the self-same money of which they had defrauded Parker), while their victim was clapped into prison to insure his presence as a witness against them should they ever be brought to trial.

It is a cheering sign of the times, however, that these rascally conspirators—in spite of the efforts of unscrupulous lawyers, who endeavored to prevent their being brought to justice—were found "guilty as charged," on Tuesday, within five minutes after the case was given to the jury, were remanded to the keeping of the sheriff, were taken back to the County Jail, and are to be brought into court for sentence this day, Saturday. It is hoped that Judge Toohy will inflict upon them the severest penalty the law allows, which unfortunately is but \$1000 fine and a year's imprisonment—a punishment quite inadequate to their deserts, who take advantage of the simple, honest, trusting stranger, to strip and plunder him without mercy. We hope this conviction will have a wholesome influence upon such moral sneak-thieves, restraining where it cannot reform.

A species of fraud but little less heartless has been practiced upon immigrants and home-seekers in some portions of this State. Unprincipled persons, professing to be real estate dealers or land-office agents, by the aid of deceptive maps and misrepresentations as to the character of the land, get people's money for locating them on wild mountain-sides or barren desert. In some cases they have been known to take parties out and show them good, even improved land, and then come back and deed them another piece that is good for nothing, but which their dupes believe to be the same they have been inspecting.

As these lines may meet the eye of some in-

tending settler or purchaser, we will say to such: Satisfy yourself that those who would have you deal with them are reliable, or else refrain from dealing with them. Before you buy, go on the land yourself and see it with your own eyes; then, if you like it, be sure that what you buy is the same that was shown you. And whatever else you do, refuse to sign any paper "merely as a matter of form," without scrutinizing and understanding its contents.

The American Hog Abroad.

The American hog has cut quite a figure abroad since his fall from favor about eight years ago, but all the resources of our Washington diplomats do not seem potent enough to reinstate him in favor on the continent. The State Department declares that the French Government does not give sufficient reason for admitting the hogs of all countries but excluding the American, and yet they will not reconsider their exclusion nor give any reason to think they ever will. It will not be worth while to discuss now whether he is excluded on his own merits or demerits in the shape of alleged trichinae or whether he is pounced upon as a retaliation for our import duties on certain French goods. The item of special interest now is that our hog is denied by our own law-makers the opportunity to vindicate himself as the best hog in the world, though he hoped by such a course to win a smile from the French gourmands. The record runs in this wise:

The French are to have a grand exposition in 1889, and have invited all nations to participate. Our House of Representatives thought favorably of the project, but could not forget the insult placed upon the American hog, and so they passed a joint resolution accepting the French invitation and directing the Commissioner of Agriculture to secure, if possible, as part of the exposition, a competitive inspection of pork products of the United States and Europe. They also authorized the commissioner to prepare for gratuitous distribution at the exposition a statement printed in English, French and German, descriptive of swine-raising in the United States, together with such information as he may possess as to the relative wholesomeness of pork raised in this and other countries.

Though the American hog had become somewhat tired of the kind of notoriety he was getting, he must have rejoiced at this opportunity of showing his quality to the world and of having his biography written in half a dozen languages. But he was doomed to disappointment, for when this joint resolution came into the Senate they unceremoniously fired the hog out of the display entirely and adopted the resolution of acceptance without mention of him. Whether they did not think it good taste to eulogize their own contribution to the picnic or whether they thought the hog would get there all the same, we are not informed. As it now stands, the hog may go as a private interest, but not as a national issue, so to speak. We hope, however, that the friends of American pork will take the hint and make a display of hot roasters, sausage, broiled ham and bacon that will fill the vast pavilion with savory aromas, and if the world can escape such an appeal we shall be mistaken. It will accomplish more than diplomacy or hog literature in all the romance languages.

Imported Fruits.

The New York importers of fruits, to show the importance of their business and how much they would be benefited by putting all these fruits on the free list, advance statistics which are of interest out here, but not in the way contemplated in their preparation. The following is their statement of imports of oranges and lemons in boxes and cases from the Mediterranean alone, simply stating that West India fruit, packed in barrels, forms a very large item, extending into hundreds of thousands of barrels per year. The item of grapes is also extending into hundreds of thousands of barrels per year:

1856-57 were: Oranges, boxes, 447,136; lemons, boxes, 238,297.
1866-67 were: Oranges, boxes, 692,259; lemons, boxes, 337,441.
1876-77 were: Oranges, boxes, 893,820; lemons, boxes, 612,463.
1886-87 were: Oranges, boxes, 1,711,644; lemons, boxes, 2,281,087.
The imports of cases of Valencia oranges for the season of 1884-85 were 388,242. The duties on the imports on boxed fruit alone amounted to the sum of \$1,112,237 for the season of 1886-87.

The Emperor of Germany.

Last year was made memorable in the annals of sovereignty as the jubilee year of Queen Victoria, who had reached the half-century anniversary of her accession to the throne, a longer reign than is usually allotted to crowned heads in this world of accidents to monarchs. Not less remarkable is the reign of Emperor Wilhelm. Among all his contemporaries and along the whole line of his predecessors no ruler has reached such an advanced age. He was born March 21, 1797, came to the throne an old man of 64 years, and reigned 27 years.

His career has been a remarkable one. He was born on the very day on which the young Napoleon left Paris to take command of the army in Italy. He was cradled in the camp of national adversity, for he was a child when the battle of Jena was fought and Prussia overthrown. He learned the trade of war in the school of arms established under successive European coalitions against France. He served with the victorious army of 1814 which marched from Leipsic to Paris, and he was in the battle of Waterloo that banished the crowned terror of Europe to St. Helena.

In all Germany, England and France there could now scarcely be mustered a corporal's guard of the veterans of the Napoleonic campaigns, and one of them, after a long and eventful reign, has just been gathered to his fathers.

From Waterloo to King William's coronation at Koenigsberg in 1861 there was a transition period of nearly half a century, during which Prussia remained a feeble, misgoverned State, greatly overshadowed by Austria. A soldier without congenial occupation, a prince of marked unpopularity, he came in old age to the throne to take up almost at once the sword of Frederick the Great, and by striking down two rival States to make Germany under Prussian leadership the strongest power on the continent. The Empire to-day is more powerful than it was in the days of Charles the Fifth. He has rendered services to the Fatherland which have combined with many homely virtues and sterling qualities to command the confidence and love of his subjects. He was honored throughout Germany for his genuine patriotism. The shortcomings of his domestic policy were recognized as faults of the head rather than of the heart. Always a thorough soldier, he has been at the head of his armies in every campaign, and if he has kept Germany in the saddle and set a pernicious example in national armaments, it has been because he believed that what had been won in the battles of his reign must be protected by standing armies for generations to come. Since Sedan he has not made the Empire troublesome on the continent. It has rather been an agency of pacific diplomacy.

The Emperor's greatest faculty as a sovereign was his sagacity in the choice of advisers. No monarch since Napoleon has displayed equal judgment and acumen in the selection of ministers and generals. Bismarck was called to his side soon after his reign opened, and was kept there as a mighty and jealous defender of the rights of the Crown, which the Emperor himself accepted as of divine appointment, and as taken, in his own words, "from the table of the Lord." Von Moltke was placed in supreme command over his armies as the ablest general of the times. As a soldier, he looked to the army as the main instrument of the greatness of the Empire and of the maintenance of peace. He had little, if any, sympathy with liberal ideas. He did not make parliamentary government a reality in Germany, nor convert the democracy he had armed with the ballot into a progressive force.

From the time he became King of Prussia he had a well-defined policy to which he inflexibly adhered, and that was the fusion of the German people into a great empire. This was a work of great magnitude, because what is now the German Empire was then divided into a number of small States which were practically independent and ruled by parties hostile to the policy that would deprive them of power. To this end William called around him some of the ablest men in Europe. Every move that was made was made cautiously, with a view of arousing in the German people the spirit of nationality. The Prussian army was made the best in Europe. Step by step his great purpose was carried out. The defeat of Austria in



Emperor



King of Prussia

1866 made the plan possible, but the overthrow of France in 1871 rendered it inevitable, and the King of Prussia became the Emperor of Germany. The credit of this great work has been largely accorded to Bismarck and Moltke,

but the conception was that of the Emperor William, and he showed his greatness in the selection of the subordinates who could carry out his grand ideas. When the history of Germany for this great period is written, the

Emperor William will be given a place as the equal of his great minister and general, and in the front rank of the great rulers in which his illustrious progenitor, Frederick the Great, stood at the head. He possessed eminently a judicial mind, and in any age would have attained distinction. He was steady, calm, and energetic. His will was indomitable. When a difference arose between his ministers, it was always the Emperor's judgment that decided. During the intense excitement and activity of the French campaign this decisive quality of his nature was repeatedly called into exercise. In the most important emergencies all advisers fell back on the judgment of the Emperor.

In his domestic relations, the Emperor has a record that is nearly isolated among the royal families of Europe. No shadow of a stain rests on the purity of his character. He was a loyal and devoted husband, a firm, gentle, loving father. No Puritan parent could point to his exemplary life with prouder assurance than this great potentate.

In personal appearance he was tall and dignified, and pleasing in address. At the age of 91 he retained all his faculties nearly intact. His carriage was erect, his eyesight undimmed, and up to a few hours before his death he attended to public affairs with usual regularity.

In spite of the growing sentiment of popular government, the venerable Emperor retained the admiration and love of the German people to a most remarkable degree. Other nations held him in high esteem as a great and good man, who had labored to improve the condition of the people, and who ever displayed the highest spirit of patriotism. The civilized world unites in paying the last tribute of honor to the man who, as a soldier, statesman, King and Emperor, had but one great object in view—the nationalizing of the German people in Europe. Even the French people, who have the least reason for kindly remembering the dead Emperor, have reflected great credit upon themselves by the dignity with which they received the news of his death, and the chivalrous feeling of satisfaction they have evinced on seeing the Crown Prince ascend the throne, whose heroic sufferings have made him an object of pathetic interest, even to his adversaries.

The Germans in this city, while thoroughly in accord with our democratic institutions, have resolved to commemorate the deeds and death of Emperor William on the day of his burial. The Grand Opera-house has been secured and there will be orations, music and fitting decorations. The Governor of the State, the Mayor of the city, General Howard and staff and all foreign consuls will be invited.

We give portraits of the late Emperor, and of Frederick III, present Emperor of Germany, his oldest son. The latter was born Oct. 18, 1831, and in 1858 married the eldest daughter of Queen Victoria. He entered military service in early life, bore an important part in the Austro-Prussian war of 1866, in which he commanded the second army, numbering some 125,000 men. During the Franco-Prussian war he led the third army of about 200,000 men and 500 guns; won the victories of Weissenberg and Worth and bore a distinguished part in the succeeding events of that war. His son, now Crown Prince of Germany, is 27 years of age.

Peculiar and mournful interest pertains to the accession of the present Emperor from the fact that he is suffering from a serious throat disease, from which a few days ago it was thought he could not recover. He now seems to be gaining strength and assumes the reins of Government with the most sincere hopes of his people for his full recovery.

THE POLLED ANGUS SALE.—The sale of Polled Angus cattle on the 7th inst. was not so largely attended as the importance of the sale would have warranted. The sale was, however, quite a success, and both seller and purchasers are satisfied with prices paid and obtained. Among those who bought largely were Frank H. Burke, F. D. Atherton, L. C. Frisbie, J. B. Smith, J. E. Camp, A. J. Johnson and S. N. Straube. We are assured by Mr. Mathews that the prices paid (23 head brought \$7122, or an average of \$309 per head) are less than heretofore obtained for such stock. It is the intention of the majority of those who purchased to breed thoroughbred Polled Angus cattle for sale. With a favorable climate, healthful ranges and rich grasses, all that is needed to assure success is intelligent management.

EDUCATIONAL.

National Educational Association.

The following address, which tells its own story, was issued on the 9th instant:

To the People of the State of California, GREETING: By your invitation, as expressed in a joint resolution unanimously passed by your Legislature at its last session; by invitation of the California State Teachers' Association, unanimously extended at the session of 1887; upon the unanimous invitation of the Boards of Education of San Francisco, Oakland and other cities; through the personal efforts of special delegates from California to the meeting at Topeka, Kansas, in 1886, and to that at Chicago in 1887; and, finally, relying upon the guarantees as to local arrangements and conditions given in writing on behalf of San Francisco by a committee of citizens, with Mayor Pond as Chairman, and upon guarantees as to rates of transportation given by the great transcontinental railroad lines, the National Educational Association of the United States will hold its 31st annual session at San Francisco, July 17 to 20, 1888.

The Association What It Is.

Over 30 years ago, a few earnest, thoughtful, devoted men in New England banded themselves together for the purpose which is still expressed to-day in the preamble to the Constitution, viz.: "To elevate the character and advance the interests of the profession of teaching, and to promote the cause of popular education in the United States."

Because its aim was noble, its purpose high, its administration in the hands of disinterested and devoted men, and its influence always for good, it prospered and grew in numbers, power and influence, until now great cities and States compete for the honor of its annual meetings.

It is incorporated under the laws of the District of Columbia.

It consists of a National Council of Education and nine departments, as follows: 1. A Department of School Superintendence. 2. Of Higher Education. 3. Of Secondary Schools. 4. Of Elementary Schools. 5. Of Kindergarten Instruction. 6. Of Normal Schools. 7. Of Industrial Education. 8. Of Art Education. 9. Of Music Education.

Membership.

"Any person in any way connected with the work of education shall be eligible to membership. Such person may become a member by paying \$2 and signing the Constitution." At the meeting in Chicago, last July, there were enrolled over 12,500 annual members, as shown by the secretary's receipt stubs for membership fees.

The \$2 membership fee secures to each member, in addition to the rights and privileges of membership at the meeting, a bound copy of the proceedings and all the papers read in general and department meetings, expressage prepaid. That of the Chicago meeting is a bound volume of over 850 pages—quite an educational library in itself. It contains the best expression of the best thoughts of some of the brightest and best men in the country.

Officers.

The officers of the General Association are a president, secretary, and treasurer; 12 vice-presidents, one director from each State, district, and Territory represented in the association, and a board of trustees.

In addition, each department has its own officers, consisting of a president, vice-president and secretary.

Difficulties.

Owing to the fact that it was not to the interest of the great and powerful railroad combinations east of Chicago that the association should come to California, it was not until the end of October that, through the presence in the East of Messrs. Goodman and Stubbs of the Southern Pacific railroad, and their persistent personal efforts, the last remaining obstacle in the transportation matter was removed. On the 11th of November the National Committee met at Lawrence, Kansas, and officially designated and announced the time and place of meeting to be July 17th to 20th at San Francisco.

Local Preparations.

At the same time and place there was also appointed a Local Executive Committee for California, consisting of eight persons, empowered to make all necessary local arrangements for the meeting, appoint sub-committees, etc.

This committee immediately met and organized, and has since held regular meetings every Saturday evening. Sub-committees have been appointed as follows:

(1) Finance, (2) Auditing, (3) Reception, (4) on Hotels and Accommodations, (5) on Public Halls and Places of Meeting, (6) on Official Bulletin, (7) Transportation, (8) Excursions, (9) Press, (10) on Exhibits, (11) Badges, (12) on Headquarters, and to co-operate with the National Department officers, (13) on Superintendence, (14) on Higher Education, (15) on Secondary Schools, (16) on Elementary Schools, (17) on Normal Schools, (18) on Kindergarten Instruction, (19) on Industrial Education, (20) on Art Education, (21) on Music Education.

These committees are all actively at work.

Commodious headquarters have been leased till the 1st of August, and well fitted up, in the new Flood building, corner of Fourth and Market streets. A secretary and one assistant are here regularly employed; here the various committees have desks and hold their meetings, and, in short, all business is here transacted. For the educational exhibit the Pavilion has been leased; a cash prize of \$500 and a parchment diploma has been offered for the best State exhibit outside of California; and, in addition to the educational exhibit, the various counties of this State, through their supervisors and boards of trade, have been invited by the Exposition Committee to make, with no charge for space, an exhibit of their production.

For the general meetings of the association, mornings and evenings, the Grand Opera-house has been leased, and for the department meetings there have been leased Metropolitan Temple, Odd Fellows' hall, Pioneer hall, B'nai B'rith hall, Y. M. C. A. hall, Union Square hall and Saratoga hall. For the exclusive use of the Reception Committee, the Committee on Hotels and Accommodations, and the Registration Committee, the gentlemen's large reception-room on the ground floor of the Palace hotel has been leased from the 9th to the 20th of July.

In accordance with the promise given by your delegation at the Chicago meeting, 100,000 copies of a Bulletin of information will be issued and mailed free to leading educational people all over the United States. It will go to press early in March. It will contain 32 pages, the print on each page being 6½ by 9 inches. It will be bound with a cover lithographed in four colors. The work of obtaining corrected lists of addresses of prominent educators all over the United States, through State, Territorial and local superintendents, and the writing of wrappers, has been going on actively and steadily for several weeks. It will require to make this Bulletin eight tons of paper, and its total cost, including wrapping, addressing, and postage, will be about \$6000. The committee will meet this from the pages devoted to advertisements, nearly all of which have been already taken.

The Excursion Committee has arranged excursions around the bay, and, at greatly reduced rates, to all points of interest in this and adjoining States, and to Alaska and the Sandwich Islands.

The Music Committee is arranging the program for a monster concert, with a chorus of 500 trained voices and an orchestra of 75 picked musicians, in connection with the exercises of the first, or welcoming, night at the Pavilion. The cost of this will be about \$2000.

Estimated Attendance.

The California delegation at Chicago pledged to the association, if it would come to California, a local membership from this coast of 2000. The honor of the profession here and of all connected with it is involved in the redemption of this pledge.

What the actual attendance from east of the Rockies will be, can, at this time, of course be merely a matter of conjecture and estimation. All the conditions, influences, and indications are favorable, and give assurances of a very large attendance. The most careful and conservative calculations place the number at from 5000 to 7000; and from these the figures vary from 7000 to 10,000. Among the favorable conditions and data are:

1. The meeting comes in the early part of the time devoted all over the country to the long summer vacation.
2. There is an army of over 312,000 public school teachers in this country who will be enjoying this furlough, besides those engaged in private schools, colleges, and universities.
3. The low fares. A round-trip ticket for one fare, first-class accommodations, Pullman palace cars, stop-over privileges both ways, choice of routes returning, and tickets good for 90 days.
4. The general desire of people, everywhere, to visit California.
5. The visits here of the Knights Templar and the Grand Army of the Republic.
6. California's renown as a royal hostess.
7. The sharp competition of railroad lines East, and the widespread advertising by them of the meeting.
8. The reports from the National officers and the State directors—the excursions which are organizing all over the country, the inquiries for accommodations, which even at this early day are pouring in upon the Committee on Hotels and Accommodations—the articles in the educational journals of the country, and the action had by educational bodies in the various States, all indicate a veritable national enthusiasm.
9. The gallant fight just made in Washington to bring here one of the great national party conventions will aid us, as having freshly and widely advertised our resources for accommodating guests by tens of thousands.

Expenses.

The great labor involved in all this detail of preparation is a labor of love on the part of those to whose hands it comes; the stimulus being a genuine and loyal State pride that California has at last received a recognition of her educational status, to the extent of having this great educational association cross the continent to hold here its meeting of 1888.

The expenses as well as the labor will be great, if California shall at all maintain the proud name she justly bears in all the land as a hospitable and generous hostess. While all

cannot share in the labor, all can share in the burden of expense.

In due time the Finance Committee, composed of Hon. Henry L. Dodge as Chairman and 16 other prominent and responsible gentlemen of San Francisco, will afford the capitalists and business men of that city an opportunity to show their appreciation of this great meeting of the many thousands of the observing, thinking, and talking men and women from the other side of the Rockies, and the benefit to California and San Francisco to flow from it.

In the meantime, and to meet the expenses already upon the committee and constantly increasing—current expenses, rent, fuel, gas, stationery, printing, postage, expressage, telegraphing, telephone and messenger service, clerical work, etc.—each County and City Superintendent in the State has been appointed Chairman of a local Finance Committee, himself to appoint the others, from two to five, to solicit contributions within his jurisdiction, and transmit the same, as collected, to the Treasurer, James W. Anderson, Superintendent of Schools, San Francisco.

It is asked that these committees be liberally met in this call; the distinct understanding being that no further demand will at any time be made by any one, for this committee, upon the cities and counties outside of San Francisco. Let this contribution, therefore, be a liberal one, such as you are willing to have stand recorded as the ultimate measure of your appreciation and help in this direction.

(Signed)

LOCAL EXECUTIVE COMMITTEE N. E. A.
Headquarters Flood Building, S. F.

FORESTRY.

Work at the Santa Monica Station.

H. Rowland Lee, head forester at the Santa Monica Forestry Experiment Station, reports to Hon. Abbot Kinney, chairman of the State Board of Forestry, as follows:

"The month ending February 21, 1888, has been a very important and busy one in our forest work. The ground is fit for planting or transplanting, as the case may be, and 75 different varieties of valuable timber and other economic plants have been placed in seedbeds or planted out, of which I hope to give a full descriptive catalogue in the near future.

"The latter part of the month has been very dry, and while we have plenty of water on the place, we have not as yet the proper appliances, viz.: Hose and pipes, which I am about to procure, and in another week will overcome the difficulty.

"There has been considerable difficulty in obtaining help. On account of not being paid, with one or two exceptions, all hands quit work on February 1st. With these I have managed to prevent much suffering among the seedlings, without making the progress the advancing season demands. In the ensuing month I hope to have proper accommodation for good help near by, and to be better prepared for emergencies.

"Seeds are now nearly all in, many of which are up, and work for the ensuing month will be chiefly planting.

"During the month we have procured one agricultural wagon, one spring or business wagon, with single and double harness to match. These, with the plow or cultivator, will in the future obviate the weight of expenses for transport and teaming. The main seed bills for the year are also embodied in this month's report. Also items for lumber of frames and boxes and other expenses incidental to the starting of a new station, which are seldom, if ever, repeated.

"During the month I have answered numerous letters of inquiry relative to the seeds, their planting, after-culture, profit, hardiness, etc., from districts as far north as Sacramento and south as San Diego. I would suggest the preparation of a pamphlet for distribution with information on the foregoing and other essential points.

"Among the contributors to the board during the past month, the name of Adolph Sutro of San Francisco deserves special mention.

"This gentleman has donated to the board 2000 *Pinus Maritima*, 1000 of which are planted in Santa Monica and vicinity, the balance being held for testing in the Chico station, which will form a more inland and climatic test for this tree. Mr. Sutro has also invited us to make a record of the trees planted on his extensive property, which would prove very valuable for the public information. I would respectfully recommend that this proposition be accepted by your honorable body, and that a record be made this year."

AFRICAN TEAKWOOD INDESTRUCTIBLE.—The interesting fact has been stated that so indestructible by wear or decay is the African teakwood that vessels built of it have lasted 100 years, to be then only broken up on account of their poor sailing qualities from faulty models. The wood, in fact, is one of the most remarkable known on account of its very great weight, hardness and durability, its weight varying from 42 to 52 pounds per cubic foot. It works easily, but on account of the large quantity of silex contained in it the tools employed are quickly worn away. It also contains an oil which prevents spikes and other iron-work with which it may come in contact from rusting.

GOOD HEALTH.

Snow-blindness and "Boot-leg Goggles."

EDITORS PRESS:—Snow-blindness is an affliction which results from the rays of the sun being reflected from a surface of snow into the eyes. It is not only painful; it frequently results in permanent injury. The eyes continue sensitive to exposure, and the tendency to close them when looking at bright objects indicates the serious nature of snow-blindness. My experience may prove serviceable if it saves others from this misfortune, and I will briefly state the facts. While living on my ranch in Colorado one of my cows was found in an irrigating ditch, where the ditch had been cut through a ridge. This cut was partly filled with drifted snow. The storm was over, and as it was in March the sun was shining brightly. To enable the cow to get out it was necessary to shovel a path in to her and also toward the sun. The plan succeeded, and the cow was liberated, but that night my eyes felt as if red pepper had been rubbed on them. If I closed them the tears would pour out and wet my cheeks. I was so blind that I could scarcely recognize my animals by daylight; ordinary exposure to sunlight was very painful.

This state of affairs compelled me to study out a remedy. After trying several expedients to shut out the light, I adopted another plan. I cut from a boot-leg a piece of leather having two ovals to fit each eye, leaving a strip to connect them and rest on the nose. The leather was soaked in water, and then each eye-piece was hammered into an iron spoon, making them convex. When they were dry a narrow slit was cut lengthwise in each of these rounded eye-pieces, and a buckskin thong fastened at each end to allow the whole to pass over the head. This contrivance cut off the reflected rays and enabled me to look out freely when the strongest sunlight was reflected from a field of snow. The goggles fitted close without inconvenience to the eyes, and could be placed in the pocket if desired.

Afterward I saved a member of a surveying party from snow-blindness by giving him a pair of boot-leg goggles, and enabled him to go on with his work. The greatest danger from this cause is in the spring, when the sun's rays have gained intensity. As some of your readers may be interested, and most American boys can make the goggles, my experience may possibly result in their benefit.

EDWARD E. CHEVER.

San Francisco, March 1 1888

How to Treat the Eye With a Cinder in It.

R. W. St. Clair writes the *Medical Summary* as follows: "Nine persons out of ten with a cinder or any foreign substance in the eye will instantly begin to rub the eye with one hand, while hunting for their handkerchief with the other. They may, and sometimes do, remove the offending cinder; but more frequently they rub until the eye becomes inflamed, bind a handkerchief around the head, and go to bed. This is all wrong. The better way is not to rub the eye with the cinder in at all, but rub the other eye as vigorously as you like.

"A few years since I was riding on an engine. The engineer threw open the front window, and I caught a cinder that gave me the most excruciating pain. I began to rub the eye with both hands. 'Let your eye alone, and rub the other eye' (this from the engineer). 'I know you doctors think you know it all; but if you will let that eye alone and rub the other one, the cinder will be out in two minutes,' persisted the engineer. I began to rub the other eye, and soon I felt the cinder down near the inner canthus, and made ready to take it out. 'Let it alone, and keep at the well eye,' shouted the doctor pro tem. I did so for a minute longer, and, looking in a small glass he gave me, I found the offender on my cheek. Since then I have tried it many times, and have advised many others, and I have never known it to fail in one instance (unless it was as sharp as a piece of steel, or something that cut into the ball, and required an operation to remove it). Why it is so, I do not know; but that it is so, I do know, and that one may be saved much suffering if he will let the injured eye alone and rub the well eye."

THE CLOSE OF LIFE.—It is a great mistake to suppose that the usefulness of life ceases with the power of active service. When the tired hands are folded in the repose which their toil has rightly earned for them, when the weary brain is relieved from the burden of cares and perplexities which it has nobly borne, there should be a season rich in blessings and in influence which no one would willingly forego. Then should come the leisure vainly loughed for in past years, and the opportunity to attend to many things and to enjoy much that was before impossible. If the busy life has also been an honorable one, there are sweet memories, cherished friendships, the devotion of children, the respect of society, the power of helping others through the accumulated experience and intelligence of many years. The very presence of a venerable and beloved face is a blessing to those who look upon it, bringing suggestions of well-earned peace and calm to the busy toiler, and calling up emotions of tender reverence in the eager and buoyant youth.

Lands For Sale and To Let.

"CHICO VECINO,"

General John Bidwell's tract, Chico, Cal. Maps of this property are now ready, and applications received for the 5-acre tracts and town lots, 90x200 feet.

CAMPER & COSTAR, Chico, Cal.
WM. H. MARTIN, Manager,
Flood Building, 809 Market St., S. F.

LAND & WATER FREE!
800 Acres Rich, Level Land.

To some one who will summer fallow and cultivate well, will be furnished free water and use of 160 acres of good land (S. E. Sec 13, T. 21, R. 23) within 9 miles of Tulare, S. W. Forty acres formerly plowed. Land on all sides cultivated and pastured. Water for irrigation (if needed) free. Also (without water) 640 acres (Section 13, T. 23, R. 24), four miles westerly of Tipton and S. P. R. R., all in Tulare County and the Artesian belt. For particulars call on E. M. DEWEY, 7 miles N. W. of Tulare, or A. T. DEWEY, 220 Market St., San Francisco.

GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

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— IN THE —

GREAT ARTESIAN BELT,
KERN COUNTY.

This tract comprises 2640 acres, all level land and ready for the plow.
In this colony is the

Greatest Artesian Well in the World,

And a perpetual water-right goes with the land bought. Tracts of 20 acres will be sold for \$500—only one-third cash; balance, one-third in two years, and one-third in three years, with ordinary interest.

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SITUATE ONE MILE FROM THE FLOURISHING

City of Sacramento,

With a Population of 30,000, and

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SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. 5 ACRES IN FRUIT, well attended to, will make a handsome income. One Acre in Strawberries will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$60, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

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Improved and unimproved lands to any extent from 5 to 5000 acres with good, comfortable homes and all necessary conveniences, for sale on desirable terms. These lands require no irrigation, Railways convenient, ample supply of water, and the climate cannot be surpassed. Apply as above.

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Santa Barbara County, California.
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TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

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Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

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Selling LEWIS' COMBINATION HAND FORCE PUMPS. It makes 3 complete machines. We have agents all over the United States who are making \$10 to \$30 per day selling these pumps. We give their names and addresses in catalogue. To introduce it we will send a sample Pump, express paid, to any express station in the U. S. for \$5.50. Made of brass; will throw water from 50 to 60 feet, and retails for only \$6. Indispensable for spraying fruit trees. The Potato Bug Attachment is a wonderful invention. They sell rapidly.

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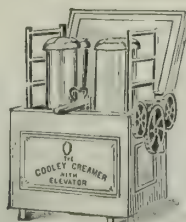
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The Largest Creamery in the United States

The Big Foot, Ill. Creamery is claimed to be the largest Creamery in this country or the world. THE PRODUCT OF 1887 WILL REACH

\$200,000.00.

The patrons are Paid 27 Cents for cream equal to a pound of butter. It is run on the

Cooley System of Cream Gathering. The Largest Creamery in New England is run by D. WHITING & SON, Wilton, N. H. Patrons receive 29 CENTS for Cooley Cream equal to a pound of butter

The Largest Creamery in Penn., is the TROY CREAMERY, patrons are now paid 28 CENTS Per Pound.

A full line of Butter Factory Supplies, including ENGINES, ROLLERS, CREAM VATS, CHURNS, WORKERS &c. Send for illustrated circulars. Plans and Estimates furnished free to purchasers.

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PALM VALLEY!

TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

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FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land?

DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10 acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

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Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES
At \$75 per Acre,

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. One hundred and seventy-five acres at Palermo are now being set out in the choicest varieties of Florida Orange Trees. Maps and further particulars of

McAFEE BROTHERS, Agents, 10 Montgomery St., San Francisco.

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AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

LIVERMORE ITEMS.—*Herald*, March 8: The volunteer hay crop will undoubtedly be an immense one in this township this season. The grass is now well rooted and in two months will be ready to cut. . . . A. Duval is shipping a carload of wine from his "Bellevue" vineyard to South America, by way of New York and Colon. Messrs. Aguilon & Bustelli, of the pioneer wine-cellar of this place, have sold 80,000 gallons of one and two year white and red wine, which they are now shipping to San Francisco. It will require 40 cars of ten tons each to handle the shipment. . . . J. H. Wheeler has shipped 120,000 cuttings of the Seedless Sultan, Black Ferrara, and Flame Tokay varieties. . . . Fifty-four boxes of eggs were shipped from the Livermore depot for the S. F. market on Sunday last. The total number of eggs in 54 boxes is 19,410.

Colusa.

HORTICULTURAL SOCIETY MEETING.—*Colusa Sun*, March 10: The meeting of the Horticultural Society at the Court House, Saturday, 3d, was largely attended, showing unmistakable interest in the promotion of horticultural pursuits. The following were proposed for membership, and will be balloted on at the next regular meeting: R. Gosner, John Boggs, Geo. F. Packer, Isaac Sylvester, F. M. Putman, A. M. Newland, W. N. Herd, Noah Scoggins. The chair appointed the following committees to confer with farmers for the purpose of urging upon them the necessity of cultivating special products to be placed on exhibition at the next State Fair: Cereals—Geo. Hagar, R. Gosner, John Boggs. Corn—Geo. F. Packer, John Boggs, W. J. Tully. Peaches—J. B. De Jarnatt, H. B. Julian, Mrs. Dora Purkett. Apricots—E. A. Bridgford, L. L. Hick, F. M. Johnson. Plums and Prunes—L. F. Moulton, W. N. Herd, H. H. Hick. Almonds—A. M. Newland, J. C. Duell, J. R. Totman. Cherries—J. R. Totman. Apples—Wash. Clark, A. M. Newland, Geo. F. Packer. Pears—R. A. Gray, G. Goldring, W. N. Herd. Figs—J. C. Duell, L. L. Hick, John Deter. Raisin Grapes—J. O. Zumwalt, J. B. De Jarnatt, W. J. Clarke, E. A. Bridgford. Wine Grapes—Gustave Weyand, J. D. Rosenberg, C. C. Felts. Melons—J. Alliston, W. N. Herd, F. M. Putman. Vegetables—N. Cutler, H. H. Hick, J. Alliston. Alfalfa and Seed—A. E. Potter, C. P. Wilson, John Richey. Wool and Mohair—Peter Peterson, Julius Weyand, Thomas Harland. Ore—C. M. Polley, J. C. Bedell, Julius Weyand. Mineral Waters—Dr. Moore, Mrs. Blanck. The following motion, made by F. W. Willis and seconded by L. F. Moulton, was carried by a unanimous vote:

"Considering the fact that the bill framed by the sub-committee and presented by the chairman of committee to the full committee on Ways and Means, on March 1, 1888, is strictly antagonistic to the fruit industry of California, and therefore to Colusa county, I hereby move that a committee be appointed by the chair to draft resolutions to be forwarded to our Representative in Congress, calling his attention to the facts, as they are, and entreating him to his utmost endeavor to defeat the measure."

The chair appointed the following committee, to which, on motion, he himself was added: Prof. Armstrong, R. A. Gray, L. F. Moulton, F. W. Willis. The secretary was requested to correspond with different parties to procure proper solutions for the preservation of green fruits for exhibition.

The meeting adjourned to same time and place Saturday, 17th inst.

ANTI-DEBRIS.—At a meeting of the Colusa County Board of Supervisors held Monday, March 5th, in the matter of the adoption of resolutions of the Anti-Debris Association of the Sacramento Valley, on motion of C. C. Felts, seconded by M. O'Hair, the said resolutions were adopted, and the adoption thereof indorsed on said resolutions and returned to the manager of the Anti-Debris Association of the Sacramento Valley at Yuba City.

SASSAFRAS.—Who that was raised in the backwoods of any of the Southwestern States has not been surfeited with sassafras tea? It was the popular drink of the days of our boyhood, especially in springtime. What boy brought up on a farm has not grubbed sassafras sprouts until almost on the point of saying bad words? As a reminiscence of old times W. G. Kitcher, now in Missouri, sent Tom Coleman a number of sassafras sprouts, and Tom gave us one, which has found a resting-place in the backyard, where in future years it may send out sprouts for the correction of the coming generation.

Contra Costa.

AGRICULTURAL ASSOCIATION.—*Item*, March 9: Owing to only a partial attendance of the stockholders of the Contra Costa Agricultural and Industrial Association, at the annual meeting called for Monday last at the fair grounds, it was deemed advisable to postpone the meeting to Saturday, March 17, 1888, when a full attendance of stockholders is expected.

El Dorado.

AGRICULTURAL ASSOCIATION.—*Placerville Republican*, March 8: The Board of Directors of our District Agricultural Association met at the

office of the secretary in this city last Tuesday evening. T. Fraser was unanimously elected president for the ensuing year. W. H. H. Fellows was elected secretary and his salary fixed at \$100 per year. James Blair was elected treasurer, E. A. Boles, superintendent of park, and Albert Norris, superintendent of the pavilion. Committees were appointed as follows: On premium lists—Norris, Allen and Alderson. On speed program—Leachman, Fraser and Inch. The date of the fair was fixed for August 21st, to continue five days, including the first. The following resolution was adopted:

Resolved, That the Board of Directors of the E. D. A. Association returns to Galusha Carpenter, the retiring secretary, its heartfelt thanks for his untiring and honest efforts to make its exhibitions a success, and for the honest, faithful and efficient manner in which he discharged the duties of the office, we shall always feel grateful.

Fresno.

WINERY BURNED.—*Fresno Republican*, March 9: The Margherita winery, situated about five miles east of this city and owned by Rogers & Co. of S. F., was totally destroyed, with its contents, by fire on Saturday morning. The winery was fitted up with fine machinery, comprising a complete still, and occupied two buildings—one 150x75 feet and the other 100x50 feet. There was a large quantity of wine and grape brandy in vats aging and in barrels ready for shipment. Capt. St. Hubert, the foreman, was awakened by the light from the burning buildings shining through the windows of his room. He sprang from bed, ran to the quarters occupied by the men and aroused them. They worked heroically, but only saved about 30 barrels of wine and 18 barrels of brandy, which were ready for shipment and near the doors. The roof fell in almost as soon as the men got to work. He is at a loss to account for the fire, unless it caught in the roof from a spark from the engine-stack, as the engine had been running all day Friday, sawing wood.

Merced.

RABBIT-DRIVE PROJECTED.—*Merced*, March 7: Preparations are being made for a great rabbit drive here on the 22d inst., to wind up with a free barbecue for all. Rabbits have become very plentiful, and are very destructive to wheat-fields, orchards and gardens. The drive has been gotten up for the double purpose of destroying the vermin and having a fine day's sport.

Monterey.

EDITORS PRESS.—Our portion of Monterey county (Jolon) is seldom represented in your paper. People outside don't believe we ever produce anything in our little valley, because we have no railroad through it, the nearest point being 14 miles. But fruit and grains of the finest quality are raised here. There is not very much fruit as yet, because it has not been planted so extensively as in our neighboring counties; but what there is, is excellent. The olive flourishes here, there being some trees nearly a century old and bearing liberally every year. On the San Carpojo creek there are several from 14 to 16 inches in diameter, and a number of pear trees from one foot to 18 inches in diameter. The climate is warm, and it is hard to grow apples the first year, but after that they do as well as any fruit. M. Boehinger and J. O. Edwards have fine young orchards in bearing. The fruit is large and delicious. P. Stretch (and several others) has planted out over 2000 vines this year. The feed on the ranches is growing splendidly. Stock is looking well and will be fit for beef in a month or six weeks. The heavy mast of last year and early feed carried many thousands through the winter.—*EXCELSIOR, Jolon, March 12th.*

Nevada.

ORANGE TREES.—*Grass Valley Tidings*, March 7: Orange trees on the Marsh & Nile fruit farm, in the Pat Hill neighborhood, lost their leaves through the freezing temperature prevalent in January last, but the baneful effects went no further. The same trees are now budding as though the freeze had never been, and all other trees and shrubs are in bloom and beautiful in their leafy greenness. This was the first time in 11 years that orange trees in that locality have in anywise been affected by frigid temperature. Thirty-five three-year-old Florida orange trees have been set out this season on the Marsh & Nile place. The venture is a success so far as can yet be determined.

Placer.

HARDY ORANGES.—*Auburn Republican*: A careful examination of Placer county orange trees shows two things: (1) that the damage done by the January frost is not so great as has been supposed, as only a very small percentage of the trees were killed; (2) that the Mediterranean Sweet is the variety which suffered most. Very few Washington Navel or other budded varieties are injured, but the Mediterranean Sweets prove to be less hardy.

CHESTNUTS ON OAKS.—*Record Union*, March 8: G. O. Hayford of Colfax has made a most interesting, and what promises to be a very valuable, discovery in the way of nut-growing. Owing to observations that the nuts of the black oak and the Italian chestnut were similar in shell and texture of meat, he concluded that the latter might be successfully grafted upon the former, and last year tried the experiment. He grafted a number of small oaks with scions from Italian chestnuts of previous year's growth, and with the most gratifying results. Nearly every one of the grafts grew and attained a remarkable height for a single year. The union between the stock and

grafted section is excellent, and the new growth gives a specially vigorous and hardy appearance. A sample of the growth made upon Mr. Hayford's premises last year may be seen at this office. Marco Varozzi, who has an excellent farm at Middletown, near Placerville, El Dorado county, tried the same thing successfully two years ago.

Sacramento.

FINE ANIMALS.—*Record Union*, March 10: A magnificent horse and a dog attracted much attention on the streets yesterday. They were in charge of T. H. Stevenson of Detroit, who brought them from Michigan for Voorhies & Barney of Sutter Creek. The stallion is a recent importation from France, a three year-old thoroughbred Norman Percheron, weighing 1700 pounds. He is a beautiful dapple bay with black points. The same owners have brought out also two splendid mares of the same stock. Mr. Stevenson has also with him a fine specimen of the smooth-coated St. Bernard dog. She stands 33 inches at the shoulder, weighs 165 pounds, measures six feet two inches from tip to tip, and is valued at \$1000. Joan is all white, and is a grand-looking animal. She was whelped March 30, 1886, at Whitworth, England, and last year won the second prize at the Detroit (Mich.) dog show. Her pedigree is as follows: Joan—By King Alfred, ex-Lady Superior. King Alfred is by Champion Beau Chief (No. 11,793 Eng. K. Stud-book), ex-Alphenrose. Lady Superior (No. 18,008) is by Tours (No. 14,944), ex-Abess.

ORCHARDS AND GARDENS THRIVING.—*Bee*, March 8: John Miller, of Walnut Grove, said this morning that prospects in the rich region down the river were never so flattering as now. The winter has been particularly propitious for fruit of all kinds. Between Sunday's gale and the frosts, some of the apricot blossoms have fallen off, but the trees will still have to be thinned out, so heavily have they blossomed. Peaches were not far enough advanced to suffer at all. The down-river orchardists are particularly happy because they believe they have got the scale bug under subjection. Mr. Miller says that the fruit yield will be fully as great as the enormous product of last year. Orchardists are taking better care of their orchards, and careful, intelligent farming is taking the place of the indifferent methods of the past. The barley lands have just been seeded and a big crop is confidently expected, especially since the ground is in better condition than last year. The gardeners are planting potatoes, of which two crops will be produced. Beans and other garden truck are being either planted or else have already attained healthy, vigorous growth. The levees along the river are in better order than ever.

Santa Clara.

REJOICING OVER A CANNERY.—*Mountain View Ctr. Mercury*, March 3: The town is full of life to-day. Castro street, the principal thoroughfare, is lined with teams of our solid farmers and fruit men; flags are flying, making quite a gala day; and the occasion for all this was the final meeting of the stockholders and others interested to elect a board of seven Directors for our cannery and fruit-drying establishment. The following gentlemen were elected: Donl Frink, John Birgen, W. A. Nygh, Dr. O. P. Askam, J. E. Williams, Henry McCleary and Prof. D. T. Bateman.

FLORAL FAIR IN PROSPECT.—At a meeting of the Directors of the Horticultural Association, held in San Jose March 3d, the *Mercury* says it was resolved to give the use of the hall to the ladies of the Conservatory of Music Association some time in May, for the purpose of holding a Floral Fair; and by so doing the Board decided to dispense with holding one themselves. The ladies intend to hold a five days' session at the time when the flowers will be most numerous and easy to be obtained. The exact time of holding the fair has not been determined.

GILROY CANNERY.—*Gazette*: The cannery building is being rapidly constructed, the contractor being Charles W. Pedlar of Gilroy, a mechanic who appears entirely competent, and is furnishing employment to several deserving home workmen. The main building is two stories high, 36x60 feet. There will also be an addition 22x40 feet, and the whole building will be practical and substantial, especially adapted to the purpose to which it is to be devoted. The boiler of 50 horse power is already in position, and the engine, and considerable other essential machinery, is on the ground. The location is well chosen, everything that is needed being at hand, and very convenient. The Southern Pacific railway runs within a few rods of the door, and thus the important question of shipments both to and from the cannery is a matter easily solved, as the expense of laying a switch to the establishment is something hardly worthy of consideration.

Santa Cruz.

FAIR BUILDING ASSOCIATION.—*Sentinel*, March 10: At the meeting of the stockholders of the Santa Cruz Fair Building Association held Saturday afternoon, the following directors were elected: L. K. Baldwin, L. H. Comstock, E. B. Cannon, M. Kinsley, R. C. Kirby, Jo. Francis and O. L. Gordon; also the following officers were elected: President, L. K. Baldwin; Secretary, Oscar L. Gordon; Treas., R. C. Kirby.

Shasta.

PLANTING AN ASSORTMENT.—*Redding Democrat*, March 7: Mr. Hemsted is putting out about 1000 trees; 100 each of olives, almonds,

mulberry, and the rest deciduous fruits of all kinds. He is also setting out a fine collection of Eastern grapes, as an experiment, and a new variety of dewberry.

Solano.

EDITORS PRESS.—The weather is pleasant, with cool nights; a little frost, two nights since the storm; three inches of rain the last storm, and nearly 17 for the season. Some tomato plants are set out. The apricots do not seem to be hurt by the cold, so far as can be seen now, and there is a prospect of a heavy crop in the vicinity of Vacaville and on Putah creek. In Pleasant Valley many trees have scarcely any blossoms on, and the crop will probably be much lighter than last year. Peach trees in Vaca Valley are as full of bloom-buds as they can well be. Grass and grains are growing very fast, but grain sown just before the freeze is thin in spots. No stock has died here this winter for the want of feed or from the cold.—*G., Vacaville, March 11th.*

THE MONTEZUMA HILLS.—*Cor. Woodland Democrat*: These noteworthy hills commence eight miles east of Suisun and eight miles south of Elmira, and extend 15 miles in a southeast direction to Colvilleville and Rio Vista. These hills are most noted for immense grain ranches, while near the borders next to the river and tule lands the dairy business is extensively carried on, and some of the largest poultry raisers are to be found dotted about among the hills. The area seeded is the largest for many years; from the present indications the yield will be abundant. On the west side those who have experimented raise the finest of pears, apples, plums and cherries, yet grain-growing is the chief enterprise. Samuel Stewart's dairy ranch is the first ranch we enter on the border of the hills. This comprises nearly 3000 acres, besides an extensive tule range, and his stock is of the finest. After leaving this ranch, we soon arrive at the small village of Denverton, or Nourse's landing. Dr. S. K. Nourse is an extensive dairyman, and has a fine head of stock. A schooner owned by Dr. N. makes weekly trips to S. F. The large stock ranches formerly belonging to Harmon & Barbour are owned by S. F. parties and rented to Swiss dairymen.

Tulare.

WARRING ON THE BARES.—*Visalia Times*, March 8: At the rabbit-drive on Sunday last, 24 miles southwest of Delano, 4800 rabbits were corralled and killed. It is estimated that 50,000 rabbits have been slaughtered in this county within the last three months through the instrumentality of drives and corrals. Residents in the vicinity of Crickerville, 12 miles north of this city, have ordered 300 rods of wire netting to be used as a corral and wings in rabbit-drives. Rabbits are numerous in that section, and it is the disposition of the people there to join with others in ridding this county of the pest. The Grangers' Union of this city has this week sold 1000 rods of wire netting, to be used in constructing rabbit corrals and fences. The cost of one of these corrals varies from \$195 to \$220 each, and the money to pay for them is generally raised by subscription among those to be benefited.

FROSTS AND FRUITS.—Opinions vary as to the late frosts on the coming fruit crop. Only a small portion of apricot trees were in bloom, and those that were are probably done for. Peaches are also somewhat injured, many of them being in full bloom. Figs are no doubt damaged and the first crop will prove very light. Almonds have suffered severely, and the crop will prove very light, if there are any at all. The early crop of figs generally sells at four cents per pound, and hence their loss will be felt.

PLANTING FOR RAISINS.—There is considerable activity in this county at present in the way of planting raisin vineyards. The vines used are of the Muscatelle, Gordo Blanco and Muscat of Alexandria varieties, which are found to be the best adapted to the soils of this county. Some of the gentlemen engaged in this line are making a mistake by setting out the Malaga grape, which does not do well here, the yield being low, the grape small and deficient in pulp for a raisin grape. The average yield of the first-named grapes in this county has heretofore been about 10 tons to the acre, which exceeds the yield of the coast counties about three tons to the acre.

Ventura.

A CHEERING OUTLOOK.—*Democrat*, March 8: All of our farmers with whom we have talked on the subject are delighted with the crop prospects. The rainfall has been ample, and the acreage will be large, perhaps larger than ever before, on account of the increased population of the county. New orchards and vineyards set out within the last three or four years will bear their first crops this season; better facilities for preserving crops will be needed, and the new enterprises being pushed, together with the incoming tide of people attracted by these conditions, will encourage efforts on the part of people generally to make the most of their opportunity. The outlook for our county is truly favorable.

Yuba.

IRRIGATING SCHEME.—*Grass Valley Union*: James O'Brien of Saartsville, who owns the old Camp Far West ditch, that takes water from lower Wolf creek, near the Lime Kila, proposes to reopen it for the purpose of conveying water for irrigation purposes in the country below Spenceville. Some of the farmers through whose lands the ditch runs are oppos-

ing the reopening—which seems rather strange, considering the chance it would give them for irrigating water.

MARYSVILLE CANNERY.—*Appeal*, March 9: The new cannery buildings in this city will be commenced as soon as the weather will permit. The contractors are Swain & Hudson. The buildings will be three in number, very simple in structure, though put up in such a manner that they will be durable and present an exterior equal in looks to any of the interior county canneries, while the arrangements within will afford accommodations for the latest improved machinery, and for comfort and rapid work when the packing season is on. The foundations will be of brick, raised two feet from the ground. The main building will face on Tenth street, and be 30x105. The second building will be 30x75, and the cooler 20x40. A1 will be 12 feet high, with arched roofs of shake. The exterior finish will be in rustic, and the interior will be without finish. A heavy board flooring will be placed in all the buildings. In addition to these, it will be necessary to erect engine rooms, office, and other structures required in the business, but these can be attended to later on. The parties engaged in this enterprise are among the principal stockowners in the Golden Gate Packing Co. of San Jose. They have plenty of means, and will push their operations here as fast as the local supply of fruit will warrant.

NEVADA.

SHEEP IN EASTERN NEVADA.—Elko Cor. Gazette, March 3: The great sheep interests of the State in eastern localities seem to have suffered more during the present winter than any other kind of stock. The depth of snow was greater southward than north. As no two winters are ever alike, the probabilities are that the past winter will not duplicate itself for 25 or 30 years. Mr. Mitchell of Huntington valley, who has a large band of sheep that was driven in the early fall southward into White Pine county, has wintered reasonably well. He thinks his loss will not exceed more than 1200 by lambing time. P. Martin, who wintered his band of sheep some 35 miles east of Austin, in Grass Valley, Lander county, was not so fortunate as Mr. Mitchell, as his loss was quite heavy, being not less than 1000 out of 4000 head. This is the heaviest loss I have heard of in all Eastern Nevada. All of the sheepmen report heavy weather throughout southern White Pine, Eureka, Lander, northern Nye and Lincoln counties. Nevertheless, from some unaccountable cause, certain localities seem to have been partially exempt from the most of the severe weather, and consequently one bunch of cattle or sheep may have suffered considerably, while another band have come out of the winter in good condition, and the distance intervening between these bunches of stock not exceed 50 or 60 miles. Close observers of wind and weather assert that high mountains with deep canyons that make down into the valleys below, coursing their way east and west, are always warmer than those running north and south, but give no substantial reason for this fact. . . . E. C. Hardy of the Oasis ranch, Elko county, who is one of the best-posted stockmen in Eastern Nevada, says that Tecoma and Steptoe valleys, as far south as 75 miles from the Central Pacific railroad, have afforded splendid pasture for all kinds of stock during the present winter, and that no losses will be sustained more than has been usual heretofore. "My band of 550 sheep," he writes, "have wintered most excellently. I have only lost a few of the earliest of the poorest lambs and some old ewes, making to date about 150 head, all told. I have come out of the winter with my stock of all kinds in a condition highly satisfactory." This splendid condition of Mr. Hardy's stock is due to the fact that he has a safe and extensive range, and put up large quantities of hay, which he fed to his poorest stock of cattle and sheep and his fine brood mares, and will carry over a large quantity of hay for next winter's use. I learn from the same source that Cave & Hurley of Tecoma, Elko county, fear heavy losses, as their band of stock encountered heavy weather and deep snow, and the sheep east of that point have suffered considerably—in fact the further south and southeast you go into Nevada and Utah the greater the losses seem to be.

NEW MEXICO.

FRUIT IN TAOS VALLEY.—A. Gusdorf in Albuquerque Citizen: Ten or twelve years ago almost everybody was under the impression that this valley was too cold for fruit-raising, and made fun of the parties who planted fruit trees. The writer was among those who tried the experiment, and planted about 400 trees of apple, pear, plum, peach, apricot and cherry; also small fruits. Three years later people began to change their tune, as the trees commenced to bear, slightly at first, but increasing every year, and there has not been a single failure in eight years. This I consider a pretty good indication that the Taos valley can raise fruits; and for quality and flavor it challenges the world, especially on apples, pears, plums and small fruits. The varieties of apple best adapted, so far as tried, are the following: For early—Early Harvest, Red June and Astrachan, and for winter varieties, the Geneton, Red, Ben Davis, Wine Sap, Baldwin, Rambo and Rhode Island Greening. Pears—Bartlett, Clapp's Favorite, Vicar of Winkfield, Louise Bonne de Jersey and Beurre D'Anjou.

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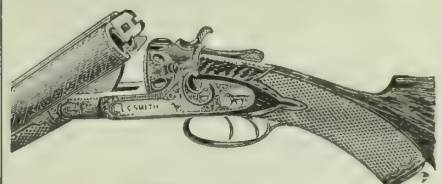
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A superior remedy for Coughs, Colds, Incipient Consumption and all Throat and Lung Troubles. Sold by all Druggists for 50 cents. J. R. GATES & CO., Proprietors, 417 Sansome St., San Francisco.



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HUNGARIAN and GERMAN PRUNE, \$18 per 100. BARTLETT PEAR, one year old, \$10 per 100; two year old, \$15 per 100—Nursery prices. One-year-old Apple, \$10. All orders for the country carefully packed to secure them against weather, etc.

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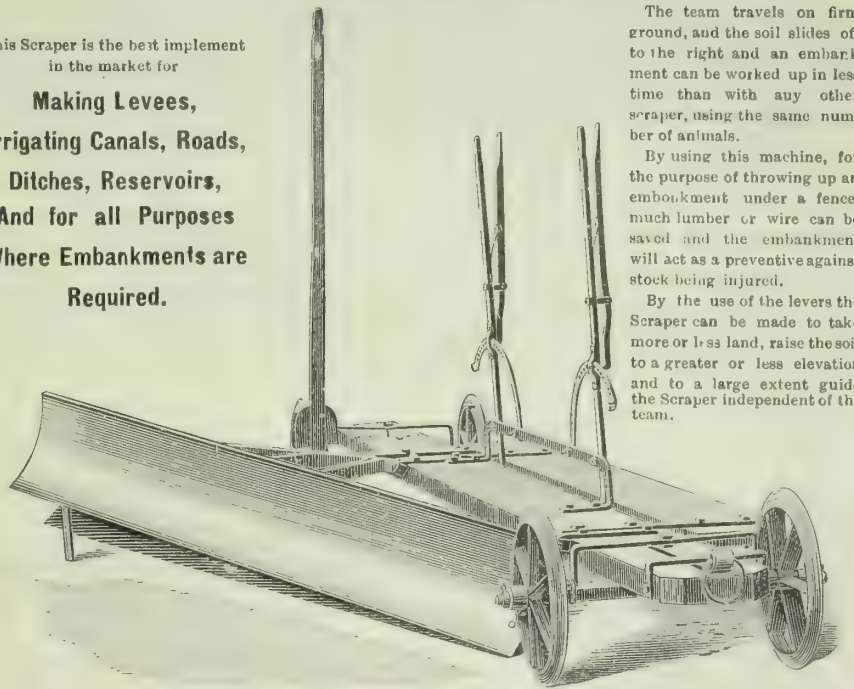
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SITUATION WANTED.—A gentleman of 10 yrs. experience on ranches in California wishes a position as superintendent or foreman on a stock, grain or dairy ranch. F. A. WARD, 121 Dore St., San Francisco, Cal.

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AGRICULTURAL SCIENCE.

Report on the Establishment of Outlying Culture Stations.

University Experiment Station. Bulletin No. 78.

President E. S. Holden—DEAR SIR: I respectfully submit the following considerations and statements concerning the organization of the Agricultural Experiment Station work under the provisions of the "Hatch Bill," which has now been made effective by the appropriation that has lately passed Congress:

The Experiment Station work that for 10 years past has been carried on so far as the funds of the University, and the State appropriations made from time to time, have permitted, is entirely of the character contemplated by the "Hatch Experiment Station Bill," and the interest it has excited in this State has not only found expression in the increased appropriations consecutively made for its support by the Legislature, but also by the desire manifested for its expansion so as to provide adequately for the varied needs of the widely different climatic regions of California. It being manifestly impossible to represent by the work of any single station the conditions of a State co-extensive with the section of the Atlantic Coast reaching from Cape Cod to the Savannah river, the establishment of outlying Culture Experiment Stations has long been urged, and to some extent the demand has been supplied by the annual distribution of seeds and living plants throughout the State, to persons applying for them and willing to make trials and report thereon to the Agricultural Department. The last annual report records the outcome of a large number of experiments thus initiated; yet it cannot be denied that, considering the large number of persons to whom distributions have been made, the responses have been relatively few and too often of a very unsatisfactory character, owing to the unavoidable want of necessary attention on the part of the distributees. At all events, these results have served to emphasize the need of Regional Culture Stations under competent supervision, and the desire of the agricultural public in that direction has repeatedly found utterance in resolutions of the State Grange, State conventions and other public meetings. Those passed at the last meetings of these bodies are especially emphatic, and the support thus given has doubtless aided greatly in the passage of the appropriation act through Congress.

Our general policy in regard to this subject being thus understood, the principles that should guide in the establishment of such culture experiment stations require a brief discussion.

In determining the proper location of the outlying stations, their distinctive objects, and relation to the central station at Berkeley, should be kept clearly in view. The latter must of necessity cover the whole ground of investigation in agricultural science and practice, as recited in the Act of Congress and as heretofore carried out so far as the means at command permitted. The outlying stations, on the contrary, are designed to be essentially "culture stations" only, in which the adaptations of culture plants to the local climates and soils are to be tested systematically, in order to relieve the practical farmer from the necessity of making such trials at his individual and often very heavy expense in unproductive investments, and the results of which after all are not convincing to others and do not become part of public experience.

With this object in view, it is evident that in the selection of locations for such stations the following points should be primarily regarded:

1. Each station should be representative of as large an area of agricultural land as possible, with respect to climatic conditions first of all, and secondly with respect to soil conditions.
2. Agricultural regions of which the adaptations and peculiarities are still uncertain should receive attention first, since it is here that the greatest volume of work remains to be done; while in regions that have been settled up long ago, the trials of individual culture plants that may come into question may be intrusted to intelligent individuals.

This implies, conversely, that when, after a time, which may vary from 10 to 20 or more years, a culture station shall have fulfilled its main objects, it may be dispensed with, or transferred to another locality standing in need of such work. Yet it may also turn out to be desirable to maintain some outlying station or stations permanently, and invest them with additional functions in the prosecution of agricultural experimentation. Under this point of view it would seem to be desirable that the lands occupied should be held in trust, or on lease, rather than in fee simple, by the University.

It is my impression that such tenure of land for the purposes of a culture station can, in most, if not in all cases, be obtained by consent or donation from the owner, with only nominal expense to the institution.

As regards the necessary buildings, the Act provides that a sum not exceeding \$3000 may be expended for buildings and repairs, the first (this) year, but thereafter only \$750 per year shall be so applicable. This provision was evidently intended to prevent the improper use of the fund for extensive buildings, allowing only what

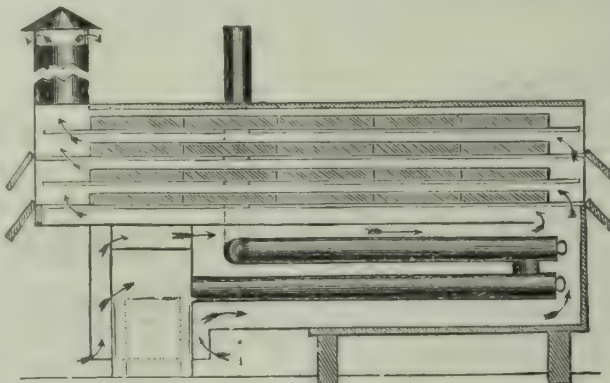
is considered absolutely essential, such as dwellings for employees, barn, tool and propagating house, to be defrayed out of the appropriation. This works well enough where, as in the smaller Eastern States, one single station answers all purposes. But where, as in California, at least five stations (besides the central one at Berkeley) will be required to represent even remotely the several agricultural regions, this provision leaves us without the means of providing for their buildings.

From the offers and suggestions already received, I believe that this difficulty can be overcome by inviting subscriptions to defray the cost of needed buildings, in the localities or regions that will be benefited by their establishment. It would manifestly be invidious to allot the whole \$3000 permitted by law to any one favored locality, unless it be the central station at Berkeley. The latter, as you are aware, stands in the most urgent need of buildings that shall properly subserve the uses of the Experiment Station, which at present has neither office, nor collection room, nor adequate laboratory accommodations. In conformity with this view, I have already submitted to you suggestions and plans by which, supplementing the \$3000 with an appropriate sum from the University fund, a satisfactory building for the use of the station may be constructed, mostly upon foundations already existing. This is really the first need for the successful management of the already complex work, which will become additionally heavy and complicated when the outlying stations shall have been established.

As regards the number and general collocation of these culture stations, I have already, in former reports and communications, outlined my views in the premises. They are based upon the natural agricultural subdivisions of the State, which may be stated as follows:

1. Southern region, from San Diego to Santa Barbara, and inland to the Mojave and Colorado deserts.
2. San Joaquin valley, from the Tejon mountains to Stockton.
3. Sacramento valley, from Stockton northward.
4. Foothills of the Sierra, substantially from Fresno to Tehama county.
5. Coast Range region.

It is impossible to make fewer divisions, and consequently five outlying culture stations is the minimum number that can at all represent the State. The Coast Range might be supposed to



SECTIONAL VIEW OF PARSON'S FRUIT DRIER.

be represented by the central station at Berkeley, but it is notorious that this is not at all the case. The Berkeley climate represents only a very limited area, directly influenced by the fogs that pour in through the Golden Gate at the time when the maximum heat prevails elsewhere. As a culture station, it is not happily located, and the Coast Range should be otherwise represented. In view of the considerations already set forth above, it appears to me that the extensive and important region lately opened up to settlement by the extension of the Southern Pacific railroad toward San Luis Obispo, along the largest river of the Coast Range, the Salinas, is eminently entitled to consideration, it being a new and apparently most promising field for varied cultures. I submit herewith a proposition looking toward the establishment of a station, on the general basis as above outlined, by a donation of land in trust and the raising of a sum sufficient for the erection of buildings, on the part of Mr. J. V. Webster of Creston, San Luis Obispo county. The land offered is situated within a few miles of the town of Paso Robles, and in my view will be as fairly representative of the culture conditions of the fine agricultural region of the Upper Salinas as could be readily chosen. I therefore respectfully recommend the formal acceptance of Mr. Webster's proposition at the coming meeting of the Board of Regents, and that the expenditure needful for farther equipment and such work as the season will permit, be authorized.

Another most acceptable offer of a similar tenor comes from Senator A. Caminetti and others, offering a tract of land within a few miles (the exact location yet to be determined upon) of Jackson, Amador county. As that county is very nearly centrally located within the Foothill region as above defined, and as personal examination has satisfied me that the soil and climate of the locations of which the choice is offered is as fairly representative of the foothill region at large as any one location that could be selected, I also recommend the acceptance of this offer, it being the only one that has come from that region, and being in every

respect a fair one, besides being situated in a community anxious for information as to untried cultures.

I am in receipt of suggestions and offers of co-operation from various other points, notably from Tulare county, from Santa Barbara, (the same as formerly communicated to you), and from the county of Los Angeles. None of these suggestions have as yet taken so definite a form as to call for a recommendation on my part at this time. But in view of the lateness of the season and of the short time remaining within which the appropriation for the present fiscal year can be expended, I urgently recommend that the power to accept appropriate donations for culture stations, and to take proper action thereon, be delegated to a committee that can be easily called together; since the necessity of awaiting the action of a regular meeting of the Board of Regents would defeat all further progress in the establishment of stations for this season.

I have in view one other station, the establishment of which will involve but little initial or current expense, and which would adequately represent the higher portion of the middle Coast Ranges. I refer to Mount Hamilton, the native vegetation of which shows unexpected possibilities in the way of cultivation at the height of 4000 feet. I have found at this altitude the native grapevine and a growth of oaks and other plants rivaling that of many interior valleys. Apart from the desirability of thus facilitating the supply of life's necessities to the personnel on the mountain, the success of cultures at that elevation would go far to show the latent possibilities of the lower ridges, now mere pasture-grounds. I, therefore, suggest that so soon as the Mount Hamilton domain shall have been turned over to the Regents, operations looking toward at least a small culture plot be at once begun, so as, if possible, to gain a year's time in actual experience.

It should not be forgotten that besides these new stations and the one at Berkeley, three specially viticultural stations, based entirely on private munificence, are already in operation. Two of these are located on opposite sides of the Santa Clara valley (at Cupertino and Mission San Jose), and one at Fresno. If these are maintained and the plans above outlined are carried out, we will have ten stations in all to look after. This is a very respectable number, and it is obvious that it cannot be

Parsons' Fruit Evaporator.

An evaporator which seems to have made an excellent record during the last year, according to all accounts we have received, is Parsons' drier, originating in the Santa Clara fruit district. The inventor, L. W. Parsons of San Jose, claims his arrangement secures several results, and in his circular mentions specially thorough ventilation or adequate draft, which quickly removes the moisture-laden air from contact with the fruit, and thus removes chance of sweating. Another point claimed is the advantage of bringing the fruit at once into air of a very high temperature and thus searing it over so that natural flavors and color are better preserved. The fruit is moved in a few moments to a cooler location out of danger of scorching, where it finds a current of dry air to carry on the evaporation of the moisture. It proceeds constantly against the blast of dry air and is finally allowed to finish in a cool, dry place, where it is claimed it cannot be discolored or saturated with moist vapor.

The sectional engraving on this page shows the internal arrangement of the drier by which the results claimed are secured. As will be seen, it is a horizontal machine, which is claimed to be the most convenient form. It is divided into an upper or fruit-drying chamber, and a lower or hot-air chamber, by a floor of sheet iron. At one end of the lower chamber is the furnace. A damper in the top of the heater can be operated so the different kinds of fruit may be seared or not, thus especially adapting this drier to different kinds of work; and when opened, it is claimed that the space above can remain full all night without burning the fruit.

The heat of the fire is economized and distributed by conducting it through flues inside of the machine. Air enters at the bottom of the furnace, is heated, and passing through the hot-air chamber containing the radiating flues, heats the sheet-iron floor above, which in turn radiates heat up into the fruit, thus helping to maintain the proper temperature. The current of hot air passing in the direction indicated by the arrows, rises at the back end of the drier into the fruit chamber. This dry air begins work on comparatively dry fruit, readily absorbing what little moisture is here offered it; passes on, finding more and more vapor, easily takes it up, and on reaching the front end is reheated from the furnace top. Floors in the fruit chamber compel the air currents to move horizontally and thus reach all parts of the chamber. With its absorptive powers greatly increased, it strikes the fresh-cut fruit just introduced, quickly absorbs its new load of moisture, and with fresh impulse, caused by the reheating, rushes up the escape flue to the outer air. The draft is so strong that it has been found necessary to place a valve in the escape flue to regulate it for different kinds of work.

Mr. Parsons' driers are made at the San Jose Agricultural Works, San Jose, Cal., where the inventor has his office.

Stockton Industries.

(By J. C. H.)

The city of Stockton maintains a leading position as a manufacturing city for agricultural implements.

The Stockton Combined Harvester and Agricultural Works are setting up a full line of combined harvesters, principally the improved "Houser." For several years the best efforts of inventive genius and mechanical skill have been applied to this harvester until a California invention has revolutionized harvesting cereals in the great grain growing belts on the Pacific Coast. Miller's Lightning Hay Press is manufactured at these works and there is now a good stock on hand.

The H. C. Plow Works have secured the letters patent of Powell's Derrick, and will be prepared to fill all orders.

The Matteson & Williamson Manufacturing Company are blocking out a number of combined harvesters known as the "Harvest Queen." The hum of industry and improvements can be heard and seen in all portions of this thriving inland city, and material prosperity pervades this section of our State.

Ashley's Scraper.

The demand for road and land scrapers has increased each year, especially since a system of irrigation has been inaugurated in different portions of our State. Inventors and mechanical genius have been stimulated in bringing out an implement that would fill this want. One of the latest was invented and patented by Mr. L. E. Ashley of Stockton. This tool has been put into practical use during the last year and has become a favorite implement. A Rural representative saw this scraper at work last week grading the streets in the addition to the town of Lathrop. It was handled with ease by six horses, and was able to follow the plow and throw up the soil as fast as a four-horse team could plow, and easily make a ditch, if desired, four feet deep. An illustration and full description of this implement appeared in the Rural last fall, and the cut can now be seen in our advertising columns.

The Montana Stock-Growers' Journal claims that Montana has no long list of casualties and terrible sufferings to report as the result of the unusually severe storms this winter.

much increased without special strong reasons or, perhaps, additional pecuniary means. I estimate the current expense of maintenance of a general culture station, of 15 to 20 acres, once established and equipped, at between \$2000 and \$2500 per annum; and it is thus easily seen that the limits of the Congressional fund will very nearly have been reached when the present plans are carried into effect.

Respectfully submitted,

E. W. HILGARD,
Professor of Agriculture.

Berkeley, March 12th.

BADEN FARM.—Robert Ashburner, the well-known Shorthorn breeder of Baden Farm, San Mateo county, reports shipment to J. D. Pemberton of Victoria of a six months' bull calf, Baron Frantic 8th, a superior calf by Baden Duke out Frantic 9th by Crown Prince of Lightburne. Mr. Ashburner's cattle seem to give good satisfaction in the Northern country, for he has just received an application for another bull from a man to whom he shipped one six years ago. He has now on hand several young bulls, 11 months and younger, of great promise. He is now preparing a shipment of 10 head of dairy cows for Japan, as the Japanese believe in securing better cattle than some which they have imported during recent years.

SAN ANTONIO, TEXAS, claims to be the first horse market of the world. The claim is based on the data of last year's trade, which has just been made up. According to these figures, San Antonio in 1887 sold \$1,500,000 worth of horses. By rail from that market were shipped 64,175 head, against 46,365 in 1886. The number driven from there last year was 3000.

D. M. FERRY & Co. of Detroit, Michigan, send us their Seed Annual for the current year, which is full of desirable things. The sample seed packages which Ferry & Co. usually send have furnished us many good things for our garden. We find the seeds fresh and the varieties good.

Why Such Choice Horses are Sold.

A few years ago Mr. F. T. Underhill of N. Y. bought the Ontare ranch of 800 acres in the vicinity of Santa Barbara and placed upon it a herd of Holstein cattle and a select lot of trotting stallions and brood mares. The predominant blood in the horses is that of Ryeddy's Hambletonian, a dash of which seems all-important in the pedigree of a well-bred trotting stallion or mare. This is supplemented by strains of nearly every blood recognized in the production of the American trotter. It was Mr. Underhill's ambition to create a breeding establishment that would take rank with the best upon the coast, and neither care nor expense were spared in the effort.

But the sudden and marvelous rise in real estate in the vicinity of Santa Barbara made it seem wise to dispose of the ranch and abandon the idea of a standard stock farm. This is the true and only reason for disposing of the horses advertised to be sold by Killip & Co. at the Bay District Track on the 20th inst.

It is doubtful if such a lot of stallions and brood mares has ever yet been placed before the California public, and they will doubtless be eagerly sought for. The sale will be absolutely without reserve.

Catalogues and all required information will be furnished upon application to C. F. Swan, manager, Los Alamos, or to Killip & Co., 22 Montgomery street, S. F.

We are also requested to say that, by permission of Mr. Swan, manager of the Ontare ranch, there will be offered for sale at the same time and place the standard bred filly "Clara E.," bred by G. A. Beaucamp, Concordia, Kansas, and owned by S. C. Davidson of San Diego. Also the thoroughbred trotting stallion Wilkes Pasha 2618, a full description of whose pedigree will be found in our advertising columns. This horse, apart from his trotting qualities and pedigree, will be found invaluable to breeders of useful stock through his remarkable size and quality.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Injurious Insects of the Orchard, Vineyard, Field, Garden, Conservatory, etc.,

Remedies for their Extermination.

By MATTHEW COOKE.

Late Chief Executive Horticultural Officer of California. Illustrated with over 750 wood-cuts and 25 pages of classified illustrations. This book is designed for the use of orchardists, vineyardists, farmers and others interested in the subjects treated. It is designed to convey practical information concerning some of the species of insects injurious to the industries of cultivators of the soil, and those interested in earth produce generally. Price \$4, postpaid. For sale by DEWEY & CO., publishers, 220 Market St., San Francisco.

Carriages.

We are receiving 10 carloads of Carriages, Buggies and Wagons from the Briggs Carriage Company of Amesbury, Mass., which will be sold at prices that will be satisfactory, considering style and workmanship. Quality of material guaranteed the best.

F. A. BRIGGS & CO.,

220 & 222 Mission St., San Francisco, Cal.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

A Rare Chance.

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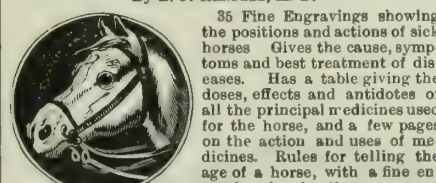
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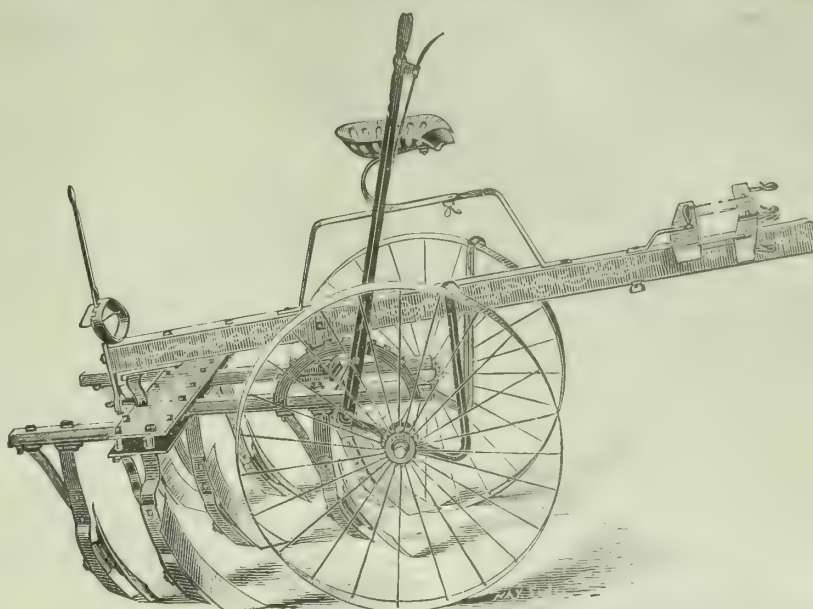
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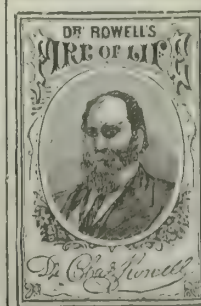
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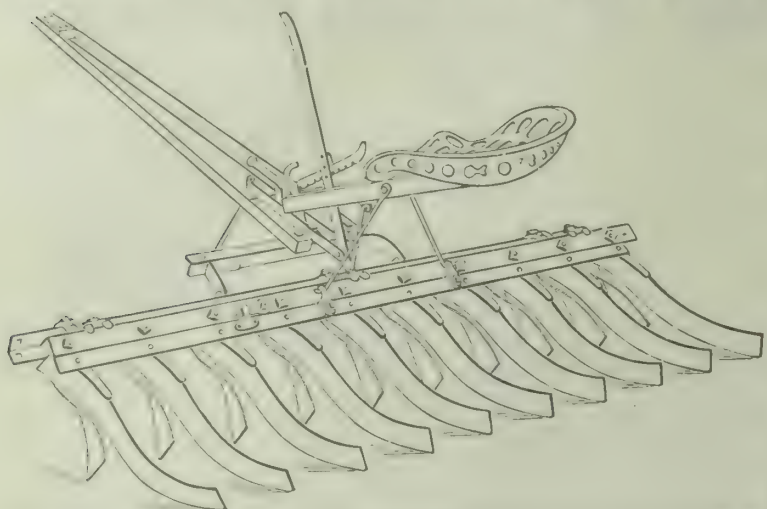
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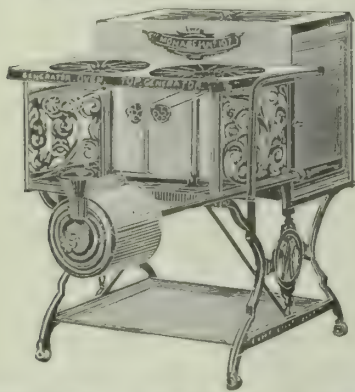
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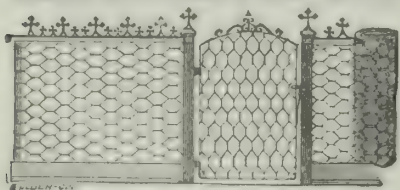
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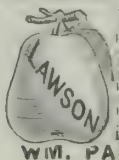
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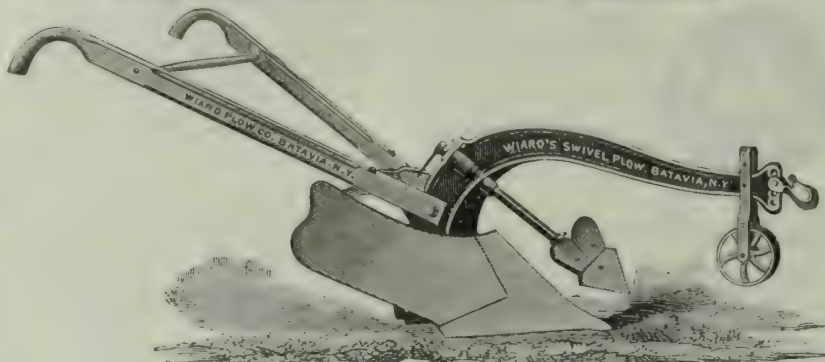
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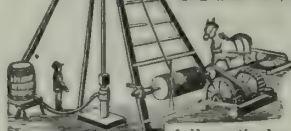
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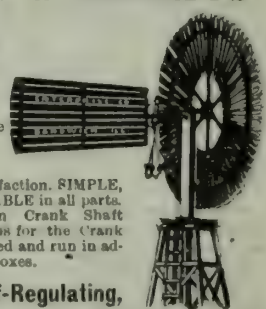
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Engraving

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Awards at the Grape-Growers' Convention.

Especial attention was given to wine tests at this year's convention, samples being submitted to the committees by numbers, and not by name or location of producers. The following are the awards reported to J. H. Wheeler, Chief Executive Officer, omitting the "honorable mentions," which would require more space than we can command:

Red Wine Committee.

The Zinfandels of 1883 and other vintages, also the Zinfandel blends of the same years, have shown superior keeping qualities, and merit the commendation of the committee. In making the following awards your committee selected the three best wines of each type, and then marked the best one of those three as "A," the next best as "B" and the next as "C."

Zinfandel 1887 majority report, A—Ewer A. Atkinson, Rutherford; B—C. C. McIver, Mission San Jose; C—Beard & Putman, Warm Springs.

Zinfandel, 1887, minority report, A—C. C. McIver, Mission San Jose; B—Beard & Putman, Warm Springs; C—Ewer & Atkinson, Rutherford.

Zinfandel, 1886, A—H. W. Crabb, Oakville, Napa county; B—Napa Valley Wine Co., Napa, Napa county; C—Courtois & Co., Larkmead, Napa county.

Zinfandel, 1885 and older, A—A. G. Chauche, Livermore, Alameda county; B—J. A. Stanly, Napa, Napa county; C—C. A. Wetmore, Livermore, Alameda county.

Bordeaux Types.

Malbeck, 1887, A—C. C. McIver, Mission San Jose, Alameda county.

Merlot, 1887, A—C. C. McIver, Mission San Jose, Alameda county.

Verdot, 1887, A—C. C. McIver, Mission San Jose, Alameda county; B—J. P. Smith, Livermore, Alameda county.

Cabernet Franc, 1887, A—Los Gatos and Saratoga Wine Co., Los Gatos; B—C. C. McIver, Mission San Jose, Alameda county.

Cabernet Sauvignon, 1887, A—J. A. Stanly, Napa, Napa county; C—C. C. McIver, Mission San Jose, Alameda county. Minority report, A—C. C. McIver, Mission San Jose, Alameda county; B—J. A. Stanly, Napa, Napa county.

Cabernet, A—M. M. Estee, Napa, Napa county; B—C. A. Wetmore, Livermore, Alameda county. Minority report, A—C. A. Wetmore, Livermore, Alameda county; B—M. M. Estee, Napa, Napa county.

Malbeck, 1886, A—J. H. Wheeler, Livermore, Alameda county.

Cabernet, 1886, A—J. H. Goodman & Co., Napa, Napa county; B—Charles Krug, St. Helena, Napa county.

Cabernet blend, 1886, A—C. A. Wetmore, Livermore, Alameda county; B—Napa Valley Wine Co., Napa, Napa county; C—J. H. Wheeler, Livermore, Alameda county.

Minority report, A—J. H. Wheeler, Livermore, Alameda county; B—C. A. Wetmore, Livermore, Alameda county; C—C. A. Wetmore, Livermore, Alameda county.

Cabernet, 1885, A—M. M. Estee, Napa, Napa county.

Burgundy Types.

Burgundy, 1887, A—Charles Krug, St. Helena, Napa county; B—Courtois & Co., Larkmead, Napa county; C—Napa Valley Wine Co., Napa, Napa county.

Burgundy, 1886, A—S. P. Connor, St. Helena, Napa county; B—Courtois & Co., Larkmead, Napa county; C—H. W. Crabb, Oakville, Napa county.

Burgundy (old), A—C. A. Wetmore, Livermore, Alameda county; B—C. A. Wetmore, Livermore, Alameda county; C—Courtois & Co., Larkmead, Napa county.

Mixed Types.

Mataro, 1887, A—C. A. Wetmore, Livermore, Alameda county; B—Wallace Everson, Livermore, Alameda county.

Zinfandel blends, 1887, A—C. A. Wetmore, Livermore, Alameda county; B—H. B. Wagoner, Livermore, Alameda county.

Zinfandel and Trousseau, 1887, A—Estate J. F. Black, Livermore, Alameda county.

Zinfandel and Cabernet, 1887, A—Charles Krug, St. Helena, Napa county.

Mondouse, 1887, A—C. A. Wetmore, Livermore, Alameda county; B—C. C. McIver, Mission San Jose, Alameda county.

Tannat, 1887, A—J. P. Smith, Livermore, Alameda county; B—J. A. Stanly, Napa, Napa county.

Carignan, 1887, A—R. M. Wheeler, St. Helena, Napa county; B—Los Gatos and Saratoga Wine Co., Los Gatos; C—Napa Valley Wine Co., Napa, Napa county; Baluzat, 1887, A—J. W. Jarvis.

Valdepenas, 1887, A—J. A. Stanly, Napa, Napa county; Grenache, 1887, A—H. H. Delafield, Calistoga, Napa county.

Chauche Noir, 1887, A—H. W. Crabb, Oakville, Napa county; B—George A. Bram, Santa Cruz, Santa Cruz county.

Pieffer's Burgundy, 1887, A—C. C. McIver, Mission San Jose, Alameda county.

Charbono, 1887, A—Beard & Putman, Warm Springs, Alameda county; B—J. P. & R. T. Pierce, Santa Clara; C—M. M. Estee, Napa, Napa county.

Mataro and Carignan, 1887, A—M. Keatinge, Lower Lake, Lake county.

Malvoisie, 1887, A—Drayeur Bros., Healdsburg, Sonoma county.

Malvoisie, B—Courtois & Co., Larkmead, Napa county.

Petite Syrah, 1887, A—H. W. Crabb, Oakville, Napa county.

Petite Syrah, 1887, B—C. C. McIver, Mission San Jose, Alameda county.

Beclan, 1887, A—C. C. McIver, Mission San Jose, Alameda county.

Mission, 1887, C—Drayeur Bros., Healdsburg, Sonoma county. (This was the only sample of Mission submitted, and was fully up to the standard, *sui generis*. "Should auld acquaintance be forgot?")

Pieffer's Burgundy, 1886, A—C. A. Wetmore, Livermore, Alameda county.

Charbono, 1886, A—Mr. Palmtag, Hollister, San Benito county.

Charbono, 1886, B—Ewer & Atkinson, Rutherford, Napa county.

Beclan, 1886, A—H. W. Crabb, Oakville, Napa county.

Spana, 1886, A—Charles Krug, St. Helena, Napa county.

Tennat, 1886, B—Kate F. Warfield, Glen Ellen, Sonoma county.

White Wine Committee.

Petit Bouschet, 1887, A—C. C. McIver, Mission San Jose, Alameda county.

Pied de Pedrix, 1887, B—J. H. Goodman & Co., Napa, Napa county.

Lenoir, 1887, C—Ewer & Atkinson, Rutherford, Napa county.

St. Macaire, 1886, A—Kate F. Warfield, Glen Ellen, Sonoma county.

Lenoir, 1886, B—Ewer & Atkinson, Rutherford, Napa county.

Lenoir, 1886, C—Kate F. Warfield, Glen Ellen, Sonoma county.

Respectfully submitted, R. J. Harrison, H. A. Pellet, A. O. Chauche, C. W. Sutro, J. B. J. Portal, Dr. J. A. Stewart, Committee.

White Wine Committee.

The Committee on White Wines received 126 different samples for competition; nearly half of these were of last vintage. They were not informed where these wines were grown or made, and had to accept the labels as stating facts about variety of grape and age of the wine. Their instructions were to compare wines of same variety and age and to state which they considered the best. Good sound fermentation was found in by far the most of the wines exhibited. Only very few samples show the old-fashioned California milk sourness. Of most of the well-known varieties the committee found some excellent samples which they could show with pride as California products anywhere in the wine-drinking world. By far the larger portion of the fine wines were of the last vintage, 1887.

The committee feel justified in saying as a result of their sampling that they came to the conclusion that California winemen have learned pretty well how to make wine, but most of them have to learn a great deal yet how to handle and keep wine. The following is the report:

Sauterne, 1887, A—Winter & Son, Cloverdale, Sonoma county; B—George A. Bram, Santa Cruz, Santa Cruz county.

Sauterne, 1886, A—J. H. Goodman & Co., Napa, Napa county; B—C. A. Wetmore, Livermore, Alameda county; C—J. P. Smith, Livermore, Alameda county.

Sauterne (old), A—H. W. Crabb, Oakville, Napa county; B—Courtois & Co., Larkmead, Napa county; C—Courtois & Co., Larkmead, Napa county.

Riesling, 1887, A—R. M. Wheeler, St. Helena, Napa county; B—Napa Valley Wine Co., Napa, Napa county; C—M. M. Estee, Napa, Napa county.

Franken-Riesling, 1887, A—Ewer & Atkinson, Rutherford, Napa county; B—E. Meyer, Wrights, Santa Clara county; C—R. H. Delafield, Calistoga, Napa county.

Riesling, 1886, A—H. W. Crabb, Oakville, Napa county; B—J. H. Goodman & Co., Napa, Napa county; C—J. H. Wheeler, Livermore, Alameda county.

Riesling (old), A—None of first quality; B—R. M. Wheeler, St. Helena, Napa county; M. M. Estee, Napa, Napa county.

Burger, 1887, A—N. B. Wagoner, Livermore, Alameda county; B—C. C. McIver, Mission San Jose, Alameda county; C—J. P. & R. T. Pierce, Santa Clara.

Burger, 1886, A—C. C. McIver, Mission San Jose, Alameda county; B—William Palmtag, Hollister, San Benito county.

Gutedel, 1887, A—Napa Valley Wine Co., Napa, Napa county; B—C. C. McIver, Mission San Jose, Alameda county.

Gutedel (old), A—R. M. Wheeler, St. Helena, Napa county; B—R. M. Wheeler, St. Helena, Napa county; C—M. M. Estee, Napa, Napa county.

Golden Chasselas, 1887, A—Ewer & Atkinson, Rutherford, Napa county; B—J. P. & R. T. Pierce, Santa Clara; C—Beard & Putman, Warm Springs, Alameda county.

Chasselas, 1886—None of first quality; B—C. C. McIver, Mission San Jose, Alameda county; C—Kate F. Warfield, Glen Ellen, Sonoma county.

Chauche Gris, 1887, A—George Husmann, Chiles Valley, Napa county; B—I. de Turk, Santa Rosa, Sonoma county; C—Winter & Son, Cloverdale, Sonoma county.

Chauche Gris, 1886—None of the first quality; B—Kate F. Warfield, Glen Ellen, Sonoma county.

Chauche Gris, B—James Shaw, Glen Ellen, Sonoma county.

Chauche Noir, 1887, A—George Husmann, Chiles Valley, Napa county; B—George A. Bram, Santa Cruz.

Orleans Riesling, 1887, A—C. C. McIver, Mission San Jose, Alameda county; B—J. P. Smith, Livermore, Alameda county.

Orleans Riesling, 1886, Excellent—J. P. Smith, Livermore, Alameda county; B—C. C. McIver, Mission San Jose, Alameda county.

Orleans Riesling (old), A—Arpad Haraszthy & Co., Madison, Yolo county.

Folle Blanche, 1887, A—C. C. McIver, Mission San Jose, Alameda county; B—H. B. Wagoner, Livermore, Alameda county; C—I. de Turk, Santa Rosa, Sonoma county.

Folle Blanche, 1886, A—Arpad Haraszthy & Co., Madison, Yolo county.

Folle Blanche (old) Excellent—Estate J. F. Black, Livermore, Alameda county.

White Mission, 1887, B—W. W. Waterman, Laurel, Santa Cruz county.

Syrian, 1887, B—Josiah Stanford, Warm Springs, Alameda county.

Syrian, 1886, B—Josiah Stanford, Warm Springs, Alameda county.

Traminer, 1887, A—Charles Krug, St. Helena, Napa county.

White Pinot, 1887, A—R. M. Wheeler, St. Helena, Napa county.

White Pinot, 1886, B—R. M. Wheeler, St. Helena, Napa county.

Palomino, 1887, B—C. C. McIver, Mission San Jose, Alameda county.

White Prolific, 1887, A—Wallace Everson, Livermore, Alameda county.

Grenache, 1887, A—J. P. Smith, Livermore, Alameda county.

Seedless Sultana, 1887, A—J. P. Smith, Livermore, Alameda county.

Boal, 1886, A—Arpad Haraszthy & Co., Madison, Yolo county. A promising sample of sherry type.

Chasselas and Gros Riesling, 1885, A—William Palmtag, Hollister, San Benito county.

Hock, 1885, B—M. M. Estee, Napa, Napa county.

Riesling and Burger, B—James Shaw, Glen Ellen, Sonoma county.

Respectfully submitted, R. C. Priber, F. Pohndorff, R. H. Rixford, J. P. Smith, Geo. Husmann, Committee.

Sweet Wines and Brandy.

Port, 1887, A—Geo. West & Son, Stockton, San Joaquin county; B—William Palmtag, Hollister, San Benito county; C—A. E. S. de Wiederhold, Healdsburg, Sonoma county.

Port, 1886, A—Geo. West & Son, Stockton, San Joaquin county; B—C. A. Wetmore, Livermore, Alameda county; C—Walter vineyard, Fresno.

Port, 1885, A—George West & Son, Stockton, San Joaquin county; B—Margherita vineyard, Fresno.

Port, (old), A—Napa Valley Wine Co., Napa, Napa county; B—Geo. West & Son, Stockton, San Joaquin county.

Sherry, 1887, A—Margherita vineyard, Fresno; B—Walter vineyard, Fresno.

Sherry, 1886, A—Margherita vineyard, Fresno; B—Geo. West & Son, Stockton, San Joaquin county.

Sherry (old), A—C. A. Wetmore, Livermore, Alameda county; B—Geo. West & Son, Stockton, San Joaquin county.

Angelica, 1887, A—Courtois & Co. Larkmead, Napa county; B—Josiah Stanford, Warm Springs, Alameda county.

Angelica, 1886, A—Geo. West & Son, Stockton, San Joaquin county; B—A. Schell & Co., Knight's Ferry, Stanislaus county.

Angelica (old), A—A. Schell & Co., Knight's Ferry, Stanislaus county; B—Geo. West & Son, Stockton, San Joaquin county.

Tokay, 1887, A—Courtois & Co., Larkmead, Napa county; B—Margherita Vineyard, Fresno.

Tokay (old), Excellent—H. W. Crabb, Oakville, Napa county.

Madeira (old), A—C. A. Wetmore, Livermore, Alameda county.

Mission Brandy, 1887, A—Sterling & Co., Fairfield, Solano county; B—Courtois & Co., Larkmead, Napa county.

Mission Brandy, 1886, A—Geo. West & Son, Stockton, San Joaquin county.

Mission Brandy, 1885, A—Geo. West & Son, Stockton, San Joaquin county; B—A. Schell & Co., Knight's Ferry, Stanislaus county.

Mission Brandy (old), very superior—Geo. West & Son, Stockton, San Joaquin county.

Brandy from foreign grapes, 1887, A—S. P. Connor, St. Helena, Napa county; B—Los Gatos & Saratoga Wine Co., Los Gatos; C—Geo. West & Son, Stockton, San Joaquin county.

Brandy from foreign grapes, 1886, A—Geo. West & Son, Stockton, San Joaquin county; B—H. W. Crabb, Oakville, Napa county.

Brandy from foreign grapes, 1885, very superior—Geo. West & Son, Stockton, San Joaquin county. Such a brandy as this, if produced and marketed, will bring fame to California as the cognac brandy has brought to France.

Brandy (old), A—H. W. Crabb, Oakville, Napa county; B—Napa Valley Wine Co., Napa, Napa county; C—Geo. West & Son, Stockton, San Joaquin county.

Chas. Meinecke, H. W. McIntyre, N. E. Rose, committee.

THE assessor of Mendocino county has instructed his deputies to assess all real estate in that county 50 per cent higher than last year.

Santa Clara Valley Note.

EDITORS PRESS:—Presuming that all have heard of but have not seen Milpitas, and know of its importance in a political sense, a few facts concerning it will surely be of interest to your readers. It is one of the oldest places in California. In fact, it is so ancient that I failed to find any one living here who was able to tell when it sprang into existence, or the circumstances from which it derived the euphonious title. One thing that all seemed to know and take especial pride in was the fact that, "As Milpitas goes so goes the State," politically, of course. Singularly enough it has so happened that the vote of Milpitas (about 100 strong, perhaps,) has generally proved a pretty sure index of the election. Some comic stories are related of this town, but I will not occupy your valuable space with their rehearsal at this time. I found among the citizens here some of the most intelligent, refined, and, best of all, hospitable people it has been my good fortune to meet in the Santa Clara valley. I also found by experience that their bank accounts showed a prosperous condition of their affairs, which you may be assured is likewise very gratifying to the traveling agent.

The firm of Boyce & Topham, Milpitas, is one of the most enterprising and prosperous in the valley. Besides doing a large amount of manufacturing of wagons and general farming machinery, they make a special business of the manufacture of the popular gang plow "American Chief." Mr. Topham also finds time to devote to the rearing of fine horses and other stock. One two-year-old, Nutwood and Hambletonian, which he showed me, he refused \$1000 for at 11 months old.

Rob Welsh, sometimes called Robert for short, is a jolly old timer and takes delight in good horseflesh, too, and is able to show some imported stock that is hard to beat.

Wm. Boots, a resident of the valley for 35 years, showed me a number of high-bred animals with fine records, some of which are undergoing training for the ribbon. Mr. Boots is the proprietor of a 640 acre homestead in a high state of culture. He has a fine orchard, is the heaviest shipper of asparagus in the State, and a few years ago held a like rank in the strawberry business.

At the stock ranch of D. J. Murphy may be seen some specimens of the horse family that are worth looking at, one of which he lately purchased from Senator Rose of Los Angeles for \$7500.

Among those to whom I beg to make especial acknowledgment for favors while in the neighborhood of Milpitas is Thos. Russell, proprietor of a good 300-acre farm. The fact that he began as a renter, paying in 10 years \$17,500 for the use of the land, supported and educated a large family, paid for his farm, and has to-day a bank account standing in his favor, should be sufficient evidence that not only is the land productive, but the further fact that Mr. Russell is a model of industry, and possessed of more than ordinary business management.

One of the most beautiful sights I beheld in this neighborhood was the 100-acre almond orchard of W. J. Curtner, at the foothills back of town. I was surprised when told that the trees were but four years old. Their extraordinary size led me to conclude that they were almost double that age. I must, therefore, give Mr. Curtner the credit of devoting to them extraordinary care and culture to have produced such gratifying results. The trees bore a light crop last year, and, to all appearances, will produce a bountiful harvest this season.

Later I inspected the large almond orchard of Mrs. Gardner, near Los Gatos, which, until recently, I believe, ranked the largest in the State. It gives promise of a heavy yield this year.

John Calker, president of the Los Gatos Co-operative Winery, is able to show an almond orchard that can't be excelled in the valley.

Until recently but little attention has been given to fruit-growing about Evergreen, grain and stock raising being the chief business. Now, however, many are commencing to plant largely of the tree and the vine. Messrs. Bingham & Edwards, under whose hospitable roof I was sheltered on a stormy night recently, are taking the lead in vine-growing, having about 70 acres planted, and contemplate increasing the area as speedily as is convenient.

Mountain View has also stood back somewhat tardily in the enterprise of fruit-growing until the last few years. Of course there have been for a number of years some engaged in the business more or less extensively, but latterly the people are beginning to realize the importance of engaging more generally in this pleasant and lucrative occupation. They see the success that has attended such men as Mr. Lydiard, who, from an orchard of only 20 acres bearing trees, received \$4000 cash last year, which paid him ten per cent profit on \$1000 per acre, besides allowing him \$1000 extra for his labor. It may be said this is an exceptional case. Granted. But what this man has done, what reason is there for supposing others may not do in his locality, if similarly situated? It can be justly cited as an instance only of the possibilities that await the hand of intelligent and persevering industry in this favored locality, and should act as a stimulus to those who aimlessly plod along in the ruts of an exploded system of farming in other portions of our State, where exist like opportunities.

Santa Clara, March 12, 1888. F. B. L.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

VALPARAISO PARK. Thoroughbred Polled Angus and Durham Cattle. Thoroughbred Berkshire Swine. Address F. D. Atherton, Menlo Park.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

OOTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen-Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Geo. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

JERSEYS THE BEST HERD—All A. J. C. registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. J. MERKLEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands; Aargie's and Case Strains. Pouch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

POULTRY.

D. H. EVERETT, 1616 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

F. PEREZ, Florin, Sacramento Co., breeder of B. Leghorns, Langshans, P. Rocks, B. Minorcas; eggs for sale.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

JAS. T. BROWN'S successor, A. C. Ruchhaupt, 18 Georgia St., Los Angeles, Cal., importer of Thoroughbred Poultry of the leading varieties. Fowls and Eggs for sale. Price list free.

JAS. MITCHELL, St. Helena, Cal., breeds only Wyandottes from choice imported stock.

PIEDMONT POULTRY YARDS, cor. Piedmont Ave. & Booth St., Oakland. Wyandottes, L. Brahmas, P. Rocks, Langshans, B. Leghorns, B. B. R. G. Bantams. Eggs \$2 for 13; circular free; Mrs. J. N. Lund, Box 116.

THOS. WAITE, Perkins, Sacramento Co., importer & breeder of thoroughbred fowls of all leading varieties.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, L. Brahmas, Houdans. Eggs, \$2.

T. D. MORRIS, Sonoma, Cal. Toulouse and Embden Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

O. J. ALBEE, Lawrence, Cal., breeder and importer.

SHEEP AND GOATS.

ANDREW SMITH, Redwood City, Cal.; see adv't.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jerseys & Berkshire Swine. High graded rams for sale.

E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

F. BULLARD, Woodland, Cal., importer and breeder of Spanish Merino Sheep. Premium band of the State Choice bucks and ewes for sale.

J. B. HOYT, Bird's Landing, Cal., importer and breeder of Shropshire Sheep; also breeds cross-bred merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep from Illinois and England for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

ANDREW SMITH, Redwood City, Cal.; see adv't.

TYLER BEACH, San Jose, Cal., breeder of Thoroughbred Berkshire and Essex Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

T. HOGAN, Edge Hill Farm, Alhambra Valley, Martinez, Cal., Thoroughbred Essex Swine.

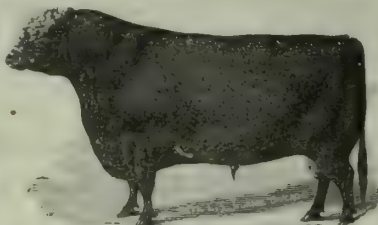
I. L. DICKINSON, Central Point, Merced Co., Cal., breeder of thoroughbred Essex Hogs. Pigs now ready for sale. Prices reasonable.

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That the public should know that for the past Sixteen Years our Sole Business has been, and now is, importing (Over 100 Carloads) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires, and Jerseys (or Alderneys) and their grades; also, all the varieties of breeding Sheep and Hogs. We can supply any and all good animals that may be wanted, and at very reasonable prices and on convenient terms. Write or call on us. **PETER SAXE and HOMER P. SAXE.** San Francisco, Cal., Oct. 22, 1886. **PETER SAXE & SON, Lick House, S. F.**



POPLAR GROVE BREEDING FARM,



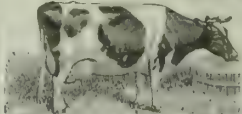
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HOLSTEIN-FRIESIANS, CLYDESDALE, FRENCH COACH AND HAMBLETONIAN HORSES.

LAKEVIEW STOCK FARM has



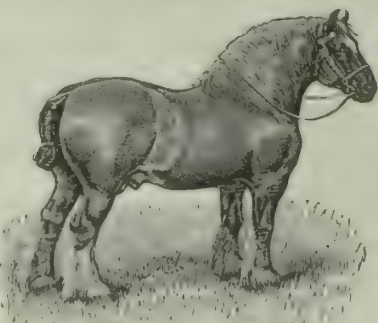
The only Cow that has given 26,021 lbs. 2 ozs. of milk in a year. The only four-year-old that has given 23,602 lbs. 10 ozs. in a year. The only two-year-old that has given 18,484 lbs. 13 ozs. in a year. The only herd of mature cows that has averaged 17,166 lbs. 1 oz. in a year. The only herd of two-year-olds that has averaged 12,465 lbs. 7 ozs. in a year. The only two-year-old Holstein-Friesian that has made 21 lbs. 10 1/2 ozs. of butter in a week. Fifty-two cows in this herd averaged 20 lbs. of butter in a week. 100 cows and heifers in this herd average 17 lbs. 1.48 ozs. of butter in a week. Over 100 cows in the Advanced Registry. Fine studs of choice highly-bred Clydesdale, French Coach and Hambletonian Horses. Send for Catalogue giving full records and pedigrees. In writing always mention **PACIFIC RURAL PRESS.**

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A choice lot of young Cattle of the above breeds for sale at very low figures. Their breeding is A No 1 and from the **BEST MILKING FAMILIES.** Prices and **QUALITY** will suit. **ELEVEN YEARS'** experience on this Coast. Correspondence solicited. Publisher of "Niles' Pacific Coast Poultry and Stock Book," a new book on subjects connected with successful Poultry and Stock raising on the Pacific Coast. Price, 50 cents, post-paid.

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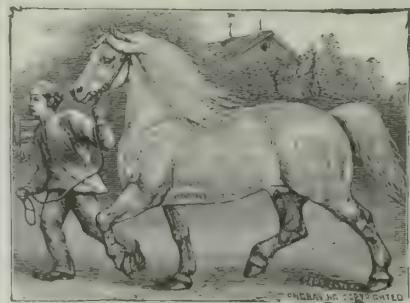
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And their grades. Young stock for sale on reasonable terms. Call on or address,

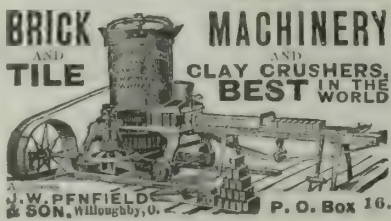
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SUFFOLK PUNCH, FRENCH COACH, NORMAN and PERCHERON HORSES.

He has at his stable horses that received prizes in their native countries, and also first premiums at State and District Fairs of California. These are a very superior lot of horses and will be sold as cheap as the same grade can be had in any part of the world, with cost of transportation added. For terms address

THEODORE SKILLMAN, Petaluma, Cal.

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35 Head of Thoroughbred Holstein-Friesian CATTLE FOR SALE.

Eighteen cows and heifers, 6 heifer calves, 11 bulls and bull calves. Will sell the entire herd at a bargain. Farm one mile from Stronghurst, on main line of Santa Fe railroad, 200 miles west of Chicago, Ill., and 25 miles east of Ft. Madison, Iowa. Address, **J. B. FORT & SONS, Olena, Henderson Co., Ill.**

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STANDARD-BRED

Trotting Stallions & Brood Mares,

Being the Entire Stud of FRANCIS T. UNDERHILL, Esq.,

ONTARE RANCH, Santa Barbara Co.,

AT 11 A. M., ON

TUESDAY.....MARCH 20, 1888

BAY DISTRICT TRACK, S. F.

On account of sale of the above-mentioned Ranch, Mr. Underhill has determined to dispose of all his Stallions and Brood Mares. They are of the choicest and most fashionable strains, comprising Rydick's Hambletonian, American Star, Volunteer, Clay, Membrino Chief, Pilot, Jr., Alexander, Belmont, Gold Dust and other famous Trotting blood, combined with judicious thoroughbred strains. Horses will be at Bay District Track March 13th. Also, by permission of MR. C. F. SWAN, manager, will be offered the

Standard Trotting Stallion

Wilkes Pasha 2618.

The Most Fashionable Combination of Blood Available.

Dark bay, 10 1/2 hands, with white hind feet, foaled in 1883, bred by K. P. Pepper, of Frankfort, Kentucky. A magnificent horse, thoroughly quiet, sound, and a sure getter.

Sired by Onward 1411. Record 2:25 1-3. Trial, 2:17.

He by George Wilkes, 2:22, sire of 54 horses in 2:30 list, ten of them with records below 2:30.

First dam Fisher by American Clay 34 (sire of Granville, 2:26; Maggie Briggs, 2:27; Ella Clay, 2:27); and the dams of Exeter, 2:24; Ranchero, 2:24; Judge Hawes, 2:24; Ambassador, 2:25; and four others in 2:30.)

Grandam by Wilson's Snow-storm (sire of Jim Irving, 2:23.)

Great grandam by Paddy Burns (thoroughbred). Onward, the sire of Wilkes Pasha, is at the head of Col. R. P. Pepper's great breeding establishment at Frankfort, Ky., and is considered the best of the great sons of the great George Wilkes.

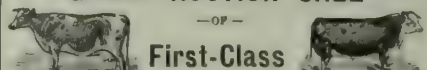
Also standard bred filly **CLARA F.** three years by Rufus O. 2:27, dam Taps by Duke of Brunswick, son of Rysdyk's Hambletonian.

For further particulars apply to

KILLIP & CO.,

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GRAND AUCTION SALE



First-Class

SHORTHORN CATTLE

AT 1 P. M. AT

AGRICULTURAL PARK, SACRAMENTO, On Wednesday, March 28th.

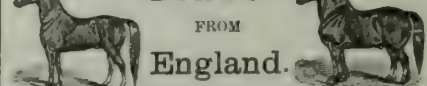
By direction of MR. JOSEPH COMBS, of Combs & Wilkerson, Bankers, Lincoln, Missouri, we will offer, on the above date, his entire herd of **PURE-BRED DURHAM CATTLE**, consisting of **FIFTY HEAD BULLS, COWS and HEIFERS** of the following well known families: **YOUNG MARYS, BELINAS, VENUSES and ADELPHES.**

These cattle have been bred by Mr. Combs, and for quality and individual merit have no superior. Their progenitors were carefully selected from the very best herds in Kentucky and Missouri. Mr. Combs will be prepared to give full guarantee as to soundness and freedom from disease, and certified pedigrees will be furnished with each animal, showing its breeding. Catalogues will be ready March 20th. Terms at sale

KILLIP & CO., Auctioneers.

IMPORTED STALLIONS!

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CARRIAGE and COACH HORSES.

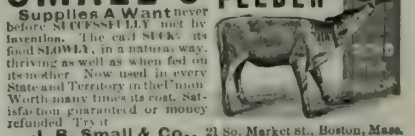
—IMPORTATIONS OF—

Seth Cook, Esq., Cook Stock Farm, Danville, Contra Costa Co., Cal., and Shericker Bros., Springfield, Ill.

For prices and catalogues apply to or address **GEO. A. WILEY, Cook Stock Farm, Danville, Cal., SAMUEL GAMBLE, 1307 Dolores street, or Bay District Track, or to**

KILLIP & CO., Live Stock Auctioneers, 22 Montgomery St., S. F.

SMALL'S CALF FEEDER



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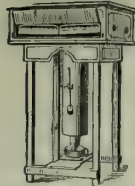
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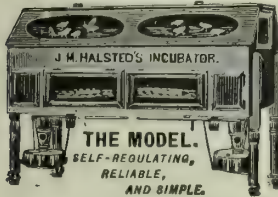


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LITTLE'S PATENT POWDER DIP.
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Mixes instantly with water. Prevents the fly from
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Cures thoroughly the SCAB
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BEST remedy known. Costs
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For Stump and Bank Blasting. From 5 to 20
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To grow large and profitable crops and at the same time to make the farm
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FERTILIZE!

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NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

DR. J. KOEBIG—Dear Sir: I have analyzed your sample
of "Nitrogenous Superphosphate," with the
following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Pota-h.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85
per cent Ammonia, therefore, total of Nitrogen calcu-
lated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vine-
yards, orchards, gardens, farms, and I recommend its
use by the cultivators of the soil generally, in Cali-
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University of California, College of Agri-
culture.

BERKELEY, Nov. 20, 1886.

DR. J. KOEBIG, San Francisco—Dear Sir: I take plea-
sure in adding my testimony to that of Dr. Schneider as
to the high quality of the "Nitrogenous Super-
phosphate" Fertilizer, analyzed by him at your re-
quest. It is a high-grade article, and as such re-
turns the user a better money value than a low-grade

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

fertilizer. It is especially well adapted to use in
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supply in our soils. Yet it is desirable that "com-
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and yours is of that character in furnishing
Potash and Nitrogen as well. Very respectfully,
E. W. HILGARD.

The value of this Fertilizer consists in the large per-
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necessary quantities of Potash and Ammonia, and
the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found
sufficient: For Wheat, Barley, Corn and Oats, 300 to 350
pounds per acre. For Grass, Sugar Beets and Vege-
tables, 250 to 300 pounds per acre. For Vines, Fruit
Trees, from 1 pound to 5 pounds each. For Flower Gar-
dens, Lawns, House Plants, etc., a light top dressing,
applied at any time, will be found very beneficial.

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MEXICAN PHOSPHATE & SULPHUR
CO. H. DUTARD, President, room 7, Safe
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Booth's Sure Death Squirrel Poison

For Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and Farmers wherever used.

The Cheapest and Best.

Put up in 1-pound, 5-pound, and 5-gallon Tins.

Every Can Warranted.

This Poison has been on the market less than two years, yet in
this short time it has gained a reputation of 'Sure Death,'
equaled by none. By its merits alone, with very little advertis-
ing, it is now used extensively all over the Pacific Coast, as well
as in Australia and New Zealand.

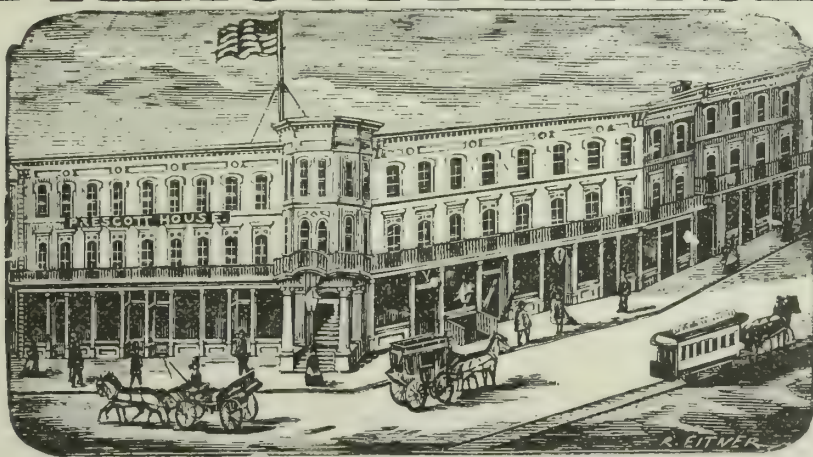
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Free Coach to and from the House.

J. W. BECKER, Proprietor.

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CODLIN MOTH WASH, WHALE-OIL SOAP, Etc.

By the use of these Washes all insect life reached will be destroyed, and all trees washed will show a marked
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BEST TREE WASH.

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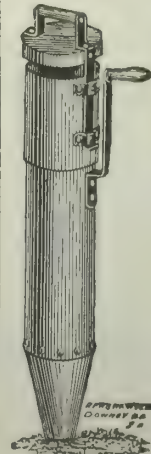
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, March 14, 1888.

The past week has been showery, benefiting many sections. Advices report all crops, fruits, cereals, vegetables, etc., as doing well, although backward for the season. Trading in farm products has been fairly active but at easier prices. European and Eastern wheat markets have fluctuated to some extent. The following is to-day's cable:

LIVERPOOL, March 14. Wheat—quiet but steady. California spot lots, 5s 5½d@6s 8½d; off coast, 33s 6d@33s 9d; just shipped, 33s 6d; nearly due, 33s 9d; cargoes off coast, quiet but steady; on passage, not much demand; Mark Lane wheat, few buyers in market; wheat on passage to Continent, 22,000 qrs.; wheat and flour on passage to U. K., 179,200 qrs.; French country markets, slow; wheat and flour in Paris, rather easier.

California Products in Chicago.

CHICAGO, March 10.—The market rules firm for oranges, with a good demand for California Navel; ordinary California do not sell so well. Ruling prices are as follows: California Riverside oranges, \$3@3.50; other kinds, \$2.75@3; Riverside Navel, \$5.50.

In California dried fruit there is only a light trade. Sales are constantly in progress, but they are not of an important kind, being mainly of small lots. The supply is fair, but the fruit is generally in strong hands, and it is steadily held so that no material change can be quoted. We quote: Peaches, sundried, in sacks, ½ lb. 11@12; do, evaporated, unpeeled, in sacks, ½ lb. 13@15; do, boxes, ½ lb. 14@16½; do, peeled, in sacks, ½ lb. 17@22; do, in boxes, ½ lb. 22@25; apricots, sundried, in sacks, ½ lb. 10@11; do, evaporated, in sacks, ½ lb. 12@16; plums, pitted, in sacks, ½ lb. 11½@12½; prunes, small, ½ lb. 8@10; do, fancy large, ½ lb. 13@14; nectarines, according to quality, in sacks, ½ lb. 5@12½; raisins, loose Muscatels, two-crown, ½ box, \$1.45@1.55; do, three-crown, ½ box, \$1.60@1.80; do, London layers, ½ box, \$2.30@2.40.

No material change in the price of beans can be quoted. Holders display some degree of firmness. Sales are, however, rather limited. Foreign beans have come in freely of late and the large buyers are well supplied; some of them, it is said, have got large stocks. In consequence the demand on the open market is rather slack and about all there is doing is in small sacks. The supply of consignment lots is small, and of no regular grade or quality, but sort of mixtures with very choice lots. California beans have about ceased coming this way owing to the advance on the Pacific Coast, so that they cannot very well be laid down here at present rates. California, according to quality, \$2.25@2.85.

In hops there continues to be a moderate movement of good choice grades. No large sales are made, but they are going to brewers as they have no need to purchase. Hops of a common quality do not sell well, but rule dull. The latter are also most plentiful so that they are easy. The market is quotable as follows: Pacific Coast, choice, ½ lb. 12@14; common to prime, 9@12c.

Eastern Wool Markets.

NEW YORK, March 12.—Bradstreet reports the Eastern wool market quiet and a shade weaker. New York and Philadelphia show relatively more strength than Boston. Manufacturers are buying wool as they need it for their machinery, which is at present in general operation on contracts. They are not anticipating further wants to any extent. Selections in some quarters are reported very much broken, but yet there appears to be a sufficient amount of choice wool on hand for all probable requirements. Foreign purchases are believed to have been heavier than last year. At Philadelphia the demand has been light and unsatisfactory, but stocks of domestic fleeces are small and prices well maintained. Tariff uncertainties and backward condition of the goods trade checked business in wool. The week's sales aggregate 521,000 lbs, against 921,000 lbs last week, and 630,000 lbs for the corresponding week last year.

Eastern Grain Markets.

CHICAGO, March 14.—Wheat, easier; cash, 75½c; April, 75½c; May, 79½c. Corn, easy; cash, 47½c; May, 51 9-16c. Oats, steady; May, 31 3-16c. Barley, unchanged.

NEW YORK, March 14.—Wheat, 91½c for May, 90½c for June.

Local Markets.

BAGS—Owing to a continued improvement in crops and several outside holders having sold out, the pool advanced Calcutta bags again. Now holding at 8½@8½ cts., June-July delivery. There are four vessels on the way with bags and bagging, but much of their cargoes are said to be pooled, and the remainder sold to farmers to arrive.

BARLEY—With the advance in overland freights, buyers are offish and bearing the market, even at present low prices. The stock of good to choice in the State is light, while the consumption is good. On Call, futures fluctuated slightly the past week, with the bulk of sales recorded being cross orders so as to keep prices down. To-day's transactions on Call are reported as follows:

Spot—200 tons, 79½c. Buyer season—200 tons, 83½c. Buyer season—100 tons, 91½c @ ctl.

BUTTER—The market has continued easy throughout the week, with some shading in values, so as to place consignments. Receipts are increasing, while the trade buys sparingly under the impression that a lower range of values will obtain.

CHEESE—The market is steady, but the tone is not quite so strong, as freer receipts are expected.

EGGS—Although the consumption has increased, yet free receipts cause prices to rule weak and low.

FLOUR—The market is without change, although a steadier tone is reported.

WHEAT—The sample market is strong at full prices for desirable grades favorably situated. Vessels loading will up slowly owing to the light offering of good to choice shipping. In futures on Call transactions were quite free, but the most of the

sales are said to have been cross orders so as to keep actual wheat down. To-day's sales on Call are reported as follows:

Morning Session: Buyer season—300 tons \$1.38; 100, \$1.37; 100, \$1.37. Afternoon Session: Buyer season—900 tons, \$1.37½; 100, \$1.37½ @ ctl.

(COMMUNICATED.)

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to Mar. 12, '87.	July 1, '87 to Mar. 10, '88.
Flour, qr. sks.	3,372,341	2,599,956
Wheat, cts.	10,489,598	6,736,016
Barley, cts.	1,934,840	1,870,360
Oats, cts.	115,466	142,096
Potatoes, sks.	698,702	879,491
Corn, sks.	73,391	109,714
Rye, sks.	19,658	15,826
Buckwheat, sks.	5,542	2,919
Beans, sks.	401,080	364,581
Bran, sks.	350,853	365,436
Hay, tons.	75,402	87,542
Salt, tons.	18,803	11,940
Wool, bls.	45,347	40,135
Hides, No.	76,951	74,805
Raisins, 20-lb boxes.	135,595	105,490
Quicksilver, flasks.	12,888	22,180
Hops, bls.	12,806	14,742

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to Mar. 12, '87.	July 1, '87 to Mar. 10, '88.
Flour, sks.	109,157	196,095
Wheat, cts.	449,977	808,515
Barley, cts.	5,149	75
Oats, cts.	285,502	177,385
Corn, cts.	78,946	12,590
Wool, bales.	9,063	7,370
Bran, sks.	27,918	51,298
Hops, bales.	754	373
Hides, No.	23,319	23,635
Rye, cts.	3,496	3,496
Potatoes, sks.	72,720	46,949

Cereals.

An English exchange says: The supply of the United Kingdom in the 171 days ended February 18, 1888, has been 103,584,925 bu. of wheat and flour, comprising 37,224,068 bu. from her own wheat production and 66,360,857 bu. from foreign wheat and flour imports. The supply in 171 days has been at the rate of 221,038,290 bu. per annum, against 212,000,000 bu. estimated annual consumption, making the supply 9,038,290 bu. in excess of the consumption. The wheat crop of the United Kingdom in 1887 is officially estimated at 76,224,940 bu., against 63,347,885 bu. in 1886, 79,635,769 bu. in 1885 and 82,066,964 bu. in 1884. The crop of 1887 is 12,877,055 bu. larger than the crop of 1886. The quantity of wheat and flour on passage for the United Kingdom on February 15, 1888, was 11,456,000 bu., against 17,584,000 bu. a year ago, or 6,128,000 less this year than last. The supply in 171 days has been 9,038,290 bu. more than the consumption, adding that much to the reserve stock. Of the 76,224,940 bu. crop of 1887, 37,224,068 bu. have already been delivered, leaving to be delivered 39,000,872 bu. Estimating the annual consumption at 212,000,000 bu., supplies in hand at 103,554,925 bu., remainder of crop to be delivered less seed 33,000,872 bu., on passage 11,456,000 bu., there remain to be purchased in foreign countries and shipped in the 254 days from February 18th to August 31, 1888, 63,988,203 bu. of wheat and flour to supplement supplies already provided for to meet consumptive requirement for the 12 months to end August 31, 1888. The normal stock is about 16,000,000 bu. flour and wheat taken together.

Gross English imports of wheat, 12 months ended December 31, 1887, were equal to 104,139,151 bu., and of wheat flour 18,056,545 cwt., equal to a wheat equivalent of 41,272,104 bu., making the total of flour and wheat together of 145,411,255 bu. The gross imports during 1886 were 47,404,344 cwt., wheat, equal to 88,444,108 bu. of wheat, and 14,739,232 cwt., equal to a wheat equivalent of 33,689,672 bu. of wheat, or a total of wheat and flour equal to 122,177,780 bu. of wheat. The gross imports of wheat in 1885 were 61,498,864 cwt., wheat, equal to 114,797,879 bu. of wheat, and 15,832,843 cwt. of flour, equivalent to 36,180,385 bu. of wheat, being a total wheat and flour of 150,978,264 bu. wheat.

English imports of Indian corn for the calendar year 1887 aggregated 62,246,802 bu., comprising 4,321,152 bu. from the Argentine Confederation, 1,139,074 bu. from Canada, 5860 bu. from Egypt, 33,000 bu. from France, 13,016 bu. from Germany, 1,047,390 bu. from Morocco, 21,830,874 bu. from Roumania, 11,072,176 bu. from Russia, 76,482 bu. from Turkey, 22,440,566 bu. from the United States and 267,412 bu. from other countries.

In its weekly review of the English wheat market, the London Miller, just to hand, says: If Southern Europe has been lately visited by great snowstorms, the English climate has had an exceptional spell of mildness in comparison with many fine winter districts. A high day and night mean temperature, with a soft, moist atmosphere, and on Saturday a copious rainfall, have given a stimulus to the grass and corn lands that was wanted. Generally, crop prospects remain favorable for wheat. Then, as in the past five months foreign and home supplies together have been at the rate of over 28,000,000 qrs. per annum, buyers are fairly warranted in believing future receipts will be quite adequate for all current demand, even if they fall off in their weekly scale for the next couple of months. Of over-supply there need not be much distrust, but many persons suppose that while the supply may be ample, that is not sufficient reason for wheat to remain at its present excessively low value. This latter may be attributed to demoralization of market feeling, which may become healthy again, and thus re-establish prices a little above existing insupportable lowness. Since harvest it is computed that farmers have already delivered, in five months, rather more than they can have to market in the next 7 months, and accordingly this fact ought to influence future business.

At present around every farmer local cheapness is spread; farmers as wheat sellers number less by half in the spring as compared with autumn season, and thus the area becomes contracted, with imports initiating prices instead of the farmers' sample. Nevertheless, what has been already done in the way of depreciating value really extends into the future. The quantity of wheat on passage to the Continent remains very small, in fact only about a fourth of what it was last year. From the Atlantic ports the weekly shipments to the Continent are now very small, and it is some weeks since California shipped anything with a Continental destination. Odessa is the only present shipper to the Continent of any importance. The Argentine Republic and India make, in racing parlance, a very bad second. Taking India as a whole, the wheat prospects appear to be rather under average to "fair" over 12,000,000 acres, and over average—or at least up to a full promise—over 14,000,000 acres.

Eastern advices are far from satisfactory so far as wheat crop prospects go, for the tenor of private advices are that the plant, taking all the States as a whole, is not up to last year at this date. Some reports say that the outlook now is that there is a great difference in the prospects for the late sown wheat, and this season this will cut a much more important figure in the crop than usual, for the reason that a very large percentage of the crop was sown late. The reports from Indiana, Michigan, Ohio and Illinois state that the late sown wheat is very backward and poor in condition; last year the above-named States yielded in round numbers 132,000,000 bushels of wheat, and they are the most important portion of the winter wheat belt.

Oregon advices report that the land on which the wheat plant was killed by the cold weather has been reseeded, but being sown late the seeding cannot be relied upon to give a full crop. At Portland, Oregon, the market is quoted as follows: "Wheat is very steady and quotable at \$1.22½ f. o. b. for Walla Walla, and \$1.27½ for Valley."

In this State crop advices continue of the most favorable character. The plant, as a rule, has not made so large a growth as usual at this season of the year, but the early sown in the majority of fields is well stood and has strong roots.

The wheat market for choice grades has ruled strong throughout the week, with offerings very light owing to the light supply in the State. Poor to fair wheat was weak, owing to buyers bidding down.

In barley the market is quiet, but there is a strong tone at the low prices notwithstanding buyers are bearing the market. Choice grades of brewing, Chevalier and feed are not offering freely, but poor to fair continue to press the market. The demand for feed keeps free. It is now believed that several counties which exported freely "overdid the business" and consequently will have to import before the season closes so as to meet the consumptive demand. The advance in overland freights has checked shipments of brewing to the East.

Oats are strong at a slight advance, due to the light supply in Oregon to draw from, the light stock here and a fair but steady consumptive call.

In corn, under free receipts the market is temporarily weak, but holders of choice are not pressing the market, as they hold to the opinion that better prices will obtain.

Free receipts of rye caused prices to shade off, but at the close the market has a steadier tone. Buckwheat is steady at quotations.

Feedstuff.

The market for ground feed has continued steady, with a good demand for ground barley, middlings and bran. Quotations are unchanged.

In hay, for the season deliveries are good. From all advices obtainable, it is quite certain that the supply of wheat and oats hay will be exhausted by the commencement of a new season, and as it is quite certain that grass will dry up soon in a number of sections, the consumption next season will be very large. The consumption now is very heavy.

Vegetables.

Frosts two nights the past week put garden truck back in the colder sections around the bay.

Free receipts of potatoes from Oregon and liberal receipts of Californian caused buyers to hold off and bid down, causing a lower range of values to obtain, as sellers, in order to effect sales and meet extra expenses, were compelled to accept the lower bids of buyers. New potatoes come in sparingly.

Onions fluctuated slightly the past week, the prices being governed by the receipts and demand.

Tomatoes are higher, owing to light receipts, as are cucumbers. Green peppers are in better supply, as is asparagus. The consumption of the latter is very heavy.

In cabbages and root vegetables, there is nothing new to report.

Fruits.

Dried fruits are in good demand in a jobbing way for shipping to points in Montana, Idaho, Nevada, Arizona and Colorado. Dried plums are about exhausted, and by the end of the season other varieties will be about cleaned up.

In raisins, there are no layers to be had, while choice loose are very scarce. Loose are stronger, with a slight advance obtainable.

It is now generally conceded that between the high price of tin, high price of lumber and the advance in overland freights, fruit-growers will be almost "skinned." The high price of tin will tell against the canned fruit industry, while the high price of lumber, about twice as high, owing to a lumber trust in this city controlling the market, will cause boxes to sell at about twice as much more than last year, which will tell against dried fruits, canned fruits and raisins, while the advance in freights is against everything.

Apples are slow, as the quality even of the choice is not good.

Common oranges are in liberal supply, and sell lower, but for choice, there being a good demand, the market holds strong. The call is both locally and shipping up North. Advices from the orange-growing sections report free shipments to the East.

Live-Stock.

The market for bullocks is easier, but not quotable lower. Offerings are free, with the quality generally good. In mutton sheep the market is weaker, with some concessions necessary to effect sales. The quality continues to improve. For milch cows there is a fair inquiry, but buyers are not disposed to bid up, and sellers are not willing to let go except at full asking price. In calves there is nothing new

to report. In horses there is a good demand for those of general utility, driving animals, matched teams and single-footers. Good-sized draft horses meet with ready sales, but small-sized and otherwise inferior are slow of sale.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed, and one-half from the price of grass-fed, that is, animals running at large).

HOGS—On foot, grain-fed, 6¼@6½c per lb.; dressed 9@10c per lb.; soft, 5¼@5½c per lb.; dressed, 7@10c per lb. Stock hogs, 3¼@5½c per lb. BEEF—Stall-fed, 8c per lb.; grass-fed, extra, 7½@—per lb.; first quality, 7c@—per lb.; second quality, 6½@—per lb.; third quality, 5@6c per lb.

VEAL—Choice, 12¼@15c per lb.; fair to good, 8@10c per lb.

MUTTON—Wethers, 9@10c per lb.; ewes, 9@9½c per lb.; lamb-spring, 15@17½c per lb.

Miscellaneous.

Poultry ruled strong and high throughout the week, owing to light receipts and a good demand.

Game held to last week's high prices, as the demand has been in excess of receipts.

Beans are very strong, held at full figures. The East imports very few choice, that now in stock being poor to fair.

Hops are without change. The peculiar manner in which brewers use adulterants has lessened the consumption. The stock here is irregular and generally poor.

In wools there is nothing doing, owing to poor assortments. Private advices report the finer grades of clothing and delaine at the East slightly higher and strong at the advance.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way.....	374,180	201,440
In port, disengaged.....	61,180	124,927
In port, engaged.....	32,504	16,370

Totals..... 467,864 342,737

To obtain the carrying capacity, add 60 per cent to the tonnage.

San Francisco, March 14, 1888.

Fruits and Vegetables

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, March 14, 1888.	
Apples, bx com.	50 @ 75
do choice.....	1 00 @ 1 75
Apricots, lb.....	— @ —
Blackberries, ch.	2 50 @ 5 00
Cantaloupes, cr.	— @ —
Cherries white bx.	— @ —
do black bx.....	— @ —
do Royal Ann.....	— @ —
Cherry plums.....	— @ —
Crabapples.....	— @ —
Cranberries.....	10 00 @ 12 00
Currants ch.....	— @ —
Gooseberries lb.....	— @ —
Figs, black bx.....	— @ —
do white bx.....	— @ —
Grapes, white.....	— @ —
do black.....	— @ —
do Rose Perle.....	— @ —
do Muscat.....	— @ —
do Tokays.....	— @ —
Isabel.....	— @ —
Wine, Zinfandel	— @ —
do Mission.....	— @ —
Limes, Mex.....	— @ —
do Cal. box.....	— @ —
Lemons, Cal. bx	1 00 @ 3 00
do Sicily, box.....	4 00 @ 5 00
do Australian.....	— @ —
Nectarines box.....	— @ —
Oranges, Com bx	1 25 @ 1 75
do choice.....	2 00 @ 3 00
do Navela.....	— @ —
choice.....	4 50 @ 6 00
do Com.....	3 00 @ 4 00
do Panama.....	— @ —
Peaches, bx.....	— @ —
Graefrorth, bx.....	— @ —
do choice.....	— @ —
Pears bx.....	— @ —
do Bartlett, bx.....	— @ —
Persimmons, bx.....	— @ —
Plums, lb.....	— @ —
Pomegranates, b.....	— @ —
Prunes lb.....	— @ —
Quinces bx.....	— @ —
Raspberries ch.....	— @ —
Strawberries ch.....	— @ —
Watermelons, 100.....	— @ —

RAISINS.	
Delmas Clus, fcy 3 25 @ 3 50	
Imperial Cabin	do, fancy..... 2 00 @ 2 25
Crown London	do Layers, fcy..... 1 80 @ 2 00
do Loose Muscatels	do Loose Muscatels, fancy 1 80 @ 2 00
do Loose Muscatels	do Loose Muscatels, 1 60 @ 1 75
Cal. Valencia	do Layers, 1 50 @ 1 61
do Sultan	do Sultan, 1 60 @ 1 75
Dried, sacks, lb.	5 @ 6
Fractions come 25, 50 and 75	cents higher for halves, quarters and eighths.

VEGETABLES.	
Artichokes, doz.	— @ —
Asparagus ½ lb.	8 @ 12½
do extra choice	15 @ 20
Okra, dry, lb.	15 @ 20
do green bx.....	— @ —
Peanuts, oil.....	2 00 @ 3
Peppers, dry lb.	8 @ 10
do green, lb.....	15 @ 25
Pumpkins ptot.	— @ —
Squash, Marrow	fat, 100..... 22 50 @ 23 00
do dumplings.....	— @ —
String beans lb.	— @ —
Tomatoes box.....	2 50 @ 3 00
do choice.....	— @ —
Turnips oil.....	1 00 @ 1 50
Beets, lb.....	— @ —
Cabbage, 100 lbs.	1 00 @ 1 25
Carrots, lb.....	30 @ 45
Eggplants, lb.....	— @ —
Garlic, lb.....	— @ —
Green Corn, cr.	— @ —
do sweet cr.....	— @ —
do large box.....	— @ —
Green Peas, lb.	10 @ 12½
10 Sweet Peas, lb.	— @ —
Lettuces, doz.	— @ —
Lima Beans lb.	— @ —
Mushrooms, lb.	10 @ 30
Rhubarb lb.	8 @ 12½
Cucumbers, doz	1 50 @ 3 10

DRIED FRUIT.	
Apples, sliced, lb	5 @ 6
do evaporated	8 @ 10
do quartered.....	11 @ 12
Apricots.....	8 @ 10
do evaporated	15 @ 17
Blackberries.....	12 @ 15
Orion.....	18 @ 25
Dates.....	9 @ 11
Figs, pressed.....	5 @ 6
Figs, loose.....	3 @ 4

BROOM CORN.	
South's per ton.....	60 @ 80 00
North's per ton.....	60 @ 80 00
CHOICEST.	
California.....	6 @ 7
German.....	7 @ 8

DAIRY PRODUCE, ETC.

do new process 28	50 @	—	Hare.....	1 25 @	1 75	—
Straw, bale.....	45 @	65	Venison.....	@	—	—
FLOUR.						
Extra, City Mills 4	00 @	4 35	Cal. Bacon.....	11 @	12 1/2	—
do Country Mills 3	75 @	4 00	Heavy, lb.....	12 @	—	—
Superfine.....	3 25 @	3 50	Medium.....	12 @	—	—
GRAIN, ETC.						
Barley, feed, cbl.	70 @	85	Light.....	12 1/2 @	—	—
do Brewing.....	95 @	1 15	Extra Light.....	13 @	—	—
Oatmeal.....	1 25 @	1 15	Lard.....	9 1/2 @	11	—
do Coast.....	95 @	1 15	Cal. Smoked Beef	11 1/2 @	12 1/2	—
Book wheat.....	1 75 @	2 25	Hams, Cal.....	12 1/2 @	14	—
Corn, White.....	1 35 @	1 30	do Eastern.....	14 @	15	—
do Yellow.....	1 27 1/2 @	1 30	SEEDS.			
Small Round.....	1 30 @	1 32 1/2	Alfalfa.....	8 1/2 @	9	—
Nebraska.....	1 20 @	—	Canary.....	3 1/2 @	4	—
Oats, milling.....	1 55 @	1 60	Olive red.....	11 @	12	—
Choice feed.....	1 45 @	1 47 1/2	White.....	20 @	22	—
do good.....	1 40 @	1 43 1/2	Cotton.....	20 @	—	—
do fair.....	1 30 @	1 33 1/2	Flaxseed.....	2 @	3	—
do black.....	1 30 @	1 40	Hemp.....	10 @	11	—
do Oregon.....	2 25 @	2 75	Italian Ryegrass	7 @	9	—
Rye.....	2 25 @	2 75	Perennial.....	7 @	9	—
Wheat, milling.....	1 40 @	—	Millet, German.....	5 @	6	—
Gilt edged.....	1 37 1/2 @	—	do Common.....	5 @	6	—
do Choice.....	1 35 @	—	Mustard, white.....	2 @	2 1/2	—
do fair to good 1	35 @	1 36 1/2	Brown.....	3 @	3 1/2	—
Shipping choice 1	35 @	1 36 1/2	Rape.....	14 @	2	—
do good.....	1 32 1/2 @	1 33 1/2	Ky. Blue Grass.....	15 @	17	—
do fair.....	1 30 @	1 31 1/2	24 quality.....	13 @	15	—
HIDES.						
Dry.....	12 1/2 @	13	Sweet V. Grass.....	7 1/2 @	8	—
Wet salted.....	5 1/2 @	6 1/2	Orchard.....	17 @	18	—
HONEY, ETC.						
Bee wax, lb.....	21 @	25	Red Top.....	9 @	10	—
Honey in comb.....	12 1/2 @	16	Hungarian.....	8 @	9	—
Honey in comb, fancy.....	16 @	19	Lawn.....	30 @	40	—
Extracted, light.....	6 1/2 @	7 1/2	Mesquit.....	8 @	9	—
do dark.....	5 1/2 @	6 1/2	Timothy.....	7 @	8	—
HOPS.						
Oregon.....	8 @	15	TALLOW.			
California.....	8 @	15	Crude, lb.....	2 @	4 1/2	—
ONIONS.						
Pickling.....	@	—	Refined.....	6 @	—	—
Red.....	@	—	WOOL, ETC.			
Silverskins.....	1 25 @	1 50	FALL—1887.			
Cut.....	25 @	75	Humboldt and.....	15 @	18 1/2	—
NUTS—JOBBER.						
Walnuts, Cal., lb.....	8 @	10	Mendocino.....	12 1/2 @	15	—
do Chile.....	8 @	—	Sacramento valley	15 @	18 1/2	—
Almonds, hdshl.....	5 @	7	Free Mountain.....	15 @	18 1/2	—
Soft shell.....	12 @	13	N'hern defective.....	@	—	—
			S Joaquin valley	10 @	14	—
			do mountain.....	12 @	17	—
			Oava's & F'th'l.....	12 @	17	—
			Oregon Eastern.....	14 @	20	—
			do valley.....	16 @	21	—
			Southern Coast.....	9 @	14	—

The Wool-Growers' Petition.

Blank forms of a petition to Congress on the subject of the wool tariff have been sent to this State for signatures by Hon. C. Delano, president of the National Wool-Growers' Association. The following is the heading of the petition:

To the Honorable the Senate and House of Representatives of the United States:

The undersigned citizens of the county of _____ and State of _____ respectfully petition your honorable body for speedy action on the subject of protection to the wool-growing and woolen manufacturing industries of this country. They represent that the changes made by the Act of Congress of March 3, 1883, reducing protection to these industries, have already resulted in great injury to the sheep-growing interest, as well as to the manufacturing interests, and, that if continued, must result in the destruction, to a very great extent, of the wool-growing industry in all parts of our country and also largely increase the price of mutton to the consumer. They represent that the number of sheep in the United States in 1883 was 49,237,291 (an increase of 15,453,691 since 1875), and which was reduced to 44,759,314 in 1887, showing a loss of 4,477,977 sheep in four years, while with proper protection the number, at the same ratio of increase, in 1887, would probably have been about 64,000,000. A further effect of this injurious legislation was an enormous increase in importation of foreign wool, both in unmanufactured and manufactured state, especially the latter, to the great loss of our domestic laboring classes, whether employed on farms or in workshops, and yielding an increase in revenue to the Government of about \$4,000,000 per annum at a time when it was not needed.

They therefore ask that the schedule of duties unanimously agreed upon by the representatives of the wool-growers and woolen manufacturers at Washington, on Jan. 14, 1888, may be enacted into a law at an early day, and, pending the passage of such bill, in accordance with the further action of said convention, we urgently request Congress to immediately pass a joint resolution correcting the present erroneous classification of worsteds, by directing that they be classified as woolen cloths.

Columbus Delano, Pres. National Wool-Growers' Association, Wm. Whitman, Pres. National Association of Woolen Manufacturers, E. A. Greene, Pres. Philadelphia Wool Merchants' Association, committee.

The above petition printed on sheets for signatures can be had by addressing J. H. Kirkpatrick, Stockton, Cal.

NOT SWAMP LANDS BUT MEADOW.—Congressman Hermann has submitted to the Secretary of the Interior a protest from a long list of settlers in the Silver Lake country, in Southeastern Oregon, enumerating numerous quarter section tracts of land which they assert are wrongly selected by the State with the consent of the Government agents as swamp land, which is not such in fact, but meadow land, and the most valuable in that valley, and that the moisture thereon is occasioned by brief periodical overflows, which in that dry climate is essential to the successful cultivation of crops, and they represent that the patenting of every tract of these lands expels an actual bona fide settler and taxpayer.

A. T. DEWEY. } Dewey & Co.'s Scientific Press Patent Agency { ESTABLISHED
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GEO. H. STRONG.

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D. N. & C. A. HAWLEY, General Agents,
Cor. Market, Sutter and Sansome Sts, San Francisco.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.		Eureka.		Red Bluff.		Sacramento.		S. Francisco.		Fresno.		S. L. Obispo.		Los Angeles.		San.	
	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.
Mar. 8-14.																		
Thursday.....	.00	40 Nw Cl.	.26	46 N Cl.	.24	54 NE Cl.	.T	56 SW Cy.	.07	53 W Cy.	1.02	52 W Cy.	.25	58 S Cy.	.84	58 E Ry.	.66	62 S Cy.
Friday.....	.00	44 SW Cl.	.00	48 N Cl.	.01	52 Nw Cl.	.00	50 Nw Cl.	.00	54 SE Cl.	.00	52 N Cl.	.00	52 W Cy.	.04	50 SW Cy.	.08	58 W Cy.
Saturday.....	.00	44 0 Cy.	.00	52 W Cl.	.00	56 W Cl.	.00	54 Nw Cl.	.00	53 Nw Cl.	.00	58 W Fr.	.00	55 W Cl.	.00	60 W Cl.	.00	56 Nw Cl.
Sunday.....	.30	46 SE Ry.	.01	60 S Ry.	.00	58 N Fr.	.00	56 Nw Cl.	.00	57 N Fr.	.00	60 S Cl.	.00	60 Nw Cl.	.00	70 W Cl.	.00	60 Nw Cl.
Monday.....	.54	64 S Cy.	.T	60 SW Fr.	.00	62 N Fr.	.00	61 Nw Cl.	.01	61 Nw Fr.	.00	66 S Cl.	.00	64 E Cy.	.00	74 NE Cl.	.00	70 N Fr.
Tuesday.....	.20	54 S Cy.	.40	54 SW Cy.	.03	60 SE Fr.	.20	60 SW Cy.	.15	57 SW Cy.	.00	68 Nw Cy.	.00	53 W Cy.	.00	70 SE Fr.	.00	62 Nw Fr.
Wednesday.....	.02	50 Nw Fr.	.00	50 N Cl.	.75	62 N Cl.	.00	60 Nw Cl.	.00	60 W Cl.	.01	54 Nw Cy.	.00	58 Nw Cl.	.00	69 SW Cy.	.00	60 W Cy.
Total.....	1.66		.67		1.03		.20		.22		.03		.25		.88		.74	

EXPLANATION.—C, for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature, wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING MARCH 6, 1888.

379,099.—ORE FEEDER—T. G. Cantrell, S. F.
379,004.—MOTOR—Cooley & Nason, Ft. Jones, Cal.

379,105.—ADVERTISING APPARATUS—A. Duboce, S. F.

379,171.—CANDLESTICK—H. E. Lewis, Gold Hill, Nev.

378,903.—CABLE RAILWAY—W. S. Phelps, S. F.
379,186.—REIN-GUARD FOR HARNESS—L. P. Tooley, Willows, Cal.

378,993.—LIFE FLOAT—H. H. Williams, Thomaston, Me.

379,191.—THRASHING MACHINE—A. J. Wise, Cottonwood, Cal.

15,259.—TRADEMARK—S. B. Murray, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Who Is It?

Who sent us a postal note from Middletown, Lake county, without sending his name?

Who did the same thing from Selma, Fresno county, some time ago?

It is impossible to give proper credits unless people will send their names with the remittance. Let all subscribers take notice.

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A portion of this Rancho, suitable for mixed farming or dairying, containing 1672 acres, will be offered for 30 days at \$35 an acre, one-third cash, balance in three years. Address J. C. HOAG, 312 Van Ness Avenue, San Francisco, or TYLER BEACH, San Jose.

Our Agents.

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JOHN G. H. LAMPADUS—S. L. Obispo Co.
G. W. INGALLS—Arizona Territory.
WM. WILKINSON—Merced Co.
A. F. JEWETT—Tulare Co.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
R. G. HUSTON—Montana Territory.
E. H. SCHAEFFLE—Calaveras and Sacramento Co.'s

THE inauguration of Horace Davis, as president of the University of California, will take place on March 23d.

STOCKHOLDERS' MEETING. GRANGERS' BUSINESS ASSOCIATION.

The Annual Meeting of the Stockholders of the Grangers' Business Association (a corporation) for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis street, San Francisco, California, at 10 o'clock A. M., Wednesday, April 11, 1888.

I. C. STEELE, President.
CHARLES WOOD, Secretary.

ORANGE CULTURE
A practical treatise by T. A. GAREY, giving the results of long experience in Southern California. 196 pages, cloth bound. Sent post-paid at reduced price of 75 cts. per copy by DEWEY & CO., Publishers, S. F.

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GOULD'S SPRAY PUMP

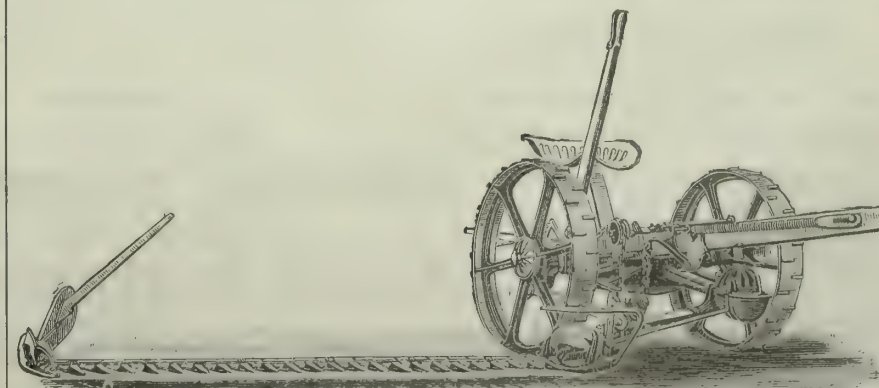
—WITH—
Bamboo Extension all fitted up,
Complete with Hose, Barrel
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This cut shows in faithful operation our Gould's Spray Pump; they are utilized for spraying Fruit Trees, Orange Groves, Vines, and in fact, all trees or shrubbery infested with the destructive insects which infest and do so much injury in Orchards, Vineyards, Orange Groves, etc. They are made entirely of brass, with the exception of frame and handle, and are strong and heavy; the valves being made entirely of metal, will not be affected by the corrosive solutions such as Caustic Soda, Acids, Lye, or any other solution that may be used to kill the destructive insect.

NOTICE.—Ongerth's Liquid Tree Protector is the best Spray for killing Red Scale, Black Scale, White Cushion Cottony Scale, San Jose Scale, or any other insect.

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4 ft 8 in., 6 ft. and 7 ft. cut.

The Very Best Mower in Use.

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EVERGREEN
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IN BOXES.A large stock of Italian and Weeping Cypress, Pines
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SEEDLESS OONSHIU.

See PACIFIC RURAL PRESS of January 21, 1888, page 53.

And other Japanese Oranges, Citrus Japonica, Chestnuts, Camphor, Persimmons, Bamboo,
Mulberry, Palms, Cycas Resoluta (large), Loquats, Ooji Tea Plants and Tea Seed, etc.

Send for Circulars, etc.

JAPANESE TREE IMPORTING CO.,

Office, 120 Sutter St., San Francisco.

Nursery, corner Van Ness Ave. and Union St. (Presidio cars from Market St. Ferry pass the door.)

The City of Sydney brings us 10,000 more Oonshuis, making
50,000 to date, and a Variety of other Trees, Etc.

460 ACRES.

INCORPORATED 1884.

CALIFORNIA NURSERY COMPANY
TREES FRUIT & SEMI-TROPICAL.
GRAPEVINES, SMALL FRUITS, ETC.
Largest Stock on the Pacific Coast!

SPECIALTIES:

PLUMS, PRUNES AND APRICOTS, ON MYROBOLAN STOCKS.

Facilities for Packing and Shipping to Distant Points are Unsurpassed.

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CALIFORNIA NURSERY CO., Niles, Cal.

JOHN ROCK, Manager.

160 ACRES NURSERY!

1,500,000 TREES AND VINES!

W. M. WILLIAMS & CO.'S

SEMI-TROPICAL AND GENERAL

NURSERIES
Fresno, Cal.We would respectfully call the attention of the public to our very complete list of Nursery
Stock for the ensuing season, consisting of a full line of all the Standard Varieties of

APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, NECTARINE, Etc., Etc.,

BESIDES A LARGE STOCK OF THE GENUINE

WHITE ADRIATIC FIG,

Guaranteed, and the NEW LYONS CLING PEACH. We have an immense stock of ROOTED
VINES, comprising 86 varieties. We carry also a full line of CITRUS FRUITS, well grown
and warranted free from all pests and true to label.

Send for Catalogue and address all correspondence to FRESNO, CAL., Box 175.

DUANE WESTCOTT.

Catalogues for 1888 Now Ready

F. B. WESTCOTT.

Westcott Brothers,

SEED MERCHANTS.

"WESTCOTT STANDARD,"

HARDY NORTHERN-GROWN SEEDS,

FROM MINNEAPOLIS, MINN.,

Will be a Special Brand of Seeds Guaranteed by us as Good and Reliable.

406 and 408 SANSOME STREET,

SAN FRANCISCO, CAL.

Correspondence solicited from Merchants, Farmers and others. All kinds of Seeds, Lawn Grass, Plants
and Bulbs always in Stock.

CHOICE ALFALFA SEED

In Lots to Suit.

Grangers' Business Association,

108 DAVIS STREET, SAN FRANCISCO.

ROSES, PALMS,
MAGNOLIAS,
Evergreen and Ornamental Trees,

12 VARIETIES OF OLIVES,

CAMPHOR TREES, CORK OAKS,

BAMBOOS, ETC.

Send for Catalogue.

John Rock,
San Jose, Cal.

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It will be to your advantage before ordering Seeds to
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Coast; it contains two beautiful COLORED PLATES,
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TABLE, FARM and FLOWER SEEDS, besides all the
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SAN JOSE, CAL.,

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Orange and Lemon Trees,

SHADE TREES,

Evergreen Shrubs, Roses,

FLOWERING PLANTS, Etc.

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Baker & Lombard Sts., San Francisco

F. LUDEMANN, Proprietor.

Offers Fruit and Ornamental Trees, Flowering Shrubs
in well cultivated plants and selected varieties.

ROSES.

Splendid collection of Teas and Everblooming sorts;
also Tree Roses from 3 to 4 feet high of the best sorts.
Camellias, Rhododendrons, Azaleas, Indica, Arancarias,
Variegated Hollies, Laurustinus and New Laurus in select
varieties.

OLIVES.

Picholine, Mission, Manzanilla, Learayanli Nevardillo
and other sorts.
Blackberries and other sorts of berries in good
varieties.

CYPRESS AND PINE TREES.

Monterey Cypress transplanted, 6 to 10 inches high, of
100 trees per box at \$2 per box or \$19 per 1000 (in larger
spaces); 8 to 12 inches, of 70 trees per box, at \$2 per box
or \$25 per 1000; or 12 to 15 inches, of 50 per box, at \$2
per box or \$35 per 1000. Seedlings 2 to 4 inches, slow
grown, at \$4 per 1000, or transplanted thick, 4 to 6
inches, at \$9 per 1000.Monterey Pines, 6 to 8 inches, of 100 trees per box, at
\$2.50 per box or \$ 2.50 per 1000. U. S. Stamp taken in
payment for sample boxes. All trees delivered in good
condition; free to shipping points; send all money
orders toBox 108. GEO. R. BAILEY,
Berkeley, Cal.

Rancho Chico Nursery,

Write for special bargains on the following trees:

5,000 Winter Nelis Pears,

8,000 Assorted Plums,

10,000 Eastern and California Black
Walnuts.JOHN BIDWELL,
Chico, Cal.

NEWCASTLE EARLY APRICOT,

Earliest in Cultivation.

HANDSOME AND GOOD FREESTONE.

Good Shipper and Productive.

All kind of Fruit Trees and Small Fruit Plants. Send
for Catalogue.O. M. SILVA & SON, Nurserymen,
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VITIS CALIFORNICA SEEDS.

Five pounds and over, \$1 per pound; less than five
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Vitis California Seedlings, Phylloxera Proof.

\$10 per 1000.

C. MOTTIER,

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Seeds, Plants, Etc.

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ALAMEDA MAMMOTH SUGAR CORN.

The best variety for market gardens. Very Low Prices. For sale by

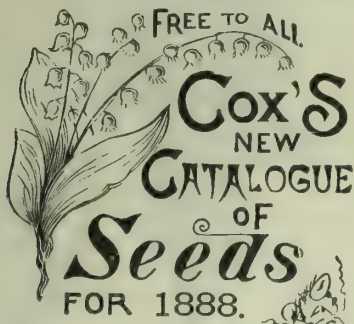
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LOGAN STRAWBERRY.

"Tested side by side with over 100 varieties, new and old; proved better than any in all respects. Berries very large and beautiful, and immensely productive. Twenty-three berries grown in 1886 weighed 31 ounces." By special arrangement with the originator, J. H. Haynes, Delphi, Indiana, we were furnished plants in advance of its dissemination, and have sole control of this magnificent variety for the Pacific Coast. Every Strawberry grower should give it a trial. Large selected plants, \$2 per dozen; \$12 per 100. Address,

C. M. SILVA & SON, LINCOLN, CAL.



Our New Catalogue for 1888, mailed free on application, contains description and price of Vegetable, Flower, Grass, Clover, Tree and Field Seeds; Australian Tree and Shrub Seeds; native California Tree and Flower Seeds, Fruit Trees, and many new novelties introduced in Europe and the United States.

THOS. A. COX & CO.,

411, 413, 415 Sansome St., San Francisco.

100,000

BARTLETT PEAR TREES.

The best kind for Shipping and Canning.

General assortment of all kinds of

FRUIT and ORNAMENTAL TREES,

Including

ORANGE and LEMON TREES.

Also, a large stock of imported Fruit Tree Seedlings, Apple Pear, Myrobalan Plum and Mazzard Cherry. Send for prices. Address,

J. T. BOGUE,

Marysville, Cal.

Formerly of Martinez, Cal.

E. J. BOWEN'S SEEDS.

ALFALFA,

ONION SETS,

GRASS,

VEGETABLE and CLOVER,

FLOWER SEEDS.

Large Illustrated Descriptive and Priced Seed Catalogue, containing valuable information for the Gardener, Farmer, and Family, mailed FREE to all applicants.

Address, E. J. BOWEN, Seed Merchant,

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ORANGE TREES.

Plant Trees Grown in Your Own Section. They do much better than others brought from a distance.

THE ALOHA NURSERIES,

Penryn, Placer Co., California,

Offers a large homegrown stock of Orange Trees, California Fan Palms and Pepper Trees, Limes, Dates, etc., at prices to suit the times.

FRED. C. MILES, Manager.

SPECIAL.

Bermuda Grass Seed,

\$2.50 per pound.

Thomas A. Cox & Co.,

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FOREST TREES

Catalpa Speciosa White Ash, European Larch, Pines, Spruces, Arbor Vitae, etc. Catalpa Speciosa Seed, Forest and Evergreen Seeds.

R. DOUGLAS & SON
Waukegan, Ill.

SEEDS

GIVEN AWAY! A package Mixed Flower Seeds (500 kinds), with PARK'S FLORAL GUIDE, all for 2 stamps. Every flower lover delighted. Tell all your friends. G. W. PARK, Fannettsburg, Pa. Be prompt. This offer appears but once more.

FANCHER CREEK NURSERY,

Fresno, Cal.,

OFFERS THIS SEASON FOR SALE A FINE ASSORTMENT OF

FRUIT & ORNAMENTAL TREES.

SPECIALTIES:

WHITE ADRIATIC FIG, SAN PEDRO FINEST TABLE FIG, JAPANESE FRUITS, OLIVES, POMEGRANATES, MULBERRIES, TEXAS UMBRELLA TREES and also a fine collection of PALMS, YUCCAS, ROSES, and OLEANDERS.

Send 10 cents in stamps for a sample of the dried and cured Adriatic Fig. Fall catalogue now ready. Address all letters to

F. ROEDING, Fresno, Cal.

STOCKTON NURSERY,

Established 1853.

ADRIATIC and SAN PEDRO FIGS.

French Walnuts, Home-grown Oranges and Rooted Grapevines.

Illustrated Catalogue and Price List for the season of 1887-88 free to all sending for them. All Trees, Vines, etc., guaranteed free from scale and other injurious pests. A certificate of inspection furnished to all. A full line of Fruit and Ornamental Trees, Shrubs, Vines and Hothouse Plants.

E. C. CLOWES, Proprietor

(Successor to W. B. WEST),

Stockton, Cal.

GRASS, CLOVER, VEGETABLE,

TREE AND FLOWER

SEEDS

FRESH STOCK.

LOW PRICES.

IN LOTS TO SUIT.

CATALOGUES ON APPLICATION.

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OUR MANUAL OF EVERYTHING FOR THE GARDEN



is this season the grandest ever issued, containing three colored plates and superb illustrations of everything that is new, useful and rare in Seeds and Plants, with plain directions of "How to grow them," by PETER HENDERSON. This Manual, which is a book of 140 pages, we mail to any address on receipt of 25 cents (in stamps.) To all so remitting 25 cents for the Manual we will, at the same time, send free by mail, in addition, their choice of any one of the following novelties, the price of either of which is 25 cents:—One packet of the new Green and Gold Watermelon, or one packet of new Succession Cabbage, or one packet of new Zebra Zinnia, or one packet of Butterfly Pansy, or one packet of new Mammoth Verbena, or one plant of the beautiful Moonflower, (see illustration), on the distinct understanding, however, that those ordering will state in what paper they saw this advertisement.

PETER HENDERSON & CO. 35 & 37 Cortlandt St., NEW YORK.



Warranted Seed.

I have founded my business on the belief that the public are anxious to get their seed directly from the grower. Raising a large proportion of my seed enables me to warrant its freshness and purity, as seen by my Vegetable and Flower Seed Catalogue for 1888, FREE for every son and daughter of Adam. It is liberally illustrated with engravings made directly from photographs of vegetables grown on my seed farms. Besides an immense variety of standard seed, you will find in it some valuable new vegetables not found in any other catalogue. As the original introducer of the Eclipse Beet, Burbank and Early Ohio Potatoes, Hubbard Squash, Deephead Cabbage, Cory Corn, and a score of other valuable vegetables, I invite the patronage of the public.

JAMES J. H. GREGORY, Marblehead, Mass.

PICHO LINE OLIVES

For Spring Planting.

FOR DESCRIPTION AND PRICE ADDRESS

LUTHER BURBANK, - Santa Rosa, Cal.

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NEW BOOKS ON GARDENING.

CELERY AND ITS CULTIVATION. W. W. Rawson, 25 Cents. SUCCESS IN MARKET GARDENING and Vegetable Growers' Manual by W. W. Rawson, Practical Market Gardener. Full of important information to market gardeners and household growers of vegetables in large or small quantities. 200 pages, fully illustrated, sent post-paid, by mail, upon receipt of \$1.00.

W. W. RAWSON & CO.

34 South Market Street, Boston, Mass.

B. K. BLISS & SONS, formerly of NEW YORK One of the most valuable and comprehensive works of the kind ever published; useful to the Farmer, Gardener and Florist. 166 pages, beautifully illustrated. A descriptive list of about 2,000 varieties, with directions for culture. A copy mailed to applicants enclosing ten cents.

To those who will mention the name of the paper in which they saw this advertisement, we will send with the Catalogue a 25-cent packet of Rawson's Choice Parsy Seed, or a 25-cent packet of Rawson's New Early Volunteer Cabbage, without charge.

B. K. Bliss, surviving partner of B. K. Bliss & Sons, now with us, and respectfully solicits the patronage of former customers.

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OF CALIFORNIA,
SAN FRANCISCO, CAL.



Authorized Capital, - - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$624,160.

Reserved Fund, \$40,000.

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CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up, and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the country are made promptly and proceeds remitted as directed.

DEPOSITS received. CERTIFICATES OF DEPOSIT issued payable on demand. BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER,

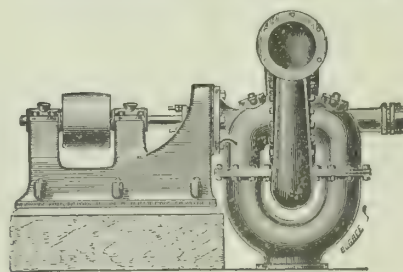
San Francisco, Jan. 1, 1888. Cashier and Manager.

H. P. GREGORY & CO.

SAN FRANCISCO, CAL.

SOLE AGENTS FOR

WEBBER'S CELEBRATED



IRRIGATING PUMPS.

WE ALSO CARRY IN STOCK THE LARGEST LINE OF

MACHINERY

In the UNITED STATES,

Consisting of Wood and Iron Working Machinery. Pumps of every description.

ENGINES AND BOILERS A SPECIALTY.

JOHN T. SULLIVAN,

Manufacturer of CUSTOM MADE

Boots and Shoes,

20 Fourth St., Pioneer Building.

FACTORY, N. E. Cor. Battery & Jackson, SAN FRANCISCO, CAL.

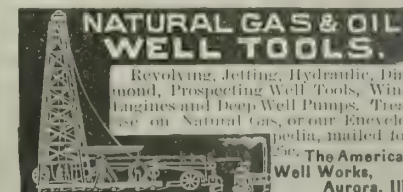
Full line of Ladies', Misses' and Children's Fine Shoes

AGENT FOR

Howell's Men's \$3.00 Shoes

In Button, Congress and Balmorals; Opera and French Toes. SEND FOR TRIAL PAIR.

CUSTOM HEAVY WORK A SPECIALTY.



NATURAL GAS & OIL WELL TOOLS.

Revolving, Jetting, Hydraulic, Dismount, Prospecting Well Tools, Wind Engines and Deep Well Pumps. Tools used on Natural Gas, or our Envelope, mailed for The American Well Works, Aurora, Ill.

SAN FRANCISCO:
Junction Market, Pine and
Davis Streets.

BAKER & HAMILTON.

SACRAMENTO:
Nos. 9, 11, 13, and 15
J Street.

MANUFACTORY: Benicia Agricultural Works, Benicia, Cal.

EASTERN OFFICE: 88 Wall Street, New York.

IMPORTERS, MANUFACTURERS, AND DEALERS IN

HARDWARE AND AGRICULTURAL IMPLEMENTS.

IMPROVED SPRAYING OUTFITS.

Farmers' Force and Spray
PUMPS.

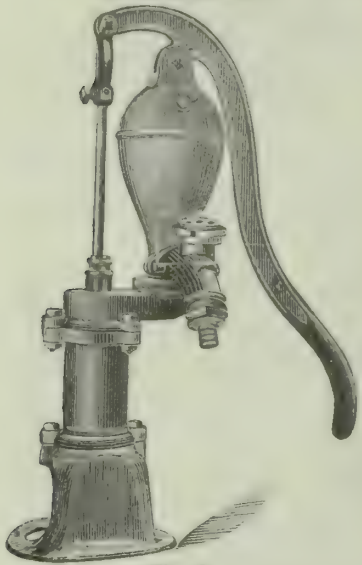


Fig. 3.

For Cistern and Household.

No. 2.—With 3-inch iron cylinder, fitted
for 1-inch hose. \$9 00
No. 2.—With brass cylinder, rod and gland \$12 00



Horticultural Spraying Pump.

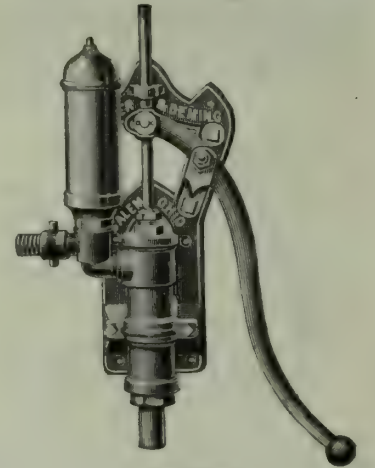


Fig. 559.

2-inch bore, 1-inch suction, 1/2-in. discharge \$15 00
Used by orchardists for spraying fruit trees
with insect exterminating liquids.

WRITE FOR SPECIAL CIRCULAR OF SPRAYING OUTFIT COMPLETE, WITH BARREL AND CART.

8 Feet Bamboo Spraying Extension, Fitted for Nozzle.....	\$3 00
Iron Cyclone Spraying Nozzle.....	2 00
Imperial New Imperial Spraying Nozzle.....	1 00
San Jose Strainers.....	1 00
Fig. 559 Horticultural Spraying Pump, complete, with Bamboo Extension Spray Nozzle, Strainer, 25 ft. 1/2-inch Discharge Hose, and 4 ft. 1-inch Suction Hose	\$25 00

H. C. SHAW PLOW WORKS,

IMPORTERS AND DEALERS IN

Agricultural Implements, Etc.

CALIFORNIA SOLE AGENTS

Moline Wagons,

Triumph Mowers and Reapers,

Chieftain Hand-Dump Rakes,

Golden Farmer Self-Dump Rakes,

Noyes Carts.

MANUFACTURERS AND SOLE OWNERS

Powell's Electric Hay Elevator,
SHAW PLOWS.

WE CARRY IN STOCK

BUGGIES and CARRIAGES

IN ALL STYLES AND PRICES.

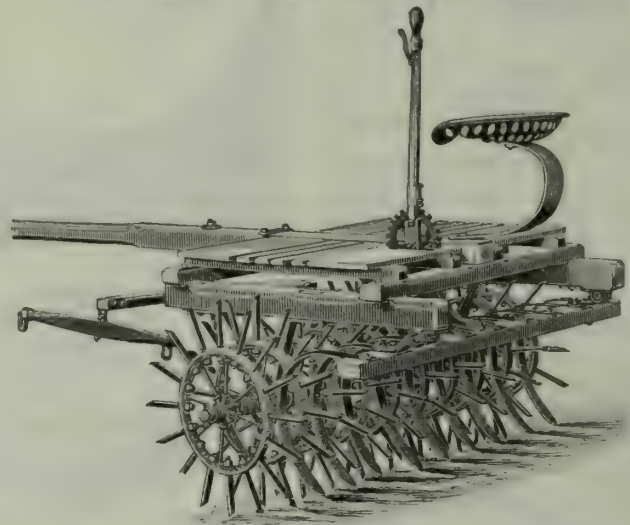
WRITE FOR NEW CATALOGUE.

Nos. 365 and 367 El Dorado St., Stockton, Cal.

THE LUBIN PULVERIZER

—MANUFACTURED BY—

P. P. MAST & CO., Springfield, Ohio.



The above cut shows Pulverizer with Pole reversed to bring Spring Teeth in the rear, and as used where ground is very rough and cloddy.

The Lubin Pulverizer, for Orchard, Vineyard or Field Cultivation, has no equal.

It thoroughly cultivates and pulverizes the soil to a depth of 6 inches, requiring less power and much less time than it can be done with any style or make of harrows and cultivators combined.

Built in two sizes; the 5-foot for two horses, and 8-foot for four horses. Can readily be changed to narrower machines if necessary.

BUCKEYE HOE AND SHOE GRAIN DRILLS,

BUCKEYE SPRING-TOOTH HARROWS AND SEEDERS,

BUCKEYE VINEYARD AND ORCHARD CULTIVATORS,

BUCKEYE SULKY RAKES, BUCKEYE LAWN MOWERS

BUCKEYE PUMPS, BEAN'S SPRAY PUMPS.

P. P. MAST & CO.,

PACIFIC COAST AGENTS,

No. 31 Market Street, San Francisco, Cal.

PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 21.

SAN FRANCISCO, SATURDAY, MARCH 24, 1888.

\$3 a Year, in Advance
SINGLE COPIES, 10 CTS.

A Fine Shorthorn Cow.

Readers of the *RURAL* who are informed on Shorthorn affairs know, of course, the famous Bow Park establishment at Brantford, Ontario, Canada. Though across the line, the management of Bow Park has always held a good place in the esteem and sympathy of American breeders, and sales from the herd have been widely distributed over the territory of the United States, even to the Pacific Coast. Only recently we saw an account of a shipment of a bull and two cows to Reed & Ladd of Portland, Oregon. The cattle of Bow Park have also occupied prominent places at American State Fairs and cattle shows. The present manager of the herd, Mr. John Hope, has done much to extend the fame of the cattle in this country.

The engraving on this page gives a portrait of an exceedingly handsome animal—Havering Nonpareil 2d, selected in England by Mr. Hope and imported by him in 1885. Havering Nonpareil 2d was calved June 30, 1883, bred by Mrs. McIntosh, Havering Park, Essex; sired by Baron Gwynne 2d (44,350), dam Telamacina 2d, by Telemachus 6th (35,725). In 1884 she won first prize at the Essex show at Saffron, Walden, and first at the Royal show at Shrewsbury. In 1885 she again won first prize at the Essex show, first at the Bath and West of England meeting at Brighton, and first at the Royal show at Preston. In 1886 she was the first prize three-year-old at Toronto and Guelph. She was exhibited at the Iowa and Minnesota State Fairs in September, 1887, as one of the show herd that was so successful and attracted so much attention. At the Iowa State Fair she was placed first, but at the Minnesota Fair, Lady Isabel, one year older, another of the same herd, was given the post of honor.

Havering Nonpareil 2d is a show cow of rare merit, as the above proves, and she is a breeder as well, having dropped a beautiful dark-roan bull calf since the fairs last fall.

CHEMIST WILEY testified before the Senate Committee on Agriculture Saturday that cotton-seed oil is nearly identical in properties with olive oil and equally wholesome.

Land-Grabbing for Wagon-Roads.

It seems rather wonderful with what tenacity grantees cling to land though they do none of the things in consideration of which grants are made. The behavior of railways in this respect is well known. It is one of the hardest undertakings of the Government to get back land, although not a rail has been laid over an aided line within the specified time, or long afterward. Now it seems that grants made

which the President submits, with the recommendation that it may become a law, and with the earnest hope that the opportunity thus presented, to demonstrate a sincere desire to preserve the public domain for settlers, and to frustrate unlawful attempts to appropriate the same, may not be neglected.

IRRIGATION IN NEW MEXICO.—The West Side Canal Company, organized at Albuquerque last week, purposes to bring water on a quarter

The Experiment Stations.

The report of Prof. Hilgard to the Board of Regents concerning the establishment of outlying culture stations is understood to have been generally approved by the board. The report was printed in full in last week's *RURAL*. We understand that the equipment of the stations will proceed as rapidly as advisable after the conditions of donation are complied with. The first station to be formally accepted

is that in Amador county, which lies about midway north and south of the foothill belt, which extends from Fresno to Tehama county. Prof. Hilgard visited the locality last week and selected a location about four miles east of Jackson. The piece of land lies in such a way that it includes slate, granite and gravelly portions, and growths can thus be easily tested on these different soils. The work of cleaning, fencing and plowing the ground will be at once commenced, and the necessary building will be erected as soon as the lumber can be got on the ground.

The Amador people, headed by Senator Caminetti, take great interest in the establishment of the station in their county. They have not hitherto shared in

the distribution of public institutions, and they propose to make this one a credit to the county and to the State, as far as generous provisions for it will go. They propose to erect a shapely building which will be visible from long distances. The water will be abundant and everything will favor growth.

Other parts of the State are now in correspondence with Prof. Hilgard, and it is likely that announcement of final acceptance of other stations will not be long delayed.

BEEF FOR FRANCE.—The Denver Cattle Trust has just closed a contract with the French Government to supply the French army with 150,000 head of beef cattle annually. The cattle will be all range stock. The price has not been made public. Shipments will be made as soon as possible to Chicago, where it is understood they will be slaughtered.

SEVERE storms and destructive freshets have been experienced this week in the northern and eastern portions of Germany.



IMPORTED SHORTHORN COW HAVERING NONPAREIL 2d.

for wagon-roads are much the same. It is telegraphed from Washington that the President has sent a communication to Congress with a great deal of testimony relating to grants of land to the State of Oregon for the construction of wagon-roads. The presentation of the facts by the Secretary, the President says, is the result of an examination which has developed the most unblushing frauds upon the Government, and which, if remaining unchallenged, will divert several hundred thousand acres of land from the public domain and from the reach of honest settlers to those who have attempted to pervert and prostitute the beneficent designs of the Government. The Government sought, by the promise of a generous donation of land, to promote the building of wagon-roads for public convenience, and for the purpose of encouraging settlement upon the public lands. The roads have not yet been built, and yet an attempt is made to claim the lands under a title which depends for its validity entirely upon the construction of these roads. A bill accompanies the communication,

of a million acres which are now practically useless. The canal, whose route has already been surveyed, will be nearly 150 miles in length; starting at the Indian village of San Felipe, following the Rio Grande on the west side of Albuquerque, re-emptying into the river a few miles below Socorro. The directors and officers are among the wealthiest men of the Territory. Judge C. H. Gildersleeve is president; Col. Thomas Smith, vice-president; Col. J. F. Chaves, secretary and treasurer, and P. A. Simpson, general manager.

SHORTHORNS IN NEVADA.—The *Reno Gazette* mentions that E. W. Crutcher of Paradise valley has sold to the Jordan Valley Cattle Co. 18 head of pedigreed Shorthorn cows, which will be placed on the breeding farm of the company in Eden Valley.

THE Yosemite Stage and Turnpike Company has shipped the first installment of 60 head of horses which it recently purchased for the Yosemite passenger traffic.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

"California a Cheat and a Snare."

EDITORS PRESS:—I am in receipt of a private letter from the editor of a leading and popular rural paper published in Illinois, declining to publish a letter I had sent him written in the full flush of my advent into this glorious State, in which I had drawn the truth very mildly, or in other words, I had given the facts exactly as my eyes had seen them, and had not searched for big crops, products, or big stories of any kind. He says:

"We cannot publish your article for the reason that we do not take any stock in the California boom. We believe that no country on earth was ever so much overpraised, and that the bottom will fall out of the boom speedily, and that Eastern men who now go there to engage in farming or fruit-growing will greatly miss it. For this reason alone we could not publish your letter, which praises the country in such extravagant style."

Such was the reply to my kindly letter to an old friend, whose paper I had written many a column for. He is an elderly gentleman, who is well-nigh worn out with work and the fierce climate of Chicago. I had advised him to close out and come here and pass the rest of his days in comfort, but I see from his reply that he does not even believe in this climate as a sanitarium. I answer him as follows:

Dear Friend: Yours of the 12th inst. at hand. I had gathered from your former letter that both yourself and your publisher were down on this State. Now I tell you candidly and positively that you are entirely and completely mistaken. I wrote back so as to have you fully express yourself. This is actually a grand, glorious State. Not because I am here and have fallen in love with it, but simply because it is.

It is true that there are many silly, very silly booms in the State. The few are being cruelly swindled by them, but it is their own fault if they put their trust wholly in the designing, irresponsible land swindler, when there are scores of Boards of Trade and reputable real estate agents to direct them, without charge, where to get good lands in the best of locations and at the lowest prices.

Every word I wrote about this country is the truth, and not overdrawn in the least. I wrote you very kindly, feeling that it was the place for you. For I have seen hundreds of people that were worn out by the fierce climate of the East, who had become a burden to themselves and friends, who have been here for years enjoying health, strength and comfort. Since coming here myself, and you will know I was a confirmed invalid in Illinois, I have gained 15 pounds in weight and greatly in strength and vigor, eat three hearty meals every day and sleep like a log every night, whereas I can hardly recollect a good night's sleep before for 20 years. An Illinois neighbor of mine came here ten weeks ago with an invalid wife and three weakly children; they are now all rosy and hearty. I could give many other examples of the same kind.

As for the crops of the country, the closest scrutiny of the publications of the Boards of Trade and the reputable land agents fail to show me anything overdrawn. And it is a fact that I can produce actual sales from the books of fruit farms and plantations that exceed anything of the kind published.

But, of course, this is not here nor there; if you want nothing about this State for publication, that is your privilege. I can readily find an excuse for your feeling. It was impossible for me to believe the reports of crops grown here, but let us consider. Crops in Illinois have at best only four months in which to grow. During half of that time it is too hot for most crops to do their best. Here they have eight months of most perfect growing weather, neither too hot nor too cold, with soils as rich and deep as soils can be. Then give these crops the one other prime necessity, plenty of water every day and hour of that growing season of eight or nine months—when we consider these facts, then, and not until then, can we believe in such crops as we find reported.

Take Gen. Bidwell's ranch at Chico, for instance, of 30,000 acres, where everything is done and managed in the most perfect manner. Let a man go there this spring and put down everything as weighed and sold, scarcely one man East would believe that the sum total had been grown on the land at the end of the season. One day in June on that ranch would prove to you that even Californians can tell the truth.

The Sacramento valley is 130 miles long and 60 miles wide, with perhaps 20 miles more on either side of foothills, splendid for fruit-growing, with perhaps two thirds of its entire area as good as Gen. Bidwell's ranch, and nearly every acre of this vast area will give these great crops without irrigation.

Then we have the great San Joaquin valley to the south, much larger, that will for the most part beat this with irrigation, and for that purpose water can be had in plenty at a reasonable cost for nearly every portion of it, making crops certain every year. Besides, there are thousands of smaller valleys just as good as these, with millions of acres of foothills left for fruit and mountains for free pasture.

D. B. WIER.

415 Montgomery Street, S. F.

THE APIARY.

California Bee-Farming.

Throughout Southern California, for a distance of 300 miles, the Coast Range of mountains is spotted with little canyons upon whose sides may be found a hundred varieties of wild flowers. Here and there rises an occasional live-oak or a clump of low-growing pines. The body of this living carpet, covering the acclivity of the Temescal range, the San Jacinto mountains and the lower edges of the Sierra Madres, is composed of all the colors of the rainbow and varies with the months and seasons, while heaps of gray old boulders, jutting clumps of sandstone and granite, and masses of chaparral, "grease-wood and mesquite, with their neutral tints, give the eye relief from the too brilliant color surrounding them.

These canyons are the sources of the water supply for the valley vineyards and orchards, and are the homes of the bee-masters of a land literally flowing with honey. The irrepressible conflict between fruit-grower and apiarist has ended in the latter fleeing to the mountains, taking the little busy bees to gather the nectar from the delicious mountain flowers. The orchardist charged that the bees punctured the ripening fruit with their lancet tongues, and while the bee-master knew this to be an error, he had no choice but to go among the hills where fruit-growing is not yet a leading industry.

Bee-farming in California bears little resemblance to the same industry elsewhere, on account of the novel difference in the seasons. Instead of making provision for long and cold winters the bees are able here to gather nectar from New Year's Day to Christmas, and the bee-master takes out honey during eight months of the year. During January, February and March the orange and lemon trees of the valley orchards and the wild acacia and eucalyptus (Australian blue-gum) are all in bloom and furnish a fair quantity of nectar, but the larger part of this is consumed by the bees, and it is not the custom to take this from the hives. The so-called "orange-blossom honey" sometimes seen on the market is not made from orange-blossom nectar at all, and is so labeled with intent to deceive.

Early in February the native sheep grass, alfalfa, furnishes an abundance of bloom which makes a good honey of amber color, but not so good as that made from the black sage which blossoms later in the same month. This sage grows in the lowest valleys and on the side of the mountain ranges in all parts of California, and is the best plant for bees because its nectar gives them heart and vitality at a season when they most need it. The honey made from it is of a fine color and strong body.

Early in June appears the best of all honey-producing plants—the white and silver sages. No flower in the world produces a clearer, white, pure nectar than California silver sage. Eastern white clover and basewood (American linden) are splendid honey-producers, but both are inferior to the silver sage in making an article of delicious flavor, good body, and clear as pure water. These sages bloom usually during the entire month of June, and then comes the wild buckwheat, which has a blossom resembling the cultivated plant, and furnishes a honey of good quality and rich amber color.

Early in July the wild alfalfa appears, and soon after the wild sumac opens its large clusters of creamy-white flowers, and both are exceedingly rich in a delicious nectar. The wild mignonette is in bloom during the same period, and the bees never seem to tire of hovering over its perfumed flowers during their short period of bloom.

The golden-rod throws up its brilliant yellow flower spikes in July and August, and continues in blossom until Christmas. It is similar to the plant of the same name growing in the Eastern States, and is one of the most valuable of California's long list of honey-producing plants.

The list includes nearly 200 plants, but many of them bloom for only a short period, every fortnight showing a new combination of colors on the hillsides. The nectar gathered from all the different flowers is not separated by the bee-master. The aim is only to keep the light, silver sage honey apart from that of darker color made earlier in the season from the alfalfa and black sage, and afterward again from the amber honey of the wild buckwheat, sumac and golden-rod.

The process of preventing the mixing of the honey by the bees is very simple, the bee-master watching the season of the different flavors and taking the honey from the combs as the season progresses.

In February, "swarming" begins in this warm climate, and continues until August. This is simply the old queen leaving the hive with her bees to the younger brood and queen hatched during the few months previous. When the young bees are old enough to take care of themselves, and the old queen finds she has a rival, she leaves the hive followed by all of her colony and alights on any low-growing bush or other object that may be near. The bees cluster around her in a mass, and the bee-master, on the alert for "swarms," removes the hive just vacated to a new stand, takes another hive, previously filled by him with empty comb frames, but having a partly filled comb of unsealed honey in the center, and places this on

the old stand. The simplest method then of removing the "swarm" to the new hive is to sprinkle their wings lightly with water, so they cannot fly, shake them gently off their resting-place into a large-mouthed vessel, cover with a cloth, carry them to the new hive and empty them all in. Finding their queen with them and plenty of empty worker-comb, the bees will nearly always accept their new quarters and go to work.

If there are two young queens in the hive just located, as sometimes happens, one of them must be removed or the bees will kill one and possibly both.

The commonest form of handling honey now is to produce what is known as strained honey, though it is really not strained at all. The old method of crushing the comb and then pressing the mixture through a sieve and cloth to remove impurities and particles of wax, has been abandoned. An extractor is now in use, consisting ordinarily of a sheet-iron tank the size of a half-barrel. In this are six or eight light iron frames, so arranged that each will hold a comb of honey and attached to a common center. This is operated by a handle in the same fashion as a coffee-mill is turned, and the swift motion of the wire frames throws the honey out of the cells by centrifugal force against the inner sides of the extractor, whence it runs to the bottom and is drawn off by a faucet.

The comb frames used are not all of the same size. When comb honey is wanted for the market a small frame is used, one holding about a pound of honey being preferred. When it is intended to extract the honey a long frame is used, as this can be handled just as easily as one holding much less honey.

The ingenuity of man has not yet devised an artificial comb that the bee will fill, though a piece of wax is always fastened to the new frame to be filled with comb honey, thus assisting the bees in starting. As more time is spent by the bees in making the comb than in filling it, there is great economy in extracting the honey, for the same comb can be refilled every 10 days by a strong colony during the best blooming season, and it will last for many years.

California liquid honey, as it leaves the bee-master, is always pure. Sugar, glucose, and all other possible adulterations cost more per pound than the pure honey is worth on the ranch.

During a single year California will send to market more than 2,000,000 pounds of honey, and much of this goes to Europe. It returns to the apiarist from 2½ to 3 cents a pound for liquid honey, and from 7 to 8 cents a pound for comb honey. These prices seem very low, but the capital and labor invested are relatively small. A good swarm of bees, including the hive, can be bought for \$6 to \$8, and in a good season a single swarm of bees will make from 500 to 700 pounds of liquid honey. This is worth \$12 to \$15, and a single apiary often contains 200 stands of bees.

Thirty years ago a swarm of bees could be sold in Southern California for \$100, and good comb honey was retailed at one dollar a pound in Los Angeles.

Very much of the work on a bee ranch can be done by a smart boy or girl, and would include extracting the honey, filling the cans, putting on labels, cutting comb honey for placing in glass jars, making the frames and putting comb foundation on the frames, and much other light work of this character; but the watchful eye and steady hand of the bee-master or bee mistress would be necessary in hiving the swarms, in looking for foul brood and moths, and in examining into the condition of the worker bees and drones.—Fred L. Allen, in *Riverside Press*.

THE VETERINARIAN.

Veterinary Association.

The California State Veterinary Medical Association, whose organization we noted four weeks ago, held a meeting in this city the 13th instant, at the office of the *Breeder and Sportsman*, President Bowhill in the chair.

Drs. McCallum, Maseo, Woodruff, Carpenter, Spencer, and Obrock were admitted to membership.

Dr. Carpenter was elected secretary of the society, and empowered to have the constitution and by-laws printed in pamphlet form.

President Bowhill delivered his inaugural address, from the *Chronicle's* report of which we add some extracts. After referring to the magnitude of the horse and cattle interests of California, he said that there is a lack of protection against contagious or infectious disease, the situation being all the more critical from the fact that the State is overrun with a class of quacks, who plunder the ranchers and scout the scientific methods of qualified practitioners as untenable theories.

He dwelt for some time on the duties and responsibilities of a veterinary surgeon and the principles of equity that should exist among members of the profession.

"If people only knew and realized the sad havoc caused in communities and families by the communication of disease from animals to man, they would not rest until the present deplorable insanitary condition is remedied. This city stands in need of stringent inspection, more especially after the late disclosures of diseased animals being slaughtered for human food. I have myself seen the carcass of a cow

on which tubercles were adherent to the pleura costalis, hanging up dressed at Butchertown, and on inquiry found this animal was an old dairy cow. Is this not a disgrace, more especially as the communicability of tuberculosis from man to animals has been proved beyond a doubt? Now, many a mother has fed her child on milk supplied by a tuberculous cow, resulting in the infant's untimely death, and being the origin of tuberculosis in many a young man or woman.

"The insidiousness of this disease makes it difficult to arouse people to its danger. The milk supply is often tested by public analysis and police inspectors to prevent the adulteration by water, but no effort is made to prove the absence of disease germs in the nutrient fluid which forms the chief diet of infants and invalids."

Milk-consumers, the speaker said, should, in the absence of scientific inspection, refuse to use milk from a cow with a cough, particularly of a chronic nature. Whenever the inspection of animals at the slaughtering-places is not properly carried out by competent persons, both in the living animals immediately before slaughtering and the carcass and internal organs at the time of killing, a percentage of tuberculosis is to be met with which would arouse the most apathetic were it to be known. Hence it is necessary not only that the cattle supplying the milk be free from disease, but that there be no possibility of disease germs (typhoid and scarlet fever particularly) having access to the milk or milk-pans, or water with which it is diluted. This can only be done by inspection of the dairy and its surroundings. Healthy milk should be perfectly opaque, white in color, without deposit or peculiar smell or taste, and should not alter in appearance when boiled.

In conclusion President Bowhill argued that cow-sheds and milk-utensils should be kept scrupulously clean, and that cows should be kept from drinking stagnant or drainage water. He hoped in the near future to see a veterinary college established on the coast, in order that the standard of the profession might be raised and present evils abolished.

POULTRY YARD.

Setting a Hen.

How many little things enter into this subject to make it a success! At least, how many points will be seen by one who has had the charge of hens for a number of years! And the longer one watches the old hen going (yes, in a quiet way) about her family duties, the more one can learn how much there is in an egg shell, and of how much will come out of it with proper care and handling. As it is not so much the fact of the old hen being broody as it is what she brings to maturity, it brings three periods of time before us to deal with, or prepare for a successful hatch: What are they?

1st. The preparatory stage, or the time before the old hen is ready to devote her time to rearing a family. Too many think this period of too little account, and they pay dear for their thoughts. But let us see what is or may be done beforehand to help in a good hatch:

First, what kind of stock shall be bred from? With that point decided, then, are they in every way in good condition to produce fertile eggs for incubation? To produce eggs for incubation with the best outlook for fertility, the hens should be fully over the molt, in good health (never use a sick bird for breeding), neither too fat nor too lean; good feed in the shape of some grain, meat and green feed in moderate quantities, bones and oyster shells crushed; hens, as far as possible, two or three years old, and if pullets are wanted, put with every 10 to 15 hens a young rooster, say from 10 to 15 months old, making some allowance for the different breeds, but get good, vigorous stock if you expect strong chicks.

Have a place fixed already for Mrs. Biddy when she has the fever, for she has a natural fever when she wants to set. Have a nest by itself, where other hens will not trouble her. Have a box set on the ground with two or three inches of sand or light loam filled in, and rounded out in the center just enough to bring the eggs together. Have several of the boxes ready, and while at the business get some little coops for the little chicks; it is so much better to be all ready than a little behind. Get the lice killed off for good.

It will be well to remember at this time that as the early broods are the most profitable ones reared in the whole year, they will need some special care, and I find that one great help is to have a large place where, in the cold or during the storms, the little coops can be taken in, and the little chicks find plenty of room to run and scratch, where it is both warm and dry. It is a thing one must provide, but use your own judgment according to your circumstances. Perhaps I have said a good deal in this first part, but so much depends on a good start that perhaps I will be pardoned.

Now for the second stage: When you find a hen sitting on the nest at night, make up your mind that there is business ahead. Let her have her own way for 24 hours, then, after dark, move her in as quiet a way as possible to the nest in which you wish her to continue her labors; have a few glass eggs in the nest; then try her for a day or two, and if she proves true, then give her the eggs to work with. Now, the egg question is one on which doctors

disagree, so I will give my experience for what it is worth, knowing that what I now state is worth a fair trial. Discard all eggs that seem to have very thin shells and that have any irregularities in the shell, for they will not hatch; waste no time with them. Pick out good, medium-sized eggs, neither the largest nor the small ones. You may pick, if you want to, the round points for pullets and the long ones for roosters, but you will hit it only by chance in that way; this rule of our grandmothers is not conclusive. I have given a better rule to go by for pullets; reverse it for roosters; for both, divide the difference, or have breeding stock about of an age. I can fix the quantity of sex in chicks better by my breeding stock than I can by picking eggs. True, every egg will not bring either pullet or rooster, but the main part will be what I aim for. If you wish eggs of any color, pick such for setting. Pick eggs from your best layers or from your most desirable birds.

The number of eggs for a hen is a great point to decide. Thirteen eggs are sold for a setting, but there are only a few hens that will cover them and bring out a good per cent of chicks. You can put more under a fat hen than a moderately fat one; more under a hen in warm weather than in cool. For a medium-sized hen in cool weather I often put but nine eggs; if the weather is warm I venture 11 average-sized eggs. One must learn by experience how to judge for him or herself in this matter. I find it a good plan to put the eggs under the hen at or about dusk. If other hens are liable to trouble her, cover the box so that the other hens will keep out, but don't keep all the air out, too; and then see that she is let out every day to get feed, water and a dust bath. Feed corn, with now and then some other feed for a change; remember she must keep up heat by what she eats to do good work. After ten days, look through the eggs toward a strong light and take out all that look clear like a fresh egg; they will not hatch, and are better out than in the nest.

Set two hens at the same time, if possible, so that if the hatch proves poor you can give the chicks to one hen and reset the other. If the hatch of the two amounts to over 15 chicks, divide the chicks between them and let them go, for the chicks will be the quicker to mature with only a few in the brood; it is a fact that a hen will force a brood of six to eight chicks to their own scratching much quicker than if she has 15 or more to scratch for.

Have nest-boxes on the ground for moisture's sake, if the weather is dry and warm. For the last two weeks sprinkle the eggs twice a week; sprinkle the last time two days before the eggs are due to hatch—it will help the little fellows to get out.

Perhaps I might say, before I go to the third point, that it is well to put eggs under a hen as near of an age as possible, as eggs laid within the same 48 hours will hatch nearly at the same time; the older and newer eggs will only make the more difference in the hatch, the older eggs taking longer to come out of the shell. Another thing, have the old hen come off the day before the chicks are due, and see that she has a good square meal of corn, so that she will stay with the nest well while hatching; it may make a difference of several chicks in the brood.

Now let us try the third point: Don't trouble the little chicks for at least 24 hours; better wait 36 hours before taking them off the nest. I like to take off the brood in the morning (say 8 or 9 o'clock), after the morning dew or damp is out of the way, and then watch how the little fellows will revel in the sunshine and fresh-turned earth. If you wish to feed the little chicks hard-boiled eggs as soon as in the coop, see that the old hen first has her crop filled with corn, or the hen will eat her fill of egg and the chicks get little of it, or else it will take several eggs for that first feed. I think that it may do to feed egg for a first feed or two, and then once or twice a week afterward for perhaps two months as a change in diet, but as a regular food it is neither natural nor good; in fact, it is almost sure death; it will bring on bowel troubles, which are fatal, and of which so many complain of having with young chicks.

I have found that little chicks will do better on dry feed than wet; in fact, I make much of grain, corn excluded almost wholly. I often crack in a coffee-mill some wheat for the first few days, now and then a feed of oatmeal. Oftentimes it is a good thing to buy broken crackers at the stores or at a cracker factory; it costs but little, and when broken fine the crumbs are relished by the chicks. Stale bread or corn bread, broken fine, is also good and often quite handy to feed. Milk in almost any shape, and at any time in the life of a chick, is good feed and drink.

Keep water before chicks at all times in clean shallow dishes; they are not fools enough to drink when there is no need of it.

Study to have variety in the food. A neck-bone fresh from the butcher's, laid before them to pick at, will help them grow, and afford you much fun if you will but watch them a few moments, which it is well to do.

Now, in conclusion: Don't forget to keep the coops clean and sweet, and dishes for food and water; cleanliness means much in the whole race of chickenhood. I have not said all that could be said by any means, for it can be made a long story. I have said enough to start with, and it is well to learn by experience, and while I have spun rather a long lot of it, I don't wish to rob any one of the privilege of learning for themselves.—E. C. Clapp, Pasadena, Cal., in the Cackler.

THE DAIRY.

The Oregon Dairymen.

The quarterly meeting of the North Pacific Dairy Association was held in Portland March 9th. The president, T. Paulsen (whom many of our readers, no doubt, met during his visit to this State as a member of the American Horticultural Society), delivered the following address:

Once more those of us who believe in the value and importance of co-operation and the benefits arising to any industry from organized efforts to further the interest that its members are engaged in, have met here to discuss and consult concerning the dairy interest and matters connected therewith. It is to be regretted that so few of our dairy farmers seem to understand the importance of discussion and consultation among men who are engaged in the same vocation, and the many advantages to be derived therefrom.

Co-operation in Dairying.

Since the beginning of the year seven new creameries have been started and three cheese factories. The average price of butter produced in the creameries now in operation on the North Pacific Coast has been at least five cents above the price realized for good farm butter, and fully as high as the best fancy (private) dairy butter. This of itself would return to the farmer who joins in a co-operative dairy enterprise the cost of manufacture, which in no instance has been over five cents per pound, and in some instances even less. There are now 15 creameries in actual operation. Many farmers seem to think that it would be preferable to sell the milk or cream instead of running the creamery on a co-operative basis, but they forget that all that any man can pay is what the butter and cheese will bring, less the cost of manufacture, and that when a man buys the milk or cream he is sure to fix the price thereof so as to allow him a liberal margin; and even should he promise more than a subsequent market price of butter or cheese would justify, he would soon be compelled to close up his factory. This has occurred in many instances in Illinois and Iowa, and entailed on the patrons of the creamery so closed not only a loss for money due for milk or cream furnished, but also great expense and trouble in disposing of milk suddenly left on their hands without proper means to manufacture it into butter or cheese themselves.

Therefore the best plan for the dairy farmers is, without doubt, to co-operate in establishing their creamery and then hire a competent manager at a stated price per pound of product, disposing of the butter or cheese themselves, or through an authorized agent.

Two creameries in our county (Washington) are carried on this way, and have, as far as I know, given complete satisfaction.

While visiting California I was informed by Mr. Wickson of San Francisco that no co-operative creamery exists in that State, but that the large dairy farms there are usually carried on by renters. Many of these dairies are quite large, and run several cream separators. During the season that we have to feed heavily they rely principally on grass as food for their cows.

Improvement in Dairy Stock.

The importance of grading up our dairy stock should be duly considered by our farmers. There is no excuse for raising scrub stock any more, as the price of a full-bred male is now so reasonable that even a comparatively poor man can procure one. The bull is half the herd, and a full-bred animal of some established dairy breed should be used. Do not be tempted to use a grade bull; he may look just as well, but the power to transmit and impress his good qualities to his offspring is far inferior to a full-bred animal. Using a grade bull, when a full-bred can be procured, is false economy.

Food for Dairy Cows.

Last summer was an exceptionally dry one, and many of our dairy farmers suffered serious loss from scarcity of green and succulent food for their cows. This is wholly unnecessary, for by proper management a full supply of green food can be obtained from spring till late in the fall. Rye sowed early in rich ground, clover and sweet corn, can be so planted and managed as to secure plenty of green food until November at least.

In the East, especially in Wisconsin, the preservation of food by means of the silo has many advocates, and judging from reports made by prominent dairy farmers at the Wisconsin farm institutes, seems to be very profitable to the Wisconsin dairy farmer. Whether it would be as profitable to us is of course a question that cannot be answered positively, but I believe it would be well to make experiments on a small scale in this direction. This should really be done by our State Agricultural college, but unfortunately this has been so far only an agricultural college in name, and will always remain so unless the laws governing its management are radically changed.

Silos.

The silo and its adaptability to the wants of the North Pacific Coast dairy farmer was taken under consideration and elicited remarks and suggestions from several members present, Mr. Knapp declaring his intention to build a silo this summer.

Mr. Hogan called the attention of the society

to the fact that quite often butter not belonging to the owner of marked butter boxes was sold out of such boxes, and asked what should be done to prevent such fraud. The general opinion seemed to be that it would be necessary to register a brand to obtain redress.

Adulteration of food of all kinds was discussed at some length, and especially attention was called to the gross adulteration of lard.

The meeting then adjourned to meet again on Friday, June 8th.

THE STABLE.

Entries for the State Fair.

The following entries in the trotting-colt sweepstakes for the State Fair races of 1888 were received by Secretary Smith. The entries for these stakes closed on Thursday, March 15th:

For the Two-Year-Old Stake.

H. L. Hoppin & Bro., Yolo, name b. c. General Logan, by Alex. Button, dam Winnie. Charles Thornquest, Oakland, names b. c. Cupid, by Sidney, dam Venus.

John P. Sweeney, Carson City, names b. c. Gibber, by Gibraltar, dam Sooner, by Breckenridge.

G. H. Miller, Stockton, names b. f. Jessie May, by Elector, dam Phoebe Drew.

Palo Alto Stock Farm names br. f. Palo Alto Belle, by Electioneer, dam Beautiful Bells; same, br. f. Norlaine, by Norval, dam Elaine, by Mess Duroc; same, b. f. Sunol, by Electioneer, dam Waxana, by General Benton; same, b. c. Coin, by Electioneer, dam Cecil, by General Benton; same, br. c. Comoner, by Electioneer, dam Mollie Cobb, by General Benton.

L. U. Shippee, Stockton, names b. c. Kilrain, by Hawthorne, dam by Whipple's Hambletonian; same, b. c. Motion, by Electioneer, dam by Clark's Chief.

C. R. Hoppin, Yolo, names b. f. Yola, by Cubit, dam Molly, by Dietz St. Clair.

William Corbitt, San Mateo, names br. f. —, by Le Grand, dam by Arthurton.

Pleasanton Stock Farm Company, Pleasanton, names b. f. Margaret S., by Director, dam May Day.

Z. E. Simmons, Lexington, Ky., names b. f. Fortuna, by Florida, dam by George Wilkes.

For the Three-Year Old and Under Stake.

Chas. David, San Francisco, names g. c. Collector, by Director, dam Kit.

Jas. Dustin, Oakland, names br. c. Balkan, by Mambrino Wilkes, dam Fanny Fern, by Jack Hawkins.

Palo Alto Stock Farm, names ch. f. Anselma, by Ansel, dam Elaine, by Mess Duroc; same, b. c. Pomona, by Electioneer, dam Pearl, by George Lancaster; same, b. c. Lowell, by Electioneer, dam Lady Lowell, by Shultz's St. Clair; same, b. c. Cedric, by Electioneer, dam Cecil, by General Benton; same, ch. f. Arodi, by Piedmont, dam Arol, by Electioneer; same, b. c. Monteith, by Electioneer, dam Mamie C., by imp. Hercules.

L. U. Shippee, Stockton, names b. c. Moses S., by Hawthorne, dam by McCracken's Black Hawk; same, b. f. Ida May, by Hawthorne, dam by Chieftain.

W. C. Harlan, Winters, names br. f. Dinah, by Prompter, dam Sproul Mare, by The Moor.

James P. Kerr, San Francisco, names b. c. Memo, by Sidney, dam Flirt.

G. W. Woodward, Woodland, names blk. c. Burbank S., by Alex. Button, dam Emogene, by Todhunter's Mambrino.

Wm. Corbitt, San Mateo, names b. g. Grandee, by LeGrand, dam Womice, by Arthurton. Westwood Stock Farm, Visalia, names ch. c. Strathway, by Steinway, dam Countess, by Whipple's Hambletonian.

J. A. Goldsmith, Oakland, names Sister V., by Sidney, dam Nettie Lambert.

Pleasanton Stock Farm Co., Pleasanton, names blk. c. Direct, by Director, dam Echora.

For the Four-Year-Old and Under Stake.

G. H. Miller, Stockton, names b. f. Flora M., by Elector, dam Phoebe Drew.

Palo Alto Stock Farm names b. f. Maiden, by Electioneer, dam May Queen, by Alexander's Norman; same, b. f. Elia, by Electioneer, dam Lady Ellen, by Carr's Mambrino; same, ch. c. Carlisle, by Piedmont, dam Idabell, by Ryedyk's Hambletonian; same, dk. br. c. Electricity, by Electioneer, dam Midnight, by Pilot, Jr.; same, b. f. Meta, by Piedmont, dam Mecca, by Mohawk Chief; same, b. c. Wellington, by Electioneer, dam Waxana, by General Benton.

L. U. Shippee, Stockton, names b. c. John C. Shelly, by Hawthorne, dam by Morgan's Rattler; same, b. c. Moses S. (3), by Hawthorne, dam by McCracken's Black Hawk.

Wm. Corbitt, San Mateo, names b. f. Gina Wilkes, by Guy Wilkes, dam Blanche, by Arthurton.

Valensin Stock Farm, Pleasanton, names blk. c. Shamrock by Buccaneer, dam Fernleaf, by Flaxtail.

DURING 1887 there were shipped to Europe through Canada ports 36,000 mutton sheep. There went from the ports of the United States a hundred thousand, either alive or as dressed meat. The Australian mutton does not command the price in London that does the American.

ARBORICULTURE.

Dr. Gally Writes About Trees, Etc.

EDITORS PRESS:—In your paper of March 10, 1888, I read about how to destroy trees by cutting them down at the right time of season. Then I turn over a few pages (same paper) and read how not to destroy trees, but how to plant and preserve trees.

Your earlier correspondent tells when to cut "evergreen oaks and other evergreens," and I guess he's mostly all right except as to redwoods or sequoia, and I've seen them cut at all seasons and hacked at and hewed at, but never saw one cut to death "so he no more sprout."

It all depends, with the leaf-shedders, somewhat on soil and altitude or nature of climate. Now, in Pajaro valley, which is cool and moist, I have seen willow, sycamore, cottonwood, boxelder, maple and "grub" oak die out from being cut down flat with the ground, or to two or three inches below the surface, in late July or early August. But even that will depend somewhat on the kind of season; if in a late, cold, wet season, you cut a little later.

But, this being a lumber-making county, you can see here where the redwoods have been cut at all seasons and the woods fired often, yet still the redwood, unlike "the aspiring blood of Lancaster," will not sink into the ground. I can at most any time (when it is not awfully dark) exhibit on part of my own land places where the redwoods have been cut down, and abused nearly every way, from 30 years ago, yet the young trees, among the solid black old stumps, are 40 to 50 feet high and 2 to 2½ feet in diameter and now growing rapidly.

This fact (this redwood fact) ought to hint to your subsequent correspondent how some of our California forest is to be replanted and perpetuated.

I do not know much about the *pinus* family, or the *cupressus*, but I think that the *conifera* do not like to live under the knife, saw or ax, though they will bear the pruning shears in moderation.

Taking the whole subject into consideration (which I have not now time to do), I rather agree with your earlier correspondent that our Pacific Coast trees (in California at least) are not easily subdued; but when that correspondent, with somewhat of the curving caper of a jocular bovine, drags into his humorous conclusion my friend the "sapsucker," then I am ready to ask "wha' fo'?" For if a "sapsucker"—which is a *picus*—(not a *Piker*) has ever killed a tree by sucking the sap of that tree I want the person who so states to prove it; but I will not take "heard say" for proof. I say that I never yet saw the bird they call the sapsucker which could *suck*; he may *drink* the water out of knot-holes or other holes in trees. I have followed that bird from tree to tree in my orchard—and I have been an orchardist for about 14 years—and examined the little pits he picks out of the external bark; but those are like little funnels lying down and cannot, therefore, hold fluid.

Now, any one who has ever cut a crack, or bored a hole, in a sugar maple tree, in sap-flowing season, knows that that wound is going weep—to weep.

"Tears, idle tears! I know not what they mean—Tears from the depths of some divine despair."

Yet who ever saw the little woodpecker pits in a tree's bark weeping? The hummingbird is the only dry-land fowl that I ever suspected of sucking, and I'll bet a box of good apples, out of the coming crop, that little hummy can't suck.

Here is the way to settle this sapsucker *sucking*: Let your correspondent kill one of the birds and cut off its head and send that head—fresh—to the editor of the RURAL PRESS with a carefully prepared, written explanation, pointing out how the sapsucker sucks through the little half-holes in the bark of a tree.

Mind, I never say nor said that birds don't drink; no more do I say that your correspondent is a sucker, though I suppose he drinks.

J. W. GALLY.

Pajaro Township, Santa Cruz Co.

[We don't like to get ourselves between the upper and nether millstone on this sapsucker controversy, but we must state that as we understand it the ornithologists do not allow the claim that the "sapsucker" actually "sucks," but admit that he has an appetite for the inner bark or new wood or alburnum or something of that sort; and he has a short bill fit to scoop out some of that. On the other hand, the numerous woodpeckers have long, sharp bills, and they go for grubs. It was argued at San Jose that no grub-struck woodpecker goes along tapping holes regularly and making a cribbage-board of the bark, but he strikes where, by clairvoyancy or otherwise, he knows there is a grub. The point seems to rest upon the form of the bill and not upon any strictly haustellate orifice, so to speak. Will Dr. Gally admit the amended complaint?—Eds. PRESS.]

COLORADO sent 170,000 head of beef cattle to market in 1887, and the average price paid was \$3.15 per 100 pounds.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

[Official Notice.]

Important Meeting of Officers.

All Lecturers and Deputies are requested to meet at the office of the Secretary of the State Grange, 220 Market street, San Francisco, at 10 A. M. Friday, April 6th, together with all officers and Past Masters of the State Grange, and also all other members—brothers and sisters—who feel an interest in the object of the meeting.

This meeting is for a conference concerning matters relating to the Good of the Order, and to devise plans for the future work and progress of the Grange.

Among other subjects to be presented is that of arranging the time of holding picnics in different parts of the State, in such order as to make it convenient for State officers and other speakers and Patrons to visit the same in rotation.

It is hoped that every officer will respond promptly and come prepared with suggestions for the Good of the Order and fully prepared for effective work.

W. L. OVERHISER, Master.
A. T. DEWEY, Secretary.

Subsidies.

H. F. B. contributes to the *Antioch Ledger* a striking article upon subsidies, the greater portion of which we herewith lay before our readers:

The period in the history of our country, in which the General Government distributes, with a lavish prodigality, immense tracts of public lands to aid the construction of numerous railroad corporations, guarantees their bonds, establishes their credit and really gives to them in fee simple lands sufficient to pay for the roads after completion—has undoubtedly passed, never to return, and counties, cities and towns, by a wise provision of the new Constitution, are expressly prohibited from bonding themselves or voting any subsidy to any railroad or any other corporation.

The period, however, for subsidizing every enterprise, from a railroad to a match factory, has not yet passed, but is as vigorously advocated by the general public and newspapers as was the government policy in this respect 25 years ago. The only difference between then and now is that, instead of the General Government, State, county, city or town making the donations, it now comes out of the individual pockets of the public-spirited citizens, who are anxious for the prosperity of the place in which they live and are interested.

If a man is possessed of property worth ordinarily \$10,000, and said property is liable to be doubled in value by the advent of a railroad, he is expected to divide the increase with the railroad company in the way of a donation, or if no subsidy is raised by said gentleman and others, the railroad will try to pass him by and kill his town.

Such has been the history of all railroads, in this State especially, and a shining example of such policy is to be seen any day only a mile south of our town. Although the public is expected to donate liberally to such enterprises because they happen to be fortunate or unfortunate enough to be in a location where the road enhances their possessions, I have yet to hear of a railroad company that ever shared any of its profits among the public who donated their coin to assist in building it. On the contrary, the companies are granted privileges and immunities, by our laws, which are denied private citizens, and to such an extent that at times our county government and even schools have suffered for want of tax moneys due from and unpaid by these corporations, because they see fit not to pay until they are ready.

The entire principle of subsidy is wrong. Business enterprises of all descriptions (including railroads) are entered into by the projectors and proprietors for the express purpose of making money. If there is no expectation of money-making it never will be entered into, but because this business naturally helps some other business is no good reason that it should be subsidized. Manufacturing industries in the whole country are protected from foreign competition—by a wise tariff which protects equally each individual, corporation or firm. That is the only subsidy they should receive. This bidding between the town of A and the town of B for a woolen-mill, or something else, only gives just so much money to some company that does not need it so much as the ones that put it up, and results in the longest pole getting the persimmon—the town that raises the most money to make a rich firm richer gets the mill. This state of

affairs has come to be so common that anywhere and everywhere any enterprise that will add anything to the place in which it locates expects and gets a subsidy. There is but one way to remedy this evil (for evil it is, and nearly as great as existed 25 years ago, only in a different form), which is for the public to require every tub to stand on its own bottom. Subsidize nobody and then no one would expect it. If a business will not pay without donations, it is not a good business to engage in; and if it will not pay, it should neither expect nor receive any other than the good-will, patronage, and business support of the community.

Versus Lottery.

A. H. Bradford, Brownsville, Tenn., in *American Grange Bulletin* says: It is a good sign to see at least one man ready to combat through Congress this giant robber. It has always been with a degree of shame, not to say disgust, to the solid old South, especially those known as Confederates, to see the names of Generals Beauregard and Early paraded at the head of this huge robbing machine, and how unpleasant it is to think of the thousands of weak-minded men who have been ruined by the names of these once honored generals! Alas! how have the mighty fallen!

The bill of Mr. Blount to prevent newspapers containing lottery advertisements from circulating through the mail is a move in the right direction, and it is to be hoped, in the interest of Christianity and the good of the country, this bill will become a law. There will be a fearful fight over it. Like a great cancer this thing has fastened itself on the vitals of society throughout the land, and it cannot be eradicated without a great effort on the part of the law-and-order portion of the law-making representatives. The advertisement sheets have reaped a great harvest from the fields of the ignorant.

No one of moral sense regards the Louisiana lottery otherwise than as a stupendous swindling concern. But the cry will go up from a thousand tongues that censorship is being established over the press by Congress. If, however, this be censorship, we already have it in the law against the transmission of obscene literature through the mails. If the public service is not allowed to be polluted by becoming carrier of vulgar productions, why not decline its prostitution to the uses of gambling concerns? It should be a fixed principle that the Government can never be accessory to the corrupting of its citizens.

It is estimated the bill will be reported on favorably, but will not pass. Now why not everybody opposed to the gambling concern go to work and make our representatives feel that it is their sacred duty to God and man to pass this law, and enable us to at least get in one good lick on the head of the reptile which has so long poisoned the public mind and drained the pockets of the people?

The Debris Cases.

The following paragraph, widely published of late in California papers, has elicited some inquiry as to what it means:

Master in Chancery Houghton has filed the final decree of the Court in the famous North Bloomfield hydraulic mining cases. The bill is dismissed as to the Conley & Gowell Consolidated Mining Co., and the North Bloomfield Mining Co., the Milton Mining & Water Co., the Omega Gold Mining and Ditch Co., the Excelsior Water and Mining Co. B. D. Chadwick, O. D. Campbell, Hannah Conley and Orrin Gowell are perpetually enjoined from dumping mining debris into Yuba river or any of its branches, particularly Deer creek, Sucker Flat creek, Humburg creek and Scotchman creek. They are also forbidden to let others use their water for hydraulic mining, and are ordered to pay \$3107.78. They may at any time petition the Court for a modification of this order.

The *Sutter Farmer* gives an explanation, as follows: This was the original Woodruff-Bloomfield suit, and the decision, of which the above is the substance, was rendered January 7, 1884, by Judge Sawyer in the U. S. Circuit Court for California, the decree being filed a few days after. By the practice of that Court the defendants had two years wherein to appeal to the U. S. Supreme Court. This they did, but not until within a very few days of the expiration of the two years. The appeal papers then went on to Washington, and after the expiration of another year, more or less, the appellant (defendant) withdrew the appeal without trial. The effect of this withdrawal upon the decision was a complete affirmation of the Circuit Court's decision, and accepted as the law and equity by the defendant as well as the plaintiff. Now, after the usual red tape, the papers are returned to the records where they originated, and enrolled as the final act in the drama. The money spoken of, \$3107.78 as costs, was returned to the plaintiff on or about June 16,

1884. No petition, according to the last sentence in the above decree, has been filed, the companies preferring to be their own judge as to the efficacy of their restraining works. It will be seen that continuance, without such a showing to the Court, is in contempt.

"Please Keep it Dark."

Senator Del Valle and his brother, who own the Camulos Rancho, lately shipped a fine lot of oranges and lemons to the California and Oregon Produce Co., 427 Front street, S. F., expecting to realize therefrom about \$600. Instead of this, they received a money-order for \$10.20 and a letter stating that the fruit had been received in bad condition, and brought only \$90, out of which \$60.50 freight, \$12 drayage, \$7.20 commission and ten cents for the money-order had been deducted. It so happened, however, that the Del Valles' suspicions were aroused; detectives Harris and Metzler were employed, and it was soon learned that the whole transaction was a fraud. The C. & O. P. Co. alias W. Solomon & Co. alias A. Zech & Co. were found to have sold the fruit for good prices and pocketed pretty much all the money. Upon discovery they weakened and promptly paid over \$627.10, begging that the thing be kept quiet. The *Ventura Republican* complies with their request by publishing an account of the transaction, and thereby renders the honest producer a service which every lover of square dealing must approve, and every one who has an opportunity should emulate with cheerful promptness.

How Am I Benefitted?

[By Sister S. J. KIDDER, Sec'y of Watsonville Grange.]

A question similar to this was brought up at our last meeting, and on thinking it over it occurred to me that really the question was of vital importance.

It seemed to me that if we derive no benefit, if we are not in some way doing some good or making some improvement, then we are committing a great error, and the sooner we realize this fact the better for all.

Surely in this age of facilities for improvement, we have no time to spend unprofitably.

Perhaps a brief synopsis of the opportunities which we might improve would remind us that they are sometimes passed unheeded.

If we take cognizance of our ritualistic work, and take to ourselves the beautiful lessons contained therein, we have—unconsciously it may be—acquired some good and possibly some knowledge.

In the office of lecturer we have been highly favored. We have listened to many communications the simple reading of which, to say nothing of the sentiments which are always educational, will amply repay the listener for the short time spent here.

The public exercises and entertainments in which we have participated cannot fail to add their share to our improvement. Every paragraph which we commit, every sentence which we write, and every impression which we receive, is a part of our education.

All who have had the privilege of attending the State Grange affirm that the knowledge and pleasure gained in that week amply repays them for the year's work and expense of the Subordinate Grange.

And what shall I say of the social element? To me this is the crowning feature, for here we meet twice in a month those whom we might not otherwise see in a year's time. Here we have formed acquaintances and doubt not lifelong friendships, which otherwise would never have been formed. If we are deriving no benefit from any of these opportunities, the question arises, "What shall we do? Where lies the difficulty? Are we doing ourselves and each other justice to engage in that which brings no reward?"

Let us ponder it well and seek a reply to the question, "How am I benefitted?"

DEBATING THE TARIFF.—W. S. Cunningham of Lemoore and A. F. Jewett of Hanford lately met before a Tulare county literary society in discussing the question: "Resolved, that the tariff tax works an injustice to the farmer, mechanic and laborer of America." A local paper says that Mr. Cunningham, the acknowledged champion of free trade in those parts, spoke for one hour in the affirmative to a very attentive house, and Mr. Jewett followed for one-half hour only, in defense of the protective system, and was loudly applauded.

THE Worthy Master has appointed Sister A. P. Roache Deputy Lecturer for Santa Cruz county and Bro. T. T. Hooper for Solano county.

San Jose Grange.

EDITORS PRESS:—Our Grange met in open session on the 17th inst. to discuss "Prison Discipline and Prison Labor," Bro. H. Pomeroy presiding. Bros. Webb and Alley read papers upon the three general systems of prison discipline, which are now engaging the attention of the world, viz.: The congregate silent system, the separate-cell system, and the system of progressive classification. Bros. Woodhams, Coats and Gilman of Minneapolis and Sisters Watkins and Sheldon took part in the discussion; all favoring progressive, reformatory and humanitarian measures to ameliorate the condition of prison life, and with a view of restoring the convict to a condition that shall make him a useful citizen when he shall have been released. Sisters Woodhams and Jennie Sanders read two fine poems upon subjects pertinent to the matter under discussion. Mrs. Eitel favored the meeting with a song.

San Jose, March 17.

YELLAFO.

Worthy Master Overhiser received a letter from San Jose Grange some time since asking him to visit them and give them a little waking up. The Worthy Master has appointed April 7th as the day of meeting, hoping to induce quite a number of Patrons, who will be in San Francisco attending the meeting of the Deputies to accompany him. They can leave San Francisco on the morning train so as to meet with the Grange at 10 A. M. The Worthy Master says he has notified them he will be there in the morning, and expects to have with him Bros. Johnston, Coulter, Chandler, Steele, Flint, Frisbie, Dewey, Davis, and as many others as he can prevail upon to go. He says: "Now, brothers, let us give them a rousing stirring up."

Sacramento Grange.

EDITORS PRESS:—Last Saturday was field day in Sacramento Grange. The subject for discussion was:

Resolved, That we are opposed to any reduction of the tariff that will affect (detrimentally) the industries of California.

Some of our members thought that, as it pertained to the tariff, it became a political question and not a proper subject for discussion in the Grange. Some evidently thought there was not politics enough in it, judging by the tenor of the amendment that was offered, while others were heartily in favor of discussing the resolution as read. And as the several brothers eloquently presented their views, and persistently maintained them, we had a lively and interesting meeting. It was just such a discussion as demonstrated the need of the Grange for the education and experience that the farmers require, and it was gratifying to notice the advanced position of some of our young brothers, with amendments to questions, points of order, and parliamentary law; thus showing that they are not only competent workmen in the field, but are able debaters in the forum.

GEO. W. HACK.

THE LUXURY OF "LAWING."—Two old farmers in Alameda county, whose lands adjoin, have lately been indulging in a lawsuit. A. made a road on his land which dammed a waterway and caused water to back on to B's land. Each refused to build a culvert under the road, which would allow the water to pass away freely. The cost of the culvert would have been about \$20, but each thought it was the other's duty to construct it, and both being stubborn, they brought their grievances into court. But one day in court settled it with them. The farmers became weary. The prospect was that the trial would last for several days to come. When the testimony was being taken the court was informed that the farmers had enough law and had agreed upon a settlement. The case was accordingly dismissed, with the understanding that each shall pay his own costs, and B. shall dig a ditch under the roadway on A's land, and the latter shall construct the culvert and keep it in repair. It has just cost these farmers \$250 each to settle a \$20 matter in a court of justice.

THE REGULAR MEETING of the Executive Committee of the California State Grange is hereby called to meet at the office of the Secretary, 220 Market street, San Francisco, at one P. M. on Friday, the 6th day of April, for the transaction of such business as may be brought before it relating to the interests of the Order.

WORTHY MASTER OVERHISER wishes us to state that all members of the Order—both brothers and sisters—are cordially invited to be present at the meeting of deputies April 6th. See the official notice in another column, which has been changed this week, and made to read as all would liked to have it.

FORESTRY.

Destruction of Forest Trees by Fungi.

Dr. H. W. Harkness, in a communication to the *Placer Republican*, says:

I am sorry to see that one of your most beautiful forest trees, *Pinus Sabiniana*, is dying in great numbers. This destruction is due to the presence of a fungus which is acting upon the branches and thus depriving the terminal twigs and foliage of necessary sustenance. The fungus is a *peridermium*, and was first found by J. P. Moore and myself about 10 years since upon the *Pinus ponderosa*, or pitch pine, in the vicinity of Colfax. In that locality only the young trees are attacked, and but few are killed. I might also note the fact that the *Pinus insignis* of Monterey is suffering from a like cause. Mr. Moore named the fungus *Peridermium Harknessii*. This specific name "Harknessii," however, will not in my opinion be retained, as it differs but slightly, if at all, from *Peridermium pinii* of the Eastern States and Europe.

The fungus first makes its appearance beneath the cambium layer of the bark, gradually separating it from the wood. New material, however, is deposited to replace that which has been destroyed, and in this manner the unsightly bulbous expansions of the branches are formed. The branch so attacked soon dies from a lack of nutriment, and if a considerable number of branches suffer, the tree dies from a like cause. At the present time, March 12th, the fungus is beginning to make its presence felt. By making a section of one of the affected branches at the point where a bursa appears, the fungus may be detected between the bark and the wood as a layer of bright orange color. In a short period this permeates the bark and appears upon the surface, where it may be readily detected by its color. As before stated, the constant irritation of the fungus leads to an abnormal thickening of the cambium with an increase of wood at the point of attack.

While this parasite has been under my observation for several years, it is only within a year or two that it has exhibited any signs of producing serious damage to the forests. In 1886 two or three trees were observed which were suffering from its effects. During the year following a few had died, while this year the dead may be numbered by hundreds. The destruction of so many of these trees must be a source of regret to the lovers of forest scenery, as this pine is one of the most beautiful of its family. The tree, so symmetrical in itself, is clothed with long and tender foliage of an olive-green tint, in delightful contrast to that of other species. It has been said of this tree that wherever its roots penetrate gold may be found.

In no place has this tree appeared to flourish so well as in the vicinity of Auburn, and its presence in the forest gives a distinctive character to the landscape. We have as yet discovered no means of arresting this pest, and it will doubtless run its course unchecked. However, it may finally cease its ravages before these trees of our forests are exterminated.

The Stock Show at Livermore.

The yearly show of stallions and other stock came off duly at Livermore on Saturday, the 10th inst. The *Herald* thinks that the rainy time just preceding interfered seriously with the exhibition, entries and attendance, and even avers that the uncertainty regarding the weather, which prevailed until the day before the advertised date, kept away fully three-fourths of both stock and people. Nevertheless there were as many entries as at any previous exhibition and the town was well filled with people. The procession showed more general stock than usual and fewer stallions; the Livermore band was at its best, the decisions of the judges gave very general satisfaction, and the affair may well be pronounced a success.

Premiums were awarded as follows:

Horses.

THOROUGHBREDS—First prize, Wallie Mendenhall's Mamie T; 2d, Wm. Gregory's Lucy.

TROTTERS—First, Martin Mendenhall's Grand Moor; 2d, John Frick's Jack Nelson. Best stallion from San Joaquin county, Conroy's Whalebone. Two-year-olds—1st, P. C. Waltenbaugh's Pearl; 2d, Dr. Savage's Quen Sabe; 3d, Mendenhall's Eva.

ROADSTERS—First, J. C. Smith's Anteo, Jr.; 2d, John Frick's Plow Boy; 3d, Wm. Gregory's Ted. Fillies, same class—1st, J. L. Mitchell's Edna M.; 2d, W. P. Bartlett's Midnight.

HORSES OF ALL WORK—First, C. G. Munch's Spy, Jr.; 2d, Christenson's Harry Granger; 3d, C. G. Munch's Canadian Spy.

NORMANS—First, D. Lafranz's Adolph; 2d, W. Mendenhall's Mont Durham. Two-year-olds—Jos. Blondin's Livermore King.

GRADED NORMANS—First, Chris Anderson's Eugene, Jr.; 2d, Berry's Colonel Whallen.

CLYDESDALES—First, M. Dolan's Chief; 2d, A. Nufer's Waxworks.

STALLION WITH BEST THREE COLTS—D. Lafranz's Adolph.

DOUBLE TEAM (mare and colt)—Vandervoort's Mikado and Mignonette.

Jack's.

FIRST, Hamilton's Big Tom; 2d, P. C. Waltenbaugh's Henry Ward Beecher; 3d, Taylor's Moses.

Cattle.

DURHAMS—Best bull, J. C. Martin's Ben. Cow—

M. Nevin's Pet. Graded Durham Cow—Charles Genger's Becky.

JERSEYS—N. D. Dutcher's bull, Hudson Jr. and cows Beauty, Daisy and Belle.

HOLSTEIN BULL—J. W. Clark's Don Juan.

BEST HAY PRESS—Aylward's Model.

Stallions at San Jose.

The exhibition of stallions, given at San Jose Fair-Grounds last Saturday afternoon, March 17th, under the management of the Santa Clara Valley Agricultural Society, drew a crowd and was a pronounced success as to both the number and the character of animals arrayed. The day was beautiful, and everything went off well.

At 2 o'clock Pres. Topham ordered the line to be formed, and the animals passed the judges' stand in the following order: thoroughbreds, roadsters, thoroughbred drafts and graded drafts.

Many of the best stallions in the county were not brought, their books for the season being already full, and consequently are not included in the appended list of those which were in the parade, viz.: Bob Wooding, by Hercules; owned by Wm. Boots; 12 years old. Soudan, by Sultan, D. J. Murphy; 4 years old, roadster. Wilmington, by Fallis; 5 years old; D. C. Gould. Col. Benton, by General Benton; 4 years old; Thos. Gould. Thornhill, inbred Wilkes draft from Ky.; James Boyd. Ario, by Florida; same owner. Bismarck, by Index; 13 years old; John Gordon. Pat, by Grosvenor; 2 years old; E. Topham. C. W. S., by Abbottsford; 5 years old; John Gordon. Dick Patchen, by Tom Patchen; 10 years old; D. J. Murphy. Rustie, by Whipple's Hambletonian; 17 years old; P. J. Shafter. Longfellow, by Buford; 4 years old; Dr. Dudley. Monte —, by Kerr's Membrino; T. Bostwick. Eros, by Electioneer; 8 years old; Burke & Voyget; (Eros was followed by three of his colts; one yearling; the others 2 years old.) Ormond, by Alden Goldsmith; 3 years old; J. Gilliam. Baywood, by Nutwood; 9 years old; E. S. Smith. Stranger, by Gus; 8 years old; T. W. Barstow; (followed by 10 of his colts.) Orion, by Elmo; 8 years old; J. R. Weller. Wopsey, by Wopsey; 4 years old; Charles Worthington. General Taylor, Jr., by Gen. Taylor; 7 years old; Blaine & Frost. May Boy, by St. John; 5 years old; J. Dempsey. Nutwood Boy, by Nutwood; 9 years old; J. O. Buffington; (followed by 9 of his colts.) Woodnut, by Nutwood; 9 years old; J. Weatherhead. Middleton, by Bob Wooding; 6 years old; R. F. Kennedy. Hollywood, by Woodnut; James Weatherhead (followed by six colts). Archer, by Sterling; R. Walton. Morgan Chief, by Hazard's Morgan; 10 years old; John Crites. Santa Clara Sultan, by Sultan; inbred; 3 years old; John Scott. Magic, by Nemo; 1 year old; Knox & Johnson. Designer, by Director; 5 years old; L. Johnson. Geo. Washington Jr., by Washington; 4 years old; Chas. Shafer. Magic, by Patchen; 2 years old; James Gregg. Major, by Dexter; 4 years old; Mr. Johnson. Mountain View. Young Signal, by Signal; 10 years old; O. P. Baxter. Chieftain, by Noyes Chieftain; 11 years old; J. R. Russell. Duke of Edinburgh; (bay carriage horse), imported; C. L. Fox. Prince Albert; (draft); 7 years old; D. J. Murphy of Milpitas. Montezuma, (Norman and Clydesdale); 3 years old; G. P. Bull. Grant; (Norman and Black Sampson); 2 years old; Simon Matthews. Suffolk Punch, (imported); 4 years old; James Boyd. Emperor, by Adolf; 5 years old; H. C. Murphy of Milpitas. Los Gatos Chief, (Clydesdale); 4 years old; Rob't Walker. Doble, by John Taylor's Norman; 6 years old; E. Meginnis. Rockton, by Norman; 9 years old; C. F. Overfelt. May Duke, by Norman; 8 years old; C. F. Overfelt. Mazeppa, by Blake's English horse; 4 years old; E. Britton. Sampson Jr., by Sampson; 4 years old; J. B. Messersmith. Marengo, by Adolph; 3 years old; J. Swope. Oregon Chief, by a Norman; 9 years old; L. H. Johns. Orio, (Hambletonian and Norman); 4 years old; J. Guignon. Royal Jim, by Murphy's Norman; 5 years old; J. Casey. Keno, from Norman; 5 years old; A. E. Wright. Col. Whalen, from Norman and Black Hawk; 8 years old; W. F. Downing's estate. Frank B., by Belmont; 3 years old; J. C. Bullard.

The object of the display being to give breeders an opportunity to see the stallions in the county, it was made a free show, admitting horses of all ages. There were no awards of either money or medals, as it was simply a voluntary exhibition by owners of well-bred horses.

OSTRICHES FOR TEHAMA.—It is reported from Red Bluff that Dr. Sketchley has just bought about 250 acres of land, five miles north of that town, on the Sacramento river, and will at once proceed to move his ostriches up there from the Los Angeles ranch, which he has sold recently. He says he will put a boat on the Sacramento river and run excursions this summer from Sacramento and Red Bluff to his farm. The news makes quite a stir at Red Bluff.

MR. S. N. STRAUBE of the Poplar Grove Breeding Farm, Fresno, has purchased quite a herd of the Polled Angus cattle lately brought to this coast by A. B. Matthews from Kansas City, and will dispose of several young bulls to parties desirous of propagating this grand breed. Mr. Straube's advertisement appears in this week's RURAL.

PORTLAND MECHANICS' FAIR is to op n October 4th and continue to the 27th inclus ve.

PUBLIC AFFAIRS.

The Railway Strike.

EDITORS PRESS:—What does the demonstration of the Brotherhood of Engineers indicate? What its results on the body politic?

It scarcely seems to require a prophet or the son of a prophet to foretell the result foreshadowed by an organization who have it in their power to obstruct, demoralize, and defeat the operation of every religious, moral, social, agricultural and mechanical enterprise, either upon the land, lakes, or rivers, or upon the high seas. Legislative council seemingly is powerless to enact laws to meet the emergency, although by the wisdom of our law-makers, enactments are attempted to be enforced to regulate charges of the common carrier, and by virtue of the declaration of an interstate commission the courts hold the common carrier responsible for the safe delivery of merchandise entrusted to his care, with damage annexed in case of failure. Can the law in equity be made to act equally upon principal and agent, according to the responsibility they have assumed? The Brotherhood by their declarations intimate that they hold the trump cards, and to enforce this idea they adopt the boycott theory, and through their officials visit the same penalty upon an unoffending party as upon the party with whom they hold an unsettled grievance. Unsettled for the simple reason that principal and agent fail to agree in the mode and amount of compensation for service rendered. Admitting the theory and practice of the Brotherhood, what is the status of all financial enterprise? What will it be in the future? Capital, always timid, will fail to invest in any enterprise where labor, by the declaration of its acknowledged dictator, can decree a suspension at a day's notice. With the assumption of prudential reasons, based upon present experience, will the capitalist jeopardize his capital with the chance of gain as uncertain as the caprice of a non-corporate body, yet controlled by a dictator whose word is law and from which there is no appeal or safeguard either in law or equity?

Admitting that the Brotherhood have a grievance, does the end desired justify the means used? Does it not smack largely of the socialistic theory? Its leaders most assuredly assume to-day a command not possessed by any judicial, executive or military officer of the United States, and, if not in defiance of law, the power thus assumed virtually thwarts its enforcement in equity by reason of its non-corporate existence and by reason of no legal enactment to cope with an organization the workings of which have not been fully known except as demonstrated in foreign lands and by dictation of foreign influence. If an influence to demoralize all the social and financial interests of the nation is without a remedy, whither are we drifting? Wherein is foreshadowed relief to the laboring class, either present or prospective, by the adoption of a coercive policy?

INQUIRER.

Citrus Fruits Scarce at the East.

The announcement comes by telegraph just as we are going to press that wholesale prices of oranges and lemons in New York have advanced 50 cents per box within the past week and \$1 a box within a month, due to the scarcity of fruit in that market. The quantity arriving has fallen off from 100,000 boxes to 40,000 boxes per month. The reduced shipment is not due to any failure of the crops abroad, but to the action of the New York bankers in declining to make satisfactory advances on fruit. The Florida crop has all been marketed, and the West Indian supply is a very small portion of the quantity received. Italian and Spanish growers all demand cash advances on their fruit, and in some cases they obtain money before the crop is gathered; but most of the advances are made on certified bills of lading. From 75 cents to \$1 per box is the usual advance, but the bankers of New York City have sustained such heavy losses that they are now refusing to take such risks.

We hope the Spanish growers will continue to call for large advances. The prospect is, however, before the game now being played between foreign and American growers of citrus fruits is over, the foreigners, if they want this market, will not be so stiff in their terms. If Congress will let the tariff alone, we shall not long have need of Spanish fruit of any kind.

A PERMANENT EXHIBITION IN SACRAMENTO.—The Improvement Association of Sacramento is doing an enterprising thing in the erection of a building adjoining the passenger depot in Sacramento, for the purpose of making a continuous exhibit of the products of Central and Northern California; also, to serve as a bureau of information as to the counties of Central and Northern California. They intend to have a competent person in charge, whose duty it shall be to meet the visitors, answer questions and impart such information as may be desired. The outside counties are only asked to contribute exhibits and printed matter. The display, it is expected, will be formally opened with proper ceremonies about April 1st.

News in Brief.

THEY are using crude petroleum as fuel burning bricks at Pasadena.

ONE day last week there were landed at New York 2262 immigrants, most of whom are bound West.

A MEMORIAL to Congress has been prepared, urging the necessity of a quarantine station at this port.

THE wire cable for the new Powell-street line in this city is 26,680 feet long and weighs 48,590 pounds.

RIVERSIDE is likely to have a motor road to Colton, before long, connecting with the line to San Bernardino.

SEVERE earthquakes have been experienced in Yunnan, China, and at one place some 4000 people were killed.

THE House Committee on Territories has decided to report the bill for the organization of the Territory of Alaska.

THE U. S. Supreme Court has rendered a decision in the telephone case, giving a verdict in favor of the Bell patent.

ARRANGEMENTS have been made looking to the establishment of a line of freight ships between Australia and Portland direct.

THE Ontario Land & Colony Co. celebrated the fifth anniversary of the inaugural improvements of their colony on the 17th inst.

CONGRESS will probably authorize the placing of certain beacon lights at prominent points on the Sacramento and San Joaquin rivers.

SECRETARY BAYARD has recommended the President to appoint Jas. V. Coleman as Chief Commissioner to the Melbourne Exposition.

THE new Hotel del Monte is finished and has over 400 guests, including distinguished people from the Eastern States, Canada and Europe.

AT Urbeta, San Bernardino county, last week, an artesian well at the depth of 175 feet struck water which sends a stream 40 feet in the air.

GORDON HUGHES, an Ohio boy, son of the American Consul at Birmingham, has won, in competition with 52 others, a Cambridge scholarship worth \$2000.

THE Railroad Commissioners are inquiring into the condition of affairs by which the California Southern is charging slightly higher rates of fare than other lines in that part of the State.

THE Board of Trustees announce that the Twenty-third Industrial Exposition of the Mechanics' Institute will open Tuesday, Aug. 7, and will close on Saturday evening, Sept. 15, 1888.

EXPORTS of wine from this port, from January 1st to March 1st, were 938,800 gallons, of an approximate value of \$414,000, against 831,200 gallons valued at \$366,000 in the same time last year.

THE Supervising Architect of Public Buildings at Washington has recommended to the Secretary of the Treasury that \$40,000 be appropriated for the repair of public buildings in San Francisco.

NEVADA local hunters say that the cold wave which swept across Western Nevada last January killed all the rabbits and thinned the ranks of the badgers and coyotes formerly so numerous on the desert.

THE War Department has issued an order for the abandonment of the military reservation at Carlin, Nev. It will be turned over to the Interior Department and steps will be taken for its sale as public land.

SENATOR DOLPH has introduced a bill to authorize the construction of a railway bridge over Clear Water river in Idaho, and for the Navigation Company to build a bridge over Snake river, at Texas Ferry, W. T.

NOT all the immigrants from Europe come to us. There are 21 companies running regular lines of steamships between Buenos Ayres and various European ports. Immigrants are thronging to New Zealand and Australia.

PARTIES visiting the volcano of Popocatepetl recently, report an increasing activity in the crater, with clouds of smoke and sulphurous fumes. Reports from Central America show that several volcanoes are unmistakably in renewed activity.

HORSE-STEALING by a thoroughly organized gang has been going on in Los Angeles county for several months past, and it is estimated that \$100,000 worth of animals have been run away with. The officers of the law have so far been baffled by the thieves, and the sheriff has called police detectives to his assistance.

CONTRACTS were signed by parties in Fresno, and a man has gone to North Carolina to ship to that country 300 negro families. Most of these will replace Chinese in the orchards and vineyards. It is said that the women and children in vineyards do better than Chinamen, while the men in the sweat and drying houses learn the business of curing raisins much better and faster than the Chinese.

DAIRYMEN of Missouri have sent the U. S. Senate a strong petition in favor of removing the duty on foreign salt. The petitioners claim that the tariff does not have the effect of improving the quality of home salt, while the tax falls directly on dairymen who need the best quality of English salt in the manufacture of butter and cheese. It is pointed out that a salt trust prepared by American manufacturers is designed to increase the burden.



Restitution.

Upon her face were lines of pain and doubt,
Love came instead of death and swept them out.
Within her breast raged tempest strong and wild;
Stilled into calm when Love said, "Peace, my child."

Her weary feet by Love were meekly shod
With sandals of the holiness of God.

Her arms drooped nerveless, after their fierce strain;
Love lifted them and they were strong again.

Her ears were deafened with the ruthless cry,
"Vae Victis!" crashing up against the sky.

Sweeter than silence came Love's voice divine:
"Thou shalt arise again, for thou art mine."

Thrilled through the agony of awful fears;
"I will restore the locust-eaten years."

So in Love's light her face transfigured shone,
And she grew very fair to look upon.

O vineyard, wasted once of beasts of prey,
Thou hast put forth thy glorious fruit to-day!

O jewel, flung 'neath trampling feet of swine,
Love's hand has set thee in the crown divine.

Maker, Redeemer, Sanctifier, Thou
Hast signed Thy sign upon her breast and brow;

And every power superb, and each bright grace
Flames in the perfect luster of Thy face.

—Macmillan's Magazine.

The Dearest Verse.

[Written for the RURAL PRESS by MAID-OF-ALL-WORK.]

It is one of the dearest verses, at least I think
of it as often as any other out of the human
selfishness of my heart, no doubt. I say it over
and over when care lies heavy or hope is bright.
You all love the verse, too:

"In my Father's house are many mansions; if it
were not so I would have told you."

If it was not so, He said, He would tell us.
Disappointment is so hard to bear that He felt
it best to tell us if it could not be so. Heaven's
embassador knew the human longing for rest,
peace and home. He, with exquisite sensibilities
too keen for us to define, lived His allotted
years without an earthly resting-place. The birds
of the air had nests, the foxes had holes, but the
Son of Man had no place to call His own where
He might hide himself from the cruelties of the
rabble, the weariness of His care and the mistakes
of His friends. His burden was always with Him,
and He had no door to shut against His penury
and loneliness. A home in a walled city meant
protection from His enemies, but He could only
flee to the wilderness for rest and peace; yet
with what a divine sympathy for the selfish human
heart He remembered to say to the home-makers
of earth: "In my Father's house are many mansions."

A mansion—a place of permanence, of comfort,
of durability, and of beauty; a place of our own,
replete with all things satisfying to the soul;
a place where we may treasure untroubled and
unseen our joys and profits, and hide away in a
sacredness that becomes sweet the ashes of our
perished hopes. A very small cottage may be a
mansion in that it covers contentment and great
hopes and noble efforts, reasonably constrained
under the habits of a kindly and modest life.
Anyway, it seems to me, a roof all one's own, a
hedged garden, and a fenced field can become to
any one a starting point from which we can measure
the world and its possibilities, or a treasure-house
after weary triumphs. Moreover, the preciousness
of what homes are to our people justifies the
adulation of this promise of our Lord to its greatest
glory. I reflect upon the cause and precedent
of such a promise.

Was there not rightfully given to the human
heart a desire for beautiful or perfect homes, and
because this desire is so seldom satisfied, the
Prince of Peace hastened to say, "In my Father's
house are many mansions."

If we must struggle for a perfect heart and a
clear conscience on account of our spiritual
necessities, we can as righteously struggle for a
clear and perfect home as a foretaste, perchance,
of that place of many mansions.

A roof all one's own: Only those who have
never enjoyed such a luxury know what it is to
be deprived of it—to be without anchorage and
foothold in the many storms of life. Let us divide
such a roof in fancy into apartments fulfilling
the necessities of our natures.

A long, spacious room, with broad windows
and a fair outlook filled with sunshine and music
and the perfume of a few choice blossoms. A
bright, open fire, with a generous space about
it and a generous heat. Many easy-chairs
ingeniously placed for warmth, light and comfort.
Nothing superfluous in the room, nothing frail
to fall over or break; nothing garish or inconvenient,
nothing out of use or suggestive of a storehouse
or museum.

A wide hall, warm and quiet, rich in color,

stored with books, the walls lined with closets,
cases and cabinets. A place for all the curios
and mementoes of mountain and seaside outings;
and studies in botany and mineralogy that any
one could make and prepare on mountain
journeys. Antlers from that rare old day in the
mountain-brush, shells from the sea, moss and
ferns from the woods.

A magical guest-chamber or two, which, like
the widow's cruse of oil, would expand with
unselfish use, which would open their arms of
welcome to curtains and sliding-screens and
extra couches, and never, never, give sigh or
groan for one too many.

"One's own room," fresh and airy, warm and
light and dry, with a cheerful little stove in it,
a lounge, a singing-bird in the window, one's
own desk, and pictures, and secret drawers.

A jolly little dining-room well furnished with
hospitality, with no aroma of fret, or worry, or
care in it. A wonderful little kitchen decorated
with a fret-work of sunshine through vines,
clean as a whistle, and capable of producing
something hot and nourishing on a few moments'
notice.

What more do you want under a roof of your
own? You might have a suite of drawing-
rooms sumptuously furnished, guest-rooms like
an inn, a book-store for a library, and a compli-
cated culinary department with a retinue of
servants, but it would be just the same, after
all, provided you have the same spirit of content-
ment and cordiality in it, such as I would
like to put in such a humble place as that.

Then there is economy and prudence. No
roof is one's own roof at all unless the income
under that roof is more than its outgo. Go back
to the Bible dinner of herbs and an oaten cake
and sup with an easy mind if you would have
this own roof a mansion of comfort.

A hedged garden: Not a few gaudy plots
placed in front for exhibition to the envious,
but a gathering of our favorite fragrant and
blossoming plants all about the house, so that
one place shall be as lovely and bright as
another. Not a moneyed patronage of a green-
house or a skilled gardener, but a garden full
of living and growing testimonials of pleasant
visits and the remembrances of friends; a bit of
sweet mint from grandmother, a root of violets
from Aunt Ruth, a rose from Japan brought by
a learned traveler; seed from the old ancestral
garden in the East. This honeysuckle is from
Uncle John's cabin in the mines, this moss-rose
from Mrs. G.—sweet lady, she is dead. This
lily I bought to commemorate my baby's birth-
day. How luxuriantly it grows this year; there
are new bulbs. This fuchsia my mother
brought all the way from home in her hand
bag—there were no cars then. This sweet
tea-rose! Do you remember Mary Lynn? I
took this slip from her grave in the mountains.
This smilax, how it does grow all over every-
thing! When Rose was married her mother
gave me the bulbs. My strawberries, my
brother Tom helped me to plant them before
he went to the theological school. These
straggling currant bushes pay for themselves
over and over.

Can anything be sweeter than these buds of
violets about my kitchen door? Whenever I
go to the city I carry a basket full to Sister
Francis Mary for her hospital work. To the
convent? No matter, I want to do it. This is
my palace and I am queen here. Yes, I let
the hedges grow high so that I can walk and
think and soliloquize all about my garden un-
seen. No one cares for it as I do.

A fenced field: If it be large, it will be
blessed according to its worth; if it be small,
according to its care. Yes, we have the whole
six acres in now—three acres in fruit and the
rest in alfalfa. The orchard is entirely cared
for us on shares by a fruit-handler, packing and
all; small, to be sure, but enough for us. That
wheat along the fences I sowed for my chick-
ens; they harvest it and the garden worms as
well. The alfalfa is no trouble at all, the cow
harvests it. The milk and eggs come to our
table in every conceivable form, which is about
as sensible as to sell them to buy something we
don't like half as well. We call the alfalfa our
living, and more, it is always beautiful. Those
five splendid oak trees are fenced apart by
themselves because I love them and what grows
under them, the mushrooms.

My sister Amy's husband has 1000 acres in
wheat every year; they are prosperous, but so
far away, and not so happy as I. Their faces are
growing more set and careworn every year.

It was a friend who stood chatting after this
manner—she so blithe and fresh and glad with
her "own roof, her hedged garden and her
fenced field." All her words sank into my
heart and I thought it a good sermon for all
my friends, many of whom are striving to be
rich, but not to be comfortable. There were
many shut up in dark stores whom I would
like to present with such a mansion within easy
distance of their precious (?) counters. There
were others fretted and changed about from
place to place, failing, stumbling, wearied and
harassed, whom I would joy to lead into such
a mansion and name it their own.

A roof of one's own, a hedged garden and a
fenced field—something to toil for, to hope for,
to wearily wait for, something to almost place
our eager hands upon and then have it fade
away into the sad realms of disappointment,
and to be glad even then for the hope that re-
maineth. But if the snows of life should
whiten your head and your understanding
should fail before you enter into such a beau-
tiful estate, be glad and calm still, for "In the
Father's house are many mansions; if it were
not so He would have told us."

A Remarkable Woman Gone.

Many readers doubtless enjoyed her graphic
sketch, "Christmas Among the Blizzards," in
our "Home Circle" just three months ago,
and have been interested in other articles over
the signature of PIONEER, which have graced our
columns from time to time for several years,
without knowing the real name of the writer.
She was Mrs. Ellen S. Tupper, who died sud-
denly March 10th at El Paso, where she was
visiting one of her children, Mrs. H. A. True.
She had put on her bonnet that Saturday eve-
ning to take a walk with her daughter: the
latter left the room for a few moments, and re-
turned to find her mother just expiring.

Mrs. Tupper had led a varied and busy life,
and was indeed a remarkable woman. She is,
perhaps, most famous in the world for what
she learned, accomplished and wrote respect-
ing insects, particularly honey-bees, while resi-
dent in Iowa. In King's *New Bee Keepers' Text-Book*, we read:

Mrs. Ellen S. Tupper has most satisfactorily
proven that women may successfully follow this busi-
ness. With great industry and perseverance she
maintained and educated her large family mainly by
bee-keeping. A close observer and pithy writer, she
has done much to attract attention to this industry.
At one time her apiary was destroyed by a hurri-
cane. A few years afterward her house was burned
in winter, which involved the loss of all her bees, as
they were wintering in the cellar. Other troubles
thickened around her, but she is recovering physi-
cally, mentally and pecuniarily. She has again gathered
an apiary, and with a woman's perseverance
amid trials, comes forward again with her pen to
help the cause she loves. It was Mrs. Tupper who
first announced success in artificial fertilization of
queens. Though pronounced impossible, her state-
ment is verified by recent experiments.

She was a valued contributor to the *N. Y. Tribune* during Horace Greeley's lifetime, and
has in later years written much for the *Youth's Companion* and the *Oregonian*. In private life
she was bright, wise, sweet, industrious—"a
high-souled woman, and a tender and thought-
ful friend."

As to facts of time and place—she was a
New Englander born and bred, Providence,
R. I., being her native town, and much of
her early life having been spent in Calais,
Maine, where her father, Noah Smith, was a
man of considerable note in politics. She mar-
ried Allen Tupper of Bangor, and they lived
awhile in Newton, Mass., before going out to
what was then the Western frontier and set-
tling at Brighton, Iowa.

She was the mother of 11 children, of whom
five—four daughters and a son—survive her.
They are Mrs. E. Tupper Wilkes, an ordained
liberal preacher, wife of a prominent lawyer at
Sioux Falls, Dakota; Miss Kate N., vice-prin-
cipal of the high-school at Portland, Oregon;
Margaret, Mrs. True, at whose home in El Paso
she breathed her last; Holmes, a farmer near
Sioux Falls; and Mila, a student of high prom-
ise at Cornell University in the class of 1889.

At the time of her death Mrs. Tupper had
nearly completed her 66th year. She had but
lately arrived from Portland, Oregon, stopping
on her way at San Francisco, where we had
the pleasure of passing two or three social
evenings with her, and was expecting to remain
at El Paso until summer and then go back to
see her other children in Dakota—whither her
remains were sent to be buried beside those of
her husband.

Rights of Animals.

Of late years there have been many laws en-
acted and many societies organized for the pre-
vention of cruelty to animals; but we think
that farmers, as a general rule, seldom need to
have such laws applied to them. A truly good
and humane farmer cares for his live-stock in a
proper manner. Every living thing, wrote the
late Rev. A. J. Baird, D. D., as well as every
field and everything it produces, has its rights
and use. Study to know, and act accordingly,
and you will be repaid. That man's field is
fat and productive, because its master feeds it
well. It seems to rejoice at his approach, and
spread out its rich green carpets for him to
walk on, and holds up its sweet blossoms to
perfume his atmosphere. It loves the flocks
that graze upon it, because they belong to the
same master, and it feeds them well. It seems
to take pride in making the strong reaper bow
to the heavy swath, and the wagon groan be-
neath its heavy yellow sheaves. It glories in
its rights and is glad. That field over there is
poor, and looks discouraged. No wonder. It
has been badly dealt with. It has a hard master.
He scratches, robs and starves his field. Look
at its bruised face. God gives it rain and sun-
shine, but it wants food. It wants a good mas-
ter, who will give it what rightfully belongs to
it. If you wish to know the nature of a farm-
er, walk with him out among his stock. If
they know him, and come to him, and trust
him, you may do so, for he will respect your
rights; but if they run from him, something is
wrong. That is their way of warning you that
he is a hard master. If you wish to know a
woman, her pets, from the canary in its prison
to the chickens in the yard, will tell the truth
more certainly than the smiles of her beautiful
face. The one is an every-day matter, the other
for company. This may not always be so.
Some are afraid of fowls. They cluck, look au-

gry and peck, and their bite is by some thought to
be very poisonous; and what an inglorious death
it would be to die from the bite of a hen! It is
much more safe and genteel for husband to
buy them. Ruler of the world, prove your
high station by living witnesses. You can-
not make a world, but you can take good care
of the one that was made for you. If you
would enjoy ease, comfort, plenty and a good
conscience, begin at once and become a faith-
ful student in this school of universal rights.
You will soon have a higher regard for the God
who made you, and you will be happy within
your wide realm of power, and be beloved by
all within its just domain.—*Atlanta, Ga., Southern Cultivator.*

Unexpected Guests.

Years ago, when I was first married, an old
lady friend gave me some excellent advice in
regard to company. Her family was small
(only herself and husband), yet a person could
never go there for a friendly visit and find her
unprepared. No apologies were ever made,
although things were of the plainest, as the
family were obliged to practice great economy,
their means being limited. But the cordial
welcome and the ease with which a visitor was
entertained made people feel that they never
came at the wrong time. * * * When I
first began to preside over a house of my own,
I thought I would not allow myself to be dis-
turbed if a friend dropped in unexpectedly.
But it took time for me to shake myself out of
the rut in which I had been led for some years.
Some time after my marriage I was talking on
the subject to my elderly friend previously
mentioned. She said: "Company never dis-
turbs me. If rich people come to see me I
know they have things good enough at home.
If poor people come I know I have as good as
they have." This, then, was her secret which,
added to her natural ease of manner, made
young and old always enjoy themselves when
visiting her. As my family cares increased, I
found that if I wished to enjoy life at all I
must often let the morrow take thought for its
own affairs.

If I knew company was coming, of course I had
my meals prepared beforehand, so that I might
have the more time to spend with them; but if
they came unexpectedly, I simply set my table
and made no excuses. I think one of the most
pleasant meals I ever enjoyed was at a time
when I had prepared a dinner for five and had
sent out to the good man to come in and partake
thereof. He sent me in word he would bring
in a gentleman with him. Another plate, knife,
fork, and napkin were put on the table, chairs
were set and we were just about to occupy
them when our family physician walked in
with another gentleman. For just a moment I
will acknowledge I feared there would not be
enough to "go around." But more plates, etc.,
were added. There was plenty of nice bread
and butter in the pantry, part of a sheet of warm
ginger-bread was cut and put on the table. As
we chatted over our dinner and the doctor
brought up reminiscences of his army life, I
doubt if any of us gave a thought to the rapid
disappearance of our "boiled dish." At
another time my husband brought in a gentle-
man to dine who was at the time a stranger to
us both. I noticed he hesitated a moment as
he entered the dining-room; but I did not think
of it again until some time afterward, when he
told me that frequently, when a host invited
him to partake of a meal, he would find he
was not always welcome to the lady of the
house, and he hesitated, fearing I was one of
that kind. He, however, staid long enough to
find out his mistake.

Years ago, on a very warm day in July, a
lady drove to the house of a gentleman to see
him on business. Arriving there, his wife in-
formed her he was away and would not return
until evening, at the same time inviting her to
come in and take tea with her and await his re-
turn. The invitation was accepted. They con-
versed for awhile, and when the proper time
arrived the hostess prepared her simple supper.
Good sweet bread and butter and a cup of fra-
grant tea, that was all, but said the lady after-
ward: "It was the best supper I ever ate."
Agassiz once called on Oken, the great German
naturalist, who invited him to stay to dinner.
There were two dishes—potatoes plain and
potatoes roasted, but so much did Agassiz learn
of the great man that in after-years he wrote:
"Never before were such potatoes grown on
this planet, for the mind of the man seemed to
enter into what we ate, socially together, and I
devoured his intellect while munching his pota-
toes. I repeat it, I never ate such a dinner be-
fore or since." Sisters, depend upon it, our
guests will not think as much of us if we spend
the time they are with us in preparing refresh-
ments for the inner man. Far better is it to
give them a hearty welcome and let them feel
for the time they are members of the family,
and while they remain with us will be used as
such.—*Mrs. L. Howard in Rural New Yorker.*

A COMING APPETITE.—The *Gridley Herald*
spins some remarkable little yarns. One of the
latest is that a rancher, prominent in that
neighborhood, went into a saloon the other
night to get something to eat. After getting
himself outside of five cans of oysters, 32
hard-boiled eggs, 14 glasses of beer and two
pounds of crackers, the grain-grower said he
"guessed he'd go home and get his supper,"
and so departed.

Mr. Crusty on Foreign Musical Training.

[Written for the RURAL PRESS by MARIS.]

One day last week Mr. Crusty was requested by a friend to invest in a ticket for the benefit of a young musician contemplating a trip to Europe to finish her education. He took the ticket in his hand, turned it round and round, finally adjusted his spectacles, and began to read: "Grand Complimentary Benefit to Miss Bella Blank"—finished perusing the card, and handed it back, saying, after a prolonged "hem:" "Don't know her, so of course don't feel bound to contribute to her benefit; but if I did know her I should take an opportunity to acquaint her with my opinion of youngsters packing up and going to Europe to be taught music. Are there not many good teachers here? Why must musicians cross the continent to learn how to sing and play to American people? "And if they went at their own expense, what harm? But generally the music-loving public has to submit to hearing its favorite selections crudely and unintelligently rendered in order that some musical fledgling may fly to Europe and have his or her wings gilded by some super-annuated professor who knows absolutely nothing of the musical tastes of our people. Is there no remedy? Allow me to make a suggestion to the victims of so-called genius. Instead of transporting all our prodigies over the ocean, and paying dear for the veneer which seems necessary (?) to success, why not import a few hoary instructors who have given their best years to the profession of teaching music, and are so wrapped up in their life study that the very air around them seems to be charged with divine harmony? Why not import a few such persons, I say, and pay them a liberal salary to polish off the aspiring recruits in the army of Euterpe? It would at least be much cheaper than fitting out pupils every month or so to spend their time and often other people's money in a foreign school.

"If they must travel, let them complete their studies in the Boston Conservatory of Music, which equals, if it does not surpass, many like institutions in Paris.

"It is a mistake on the part of Americans to ape the fashions, manners, and schools of other countries whose power is on the wane, while America is in the height of her glory, and could, if she would, assume and maintain the lead in these, as well as in other regards.

"The cry from the labor market is 'Patronize home industries;' from the producer, 'Consume home products;' and one which is in the heart, if not on the lips, of many a well-trained but ill-paid professor in our midst is, 'Recognize home talent.' We consider it a duty to listen to the first and second. Let us not turn a deaf ear to the third. We are just as cultured as our continental friends, and it only remains for us to make this fact patent to all by training our future composers and prima donne at home."

Oakland.

Church Fairs Disfavored.

At a recent meeting of the Clerical Association (Episcopal) of Alameda and Contra Costa counties, a committee, to whom had been referred the subject of church fairs, reported the following preamble and resolution, which were adopted by the association:

WHEREAS, The well-known views of a large number of the bishops of our church, including our own diocesan, are opposed to such means of raising money for church purposes and religious objects; and

Whereas, The general sentiment of our clergy and many of our most devoted laity, to say nothing of the repeated adverse opinions of our diocesan convention, is, as we believe, unfavorable to such measures, while the downward tendency toward extreme license in these matters is exceedingly strong in California; therefore, be it

Resolved, That it is the sense of this association that it is inexpedient for our church people to attempt to raise money for building or furnishing churches, or for other religious objects, by means of fairs, carnivals, or the like. And we invite our brethren elsewhere in the diocese to unite with us in discouraging and opposing such methods, committing ourselves hereby against taking any part in them ourselves.

A THRIFTY YOUNG WORKER.—The Woodland Mail says there is in Yolo county a ranch hand who has \$2500 in the Hibernia bank of San Francisco. This money he has saved out of his earnings of the past six years. During this time he has served but one employer who gives him \$500 a year. Every Christmas for the past six years this young man (he is only 30 years old) sends his old mother in Scotland \$100. From these figures, which we are assured are reliable, it would appear that the interest which his savings have drawn have more than supplied his clothes and other living expenses. That is the kind of a man the Mail honors. We have no apology to offer for saying so, either. It is safe to hazard a prediction that his expenses for tobacco and beer are quickly figured up. Ten to one, this thrifty laborer would fill any trust reposed in him with fidelity and courage. The man who freely sets apart for his mother out of his hard-earned and harder-saved savings, as much as this man does, has immeasurably more humanity and decency in his makeup than a whole regiment of that stripe of a loafer who pours down his worthless neck in bad whisky the money he owes his butcher and groceryman.

YOUNG FOLKS' COLUMN.

The Snow-Bird's Lesson.

[Written for the RURAL PRESS by MRS. M. F. ROWE.]

Tiny little snow bird,
Flitting through the air,
Searching for a breakfast
On the branches bare;
Thou dost teach sweet lessons
Of the Father's care.

When the sky is shrouded
With the stormcloud black,
And the snow is falling
On thy hapless back,
'Tis His eye that guides thee
On thy unseen track.

He thy food provided
In the long ago
Of the summer sunshine,
Ere the frost and snow
Brought thee near our dwellings,
Flitting to and fro.

What we feared would injure
Flower and shrub and tree,
In His wondrous wisdom,
He designed should be
Food, rich and abundant,
Little bird, for thee.

If our Father's goodness
Feeds the birds thus,
How much more His loving,
Tender care for us;
Who can trust His wisdom
In whatever He does?

"Fear not," He hath spoken
In His holy Word,
"Ye are of more value
Than the little bird;"
Yet its feeblest crying
Hath your Father heard.

His own eye will guide you
Thro' life's unseen way;
He will still provide you
All things day by day;
No ill shall befall you,
He will keep away.

Grass Valley.

Little Bluebird.

[Written for the RURAL PRESS by AUNT SUSIE.]

What do you suppose this "little bluebird's" real name was? It was Sue, so you see she wasn't a little bird at all, but a blue-eyed little girl. An aunt who loved her very much saw her coming up the walk one day. She wore a blue cashmere "jossie," as a child's cloak was called then, which was a long time ago, but it was just like the cloaks little girls wear now, with a long waist and full skirt and little cape. Well, this little girl also had on a blue velvet bonnet with a high crown and soft, white lace pleated full around the front, and she had on blue stockings, and blue gloves, so when her aunt saw her she called out, "Oh, here comes my dear little Bluebird!" and so the name clung to her, because she looked so pretty in blue. She had blonde hair that was as fine as unspun silk, and looked very pretty hanging down below her blue bonnet in soft, loose curls.

Well, little Bluebird's mamma was dead, and she went to boarding-school when she was only four years old with her big sister, who told her when she had on a fresh white dress not to rumple it when she sat down. Her dresses and skirts were made very full, as was the fashion then, and when fresh from the laundry, looked very pretty. Of course, she was petted by all the big girls in the school, and I am sorry to say, was a little spoiled and rather vain of her pretty clothes, and almost always lifted up her dress, which was very short, when she sat down; but alas! her vanity brought her to grief one night. There was a low stove in her bedroom, and one cold night the fire was hotter than usual; her sister was busy fixing the bed for her, and, without noticing where she was, said: "Now, Bluebird, sit down and take off your shoes and stockings." She was all undressed and had on her little white "nighty," and, without noticing where she stood, and forgetting she didn't have on a fresh stiff dress, pulled up her little "nighty" and sat down, but not on a chair; dear me! if it only had been on a chair; but it wasn't—it was on the low stove, which was red hot on top. She didn't stay there long. With a terrible scream she fell to the floor. She was badly burned and in great pain; her sister lifted her up and sent for a doctor. When he came the tender skin was broken and the poor child was screaming so with pain, he had to give her something to make her sleep, and she had to stay in bed quite a long time. At last the skin was all healed and she could run about again, but she didn't take so much pains to keep her dresses unrumpled.

Well, one day her papa told her she had a new mamma, and so she left the boarding-school with her sister May, who was two years older than she was. The first morning they woke up in the new home they felt very strange and lay awake for some time, wondering if their new mamma would remember them.

May said: "I don't believe she will think of us. She hasn't any little girls, and only saw us just a little while last night when she put us to bed. I guess we will have to stay here a long time and get awful hungry."

"Can't we get up and dress ourselves?" said Sue.

"No," replied May, "we must just stay

here till she comes if it's forever-n-ever;" and so they talked on, not coming to any very happy decision in the matter.

But their new mamma had not forgotten them. When she thought it was time, she went to their room and said: "Well, are my two little girls ready to get up?"

"Yes'm," said May, "we've been ready this long time, and thought you'd forgot we were here, and we'd never have anything to eat."

"Oh, no. I shan't ever forget my little girls."

"Am I your little girl?" asked Sue.

"Yes, and I want you to love me very much."

"I guess I love you now," said Sue, as she threw her arms round her new mamma's neck and gave her a good kiss.

She was an affectionate, impulsive child, and showed just what she felt, but May was more reserved and didn't show any outward tokens for some time of the love she really felt for her new mamma.

They had two cousins named John and Tom, who were almost like brothers to them, as they lived near and were always playing together; of course they teased each other sometimes, as I am sorry to say little boys and girls will. Bluebird was very fond of the "leavings" in the big yellow bowl after her mamma had made cake. She knew Tom didn't like it, but one day when she went in the kitchen and found the big yellow bowl all ready for her to "scrape," as she called it, just for fun she called out: "Say, Tom, come here quick. I've got something awful good."

"What is it?" called Tom, who was playing outside.

"Oh, I shan't tell; if you don't want any I'll eat it all up."

That was too much for Tom. He scrambled in the wood-shed window, as that was the quickest way to reach the kitchen; but dear me! "Haste makes waste;" many times he slipped and fell; he tried to get up but couldn't, so called out:

"O aunt, come quick. I can't get up; my ankle hurts awful bad."

Sue and her mamma ran quick to him, and when his aunt lifted him up, found he had sprained his ankle. It hurt him so much he had to cry, even if he was a boy. Sue called the man who was working in the garden, and he took Tom in his strong arms and carried him home, which fortunately was near by. His mamma felt very bad, but was glad to know it was nothing worse than a sprained ankle. She put him to bed, and he looked so white it scared Bluebird very much. She ran downstairs, went to the parlor and curled herself up on the sofa and cried very hard. Her mamma hunted all about for her, and called out:

"Where has my Bluebird flown to?"

"Here I am, mamma," she heard in a stifled voice, followed the sound, and found a very sad little Bluebird sobbing as if her heart would break. When her mamma tried to comfort her, she said:

"If I hadn't called Tom when I knew he didn't like raw cake, he wouldn't be in bed now, as white as the pillows, the doctor with him, and everything. Oh, dear, I'm so sorry, and I'll never do it again. Oh, dear, oh, dear, what makes folks do naughty things?" and then she began to cry again.

Her aunt came in and comforted her a little, for she knew her Bluebird had not really meant to be naughty; did it "just for fun," so she let Bluebird help nurse Tom, and she loved him all the more after that, and he forgave her, like a good little boy, and they had many a fine romp together after his ankle was well.

One day, when Bluebird was seven years old, she fell asleep in school, with her head on her arm, on her desk; the teacher tried to wake her, but she was so sound asleep she couldn't get her awake. Her cheeks were very red, and her little hands were so hot the teacher knew she must be sick, so had some one take her home. Her mamma put her on the bed and undressed her, but still she didn't wake up. When the doctor came the little cheeks and hands were hotter than ever. He looked very sober as he held the little hot hand and listened to the heavy breathing of the still sleeping child, and told her anxious parents he feared it was scarlet fever. He called again at night, and said it surely was, and they had a very sick little Bluebird for a long time. May, of course, had to be kept away from her, and although she had John and Tom to play with, and stayed at their house, still she missed her little sister. After many days and nights of anxious nursing and watching, the dear little blue eyes looked clear once more, and she was able to sit up in the big chair, with lots of pillows all about her. One day she was sitting up and had on a pretty little loose gown that covered her feet all up, when her aunt came to see her. She said, as she had many times before: "Well, here is my dear little Bluebird."

GERMAN SONGSTERS FOR OREGON.—It is stated that a number of Germans, resident in Portland, Oregon, have made up a fund of \$1000 to defray the expense of bringing over from "the singers' Fatherland" several hundred song birds—nightingales, linnets, thrushes, skylarks, etc.—to be set free in the neighborhood of that city. It is expected that they will arrive at Portland next spring in time to nest and rear young, and that they will return thither from their winter migration to the South. An Act for the protection of these birds will probably be passed by the next Legislature.

DOMESTIC ECONOMY.

CHICKEN PANCAKES.—One pint of fine chopped cold chicken, freed from bones, seasoned with salt, pepper and tomato or mushroom catchup. Pour over the meat one tablespoonful of flour, one tablespoonful of butter, mixed with one-half pint each of water and cold gravy, heated to boiling point; then heat the chicken. For the batter, beat two eggs until light and mix with 1½ cupfuls of sweet milk, two full cups of flour and one teaspoonful of baking powder. Hastily fry pancakes of the desired size to a light brown, spread some of the prepared chicken upon each pancake, fold once, and keep hot until all are ready.

RAGOUT OF BEEF.—Cut one pint of cold meat into one-half inch dice, removing fat, bone and gristle. Put the meat into a stewpan, cover with boiling water and simmer slowly two or three hours; then add one-half can mushrooms, cut fine, two tablespoonfuls wine, salt and pepper to taste. Wet one tablespoonful flour to a smooth paste with a little cold water, stir into the liquor, cook ten minutes and serve.

FRIED BREAD.—One quart of flour, one teaspoonful of salt, three of baking powder, and milk enough to make it as stiff as biscuit dough. Roll it out and cut into square cakes two inches long and a little over half an inch thick. Drop them into boiling lard. They require only a few minutes cooking, and when properly made they are so nice they will soon become a family institution.

BAKED MACARONI.—Take some minced chicken or meat, then weigh half the quantity of macaroni, which must be cooked tender in broth; add two well-beaten eggs, three ounces of butter, cayenne pepper and salt to taste; all these ingredients must be well mixed. Put into a baking dish and cook until a yellowish-brown crust is formed on the top. Veal and chicken can be mixed.

PUFF PASTE WITH BEEF SUET.—Where you cannot obtain good butter for making paste, the following is an excellent substitute: Skin and chop one pound of kidney beef suet very fine, put in a mortar and pound it well, moistening with a little oil, becoming as it were one piece, and about the consistency of butter; proceed exactly as in the last, using it instead of butter.

SHORT PASTE FOR TARTS.—Put a pound of flour upon your pastry slab, with six ounces of butter, and rub them well together; then make a hole in the center, in which put two ounces of powdered sugar, two whole eggs and a large wineglassful of water; mix the eggs, sugar and water well, then drown in the flour and mix together and work it lightly.

MARBLE CAKE.—Light part—Two cups of white sugar, one cup of butter, one-half cup of sweet milk, whites of four eggs, 2½ teaspoons of baking powder, two cups of flour. Dark part—One cup of brown sugar, one-half cup of molasses, one cup of butter, one-fourth cup sour milk half a teaspoon of soda, yolks of four eggs, flour to thicken, and flavor.

MUSHROOM CATSUP.—To 1 bushel of mushrooms, add 1 ounce of cinnamon, 1 ounce of cloves, 1½ ounces of black pepper; let them lie five or six days in a keg or barrel, take out the juice and squeeze the mushrooms, then boil down to one-half, and add vinegar (about 1½ pints) to suit taste. Bottle and use.—Mrs. F. W. in Martinez Item.

ROAST BEEF.—Remove the bone from the thin part of the roast, then fold it around against the thick part of the meat. Skewer it well. Lay some thin slices of bacon in a dripping-pan with the beef, and place in a hot oven; salt when half done and baste frequently. Minced onion and parsley can be added to the gravy. Allow 12 to 14 minutes to the pound in the roasting.

CORNMEAL MUFFINS.—One egg, one teaspoon of salt, one tablespoon of lard, three teaspoons of fresh buttermilk, two small teaspoons of soda, and enough cornmeal to make as thick as cake batter. Sift soda into meal and add salt last. Grease the muffin-pan well, and have hot enough to fry before putting in batter. Place in a hot oven and bake quickly.

ORANGE PUDDING.—Grate three sponge biscuits in enough milk to make a paste; beat three eggs and stir them in with the juice of a lemon and half the peel grated. Put a teaspoonful of orange juice and one of sugar with half a cup of melted butter in the mixture; stir it well, put in a dish with puff paste around it, and bake slow one hour.

SPONGE CAKE.—Two cups of sugar, 2½ cups of flour, one-half cup cold water, four eggs, two teaspoons of baking powder. Beat the yolks of eggs thoroughly with the sugar, add the water, then the flour with baking powder, and lastly the whites of the eggs well beaten.

MEAT SALAD.—Chop fine one or two pounds of corned beef, then take two-thirds of a cup of vinegar, one tablespoonful of sugar and one egg Beat all together, and pour into the frying-pan and let boil, then pour into a dish to mold. Serve in slices when cold.

EXCELLENT PIE CRUST.—One cup of lard, one cup of sweet milk, pinch soda, one tablespoonful of cornmeal, salt and flour enough to mix rather soft; do not knead it.

SAUCE FOR FISH.—The yolks of three eggs, one teaspoonful of vinegar, quarter of a pound of butter, a little salt. Stir over a slow fire.



A. T. DEWEY.

W. B. EWER.

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Business Announcements.

[NEW THIS ISSUE.]

Agricultural Implements—Frank Brothers.
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Agricultural Implements—Baker & Hamilton.
Cattle—F. T. Underhill, Los Angeles, Cal.
Best Seed—W. C. Damon, Napa, Cal.
Harness—C. L. Haskell.
Foreman Wanted—C. M. Silva & Son, Lincoln, Cal.
Merced Lands—Pacific Improvement Co.

See Advertising Columns.

The Week.

The most notable event of the week has been the strike on one of the leading Western railways, which at one time bid fair to seriously interfere with overland travel and freight movement. There was a tie-up of four days on the Santa Fe system, but it did not extend to other lines. Even this delay caused much hardship at some southern points, and orange picking was stopped for fear of a permanent stoppage. As it was, there were several trains of oranges side-tracked in Arizona and New Mexico, and doubtless shippers will suffer somewhat from the delay. We do not profess to understand the equities between the railway employees and managers, but it is plain that there should be some way to obviate the stoppage of trains and the incident public inconvenience and loss. We notice that Congress is calling the attention of the Interstate Commission to the problem. If it has any wisdom on the subject it should make it known.

California interests have progressed well since our last issue. The weather has been at its best. Growth of all kinds is progressing, and field-work has been pushed to the full measure of the lengthening days.

The Bag Business.

The usual talk, and probably the usual maneuvering, of grain-bags has already begun. Any year with a good outlook gives occasion for attempts at concentrating bag supplies with the idea of selling them high when the farmer needs them next June. There is not nearly the harm done nowadays that there was years ago, for our farmers have become more forehanded financially, and more independent, and have secured facilities for doing business which they did not have a decade or more ago. Still there usually is some concentration of bags, and some money is made by squeezing those who have not been far-seeing enough to lay in supplies when prices are low. It is reported that this movement has already gained momentum for this year's campaign, that the bags are cornered, the freights are cornered, etc. This view is held by the *Evening Bulletin*, and was set forth in its issue of March 17th as follows:

It is now well known on the "street" that the ring intends, by controlling the supply, to force the price of bags up to ten cents. This will be equivalent to levying tribute upon the farmers of the coast to the tune of \$1,200,000. In round figures 40,000,000 bags are required to cover the wheat crop of California, Oregon, and Washington Territory in ordinary seasons. At six cents, the ordinary price, \$2,500,000 would be required to purchase that number of bags. Last season the dealers carried over about 14,000,000, every one of which, it is understood, the syndicate either owns directly or controls under optional contracts. The ring now has 25,000,000 on the way by clipper from Calcutta, not one of which will be sold for less than nine or ten cents. As the ordinary price of a jute grain-bag is seven cents—that is to say, a fair profit goes to the manufacturer at that price—the bulling operations of the ring will net them \$1,200,000. This sum the farmers will have to pay.

Not only has the syndicate got control of this season's bags, but preparations have already been made to "corner" next year's supply. It is stated on good authority that they have purchased 14,000,000 for delivery in 1889, and made contracts with the Calcutta mills for an option on all bags manufactured in excess of the demand from India. Not only this, but it is affirmed that the ring has also "cornered" the means of transporting bags from the Orient, by contracting for all the steamer freight up to July or August, 1889. Therefore, if a man had a shipload of bags in Calcutta next year he would not be able to get them here until after the wheat crop is harvested.

Judging by the behavior of the bag-manipulators in previous years, the conduct described above is just about what we would expect. The *Chronicle* of Tuesday has an article denying the *Bulletin's* statements, denying that there is a corner, and naming the leading operators who are said to have bags for sale.

However the facts may really be, it is quite clear that the output of bags from the State Prison, where the factory is being pushed to its full capacity by working day and night shifts, will prove a most important factor in preventing the squeeze which greedy dealers usually plan for. It is not that the manufacture will reach such very high amounts, but by having this source of supply entirely out of dealers' control, a moral effect is produced, which cannot but be powerful. It is very hard to hold a "bag ring" together, even if it has its own way in all things, for those who have much money in such a venture are timid, and this feeling will be promoted by the operation of the San Quentin factory. We are glad that the management proposes to use the influence of the concern to its full weight in the interest of the grain-growers. The following is taken from a letter by Gen. John McComb, warden of the San Quentin prison, addressed to two dealers who wished to get control of a great part of the prison's output on the plea that he had orders for them from farmers:

SAN QUENTIN, March 15, 1888.

Gentlemen: Your inquiry about grain-bags, dated 7th instant, came duly to hand and received my careful attention. As you are aware, the Governor of this State some time ago made the announcement that bags manufactured at the prison would be sold to farmers only, or as far as practicable. This declaration has had a wide circulation, nearly all the newspapers in the State publishing it, and I am of necessity bound to carry it out in good faith as near as possible.

The immediate effect of this declaration was that the farmers all over the State began to send in inquiries, and enough quotations and terms have been given by me to make it a well-known fact throughout the farming community of the State that I shall endeavor to conform strictly to the Governor's wishes in this matter.

Orders for bags from direct customers have since been briskly received, and it has become a matter of calculation to determine how nearly the product of our mill can be disposed of in this way. The indications at the present time are that we shall not be

able to manufacture more than will be needed to meet the demand thus created, and therefore I must exercise the greatest caution in determining what course to pursue when inquiries are received from dealers, not direct consumers, for large quantities of bags such as you desire.

After mature reflection I have arrived at the conclusion that it would not be prudent for me to sell such large quantities to dealers, but submit the following proposition: I will sell you 200,000 22x36 grain-bags at 8 cents, net cash, delivered at Jackson-street wharf, San Francisco, on conditions as follows: Bags to be shipped direct from here to consumers in such lots as may be required, bills for same to be sent to and paid by you, on receiving notice of shipment; 100,000 bags to be delivered between now and April 1st, and 100,000 bags between April 1st and 15th. This is the best offer I can make, and in no event can I now accept your order for more than 200,000 bags.

Trusting the foregoing will serve to explain the delay in answering your inquiry, I am yours, very respectfully,

JOHN MCCOMB, Warden.

A similar letter was written to the other broker who desired to secure the \$400,000 lot. As the brokers did not purchase the bags it is but fair to presume that they did not have customers waiting for them as was stated in their applications, and that the bid they made was merely to obtain control of as many of the State bags as possible.

The Governor and the Prison Directors are working in accord to make the State bag-factory not only self-supporting but of great value to the farmers, and if they succeed in breaking up the bag conspiracies in this city they will deserve the thanks of the State.

Fertilizers for Fruit.

Indications are unmistakable that the use of fertilizers is spreading rapidly in this State. This we count as satisfactory not because it may be inferred from the fact that our soils are wearing out, but because it shows that the old notion that California soil is inexhaustible is giving way to truer ideas. There are, it is true, many places in which the soil, from its depth and richness, will not need enriching for years to come, but if a general appreciation can be had of the fact that fertility can be reduced here as elsewhere, the result will be better conservation and local use of fertilizing materials. Learning this lesson early enough will lead to the application of manure before the land has to cry for it, and thus, by wise action, exhaustion may never come.

The orange-growers of the South are moving early in this matter, and will be rewarded. At the last horticultural convention a paper was read by Commissioner A. S. Chapman of San Gabriel in which he strongly urged the use of fertilizers on oranges, lemons and walnuts. He notes that the effect of the fertilizers on the Australian Navel is very marked, for it generally happens that there are on this tree a great many oranges that do not develop the proper characteristic. Last year on manured trees the stamp of the fertilizer was plain. Walnuts and lemons left uncultivated for two years and manured by running the water with sheep manure in the irrigating ditches, etc., gave better crops than ever before. He especially mentions this case:

We have a particular plot in our orchard, about five acres, where we have not allowed a weed to grow, cultivating after each irrigation; but this orchard was fertilized with sheep manure at each irrigation, and limed last winter at the rate of 10 barrels to the acre. These trees will average 12 feet in diameter and 15 feet in height. They are literally covered with fruit, and will average about six boxes to the tree.

At Riverside, according to a recent issue of the *Press*, there is much attention being paid to fertilizing. Sheep manure has been used quite largely throughout the valley in strengthening the soil in the production of the orange; and highly beneficial results have been obtained from it. But sheep manure is getting so scarce and the price asked for it is so high that growers will have to resort to other fertilizers. Sheep manure now costs \$3.50 a ton.

H. B. Everest recently received a carload of superphosphate for his Riverside orange grove, buying it at \$31 per ton, or \$310 for the carload. This he thinks quite as profitable as sheep manure at present prices. He applies from four to six pounds per tree to six-year-old orchard. His method of applying it is to run a chisel-tooth cultivator ahead of the grain-seed drill and to distribute and drill in the fertilizer as deep as feasible to do without injuring the roots. By drilling it in it prevents it from being carried off by irrigating and makes it quickly available to the roots of the tree.

This experience is being reproduced here

and there in the most progressive neighborhoods at the South, and it is wise. The result is better growth of young trees, larger fruit and more of it.

In the upper part of the State also fertilization of orchard and vineyard is receiving more attention than formerly, and the indication is a promising one.

Board of Forestry.

A meeting of the State Board of Forestry having been called for last Tuesday afternoon, Chairman Kinney and Secretary Forman were at their posts, but a quorum of members was wanting. This, however, did not prevent the reception of some interesting reports.

Special Agent Collins stated that having received information last summer of illegal timber-cutting on school lands in Mariposa, he worked up the case and submitted it to the Attorney-General, expecting him to proceed against the guilty parties. That officer, however, on looking up the law, found he had no authority to bring a civil action under such circumstances, but only to prosecute criminals, so that it appears desirable to secure legislation giving the board additional powers.

Mr. Behen, special agent at Pasadena, reported that S. L. Leighton & Co., contractors in Los Angeles county, were cutting timber on a section of unsurveyed land recently forfeited by the railroad company to the Government. They claim to have bought the timber from the railroad company prior to the forfeiture of the grant. J. Marion Brooks, U. S. District Attorney for Southern California, was notified of the facts, but said that he did not want to have anything to do with such lands.

In regard to the distribution of seeds, Mr. Behen stated that some of the persons to whom they were sent did not call for them, and consequently the larger portion have been planted in the Park nursery. Of the seeds so far planted, Mr. Clark, manager of the nursery, reports that those of the sugar gum proved to be the best. The loto and wattle seeds sent to Pasadena have just been planted.

Mr. Kinney announced that Hon. Wm. A. Holman, Chairman of the House Committee on Lands, has introduced a bill into Congress as a substitute for those submitted by the State Board of Forestry and B. E. Fernow, the National Forestry Officer. Mr. Holman's bill provides for placing the protection of all forest land reserves in the hands of the army, instead of under the control of the Forest officers. All forests consisting of commercial timber are reserved as to the sale of land, and as a substitute for the present system a sale of timber is provided for under control of the Secretary of the Interior. The President is further empowered to withdraw from sale or entry any forest lands that he may think necessary for the preservation of the climate, streams and general welfare of the people. This bill is very much opposed by the foresters in the East, as not sufficient to produce the results desired; but Mr. Kinney deems "half a loaf better than no bread," and regards the proposed enactment as at least a step in the right direction.

A series of large photographs, illustrative of lumbering operations in California, has been donated to the board by Chas. G. Yale, and will soon adorn the rooms.

Prof. and Mrs. J. G. Lemmon having been appointed botanist and artist to the board, the Professor is to be supplied with a fine photographic outfit, and will soon start to investigate the habits and growth of the forest trees of California. He will also gather data of the flora, while Mrs. Lemmon will make drawings and sketches. The information thus obtained will be incorporated in the board's annual report.

PERSONAL.—We had a pleasant call the other day from Mr. C. L. Travis of Minneapolis, a well-known inventor of improvements on the twine-binding mower, and a member of the Minneapolis Twine Binder Company. Mr. Travis comes to California merely for recreation, and is getting that in acceptable form. He will not admit, however, that all the good things in the world are in California, but still clings to the scenes and interests of the great Northwest. His stay in California this time will be brief.

THE Stanford University has three large buildings completed.

Olive Culture.

[Written for the RURAL PRESS by F. B. LOGAN.]

The history of the olive dates far back into the misty past. It has been the theme of many legends of poetry and of song. In scriptural times the olive branch was regarded as the appropriate emblem of peace and plenty, and is still held in like veneration. In view of this fact, and the further consideration that it is evidently destined to become one of the prominent industries of California, I venture to give a few observations on olive culture—the result of some investigation of the subject and of interviews with experienced olive culturists. Prominent among those to whom I am indebted for valuable information on the subject in question, I make grateful acknowledgment to E. E. Goodrich, Esq., of Santa Clara. This gentleman is the proprietor of a fine olive orchard of 76 acres, known as the Quito Farm, Santa Clara valley. He has spent several years in Italy and other portions of Europe for the express purpose of acquainting himself with the details of the most approved methods of olive culture and oil manufacture. In addition to such advantages, he has always had on his plantation a most competent and reliable foreman, who, in practical knowledge of the subject, has few equals in this country. Mr. Goodrich is therefore quite capable of imparting much reliable intelligence on the question. From this source and others above referred to, I am led to the conclusion that, while the olive will grow (where the climate is suitable) on almost any kind of soil not too wet, the best results are attainable only on moderately fertile lands, dry, stony, hill and mountain soils being decidedly preferable to moist valley lands.

Reproduction.

There are numerous methods of propagation, as by seed; by simple cutting; by the ramified cutting; by suckers that shoot from the trunk; by the layering system.

Practically the best and most hardy trees are propagated from seed, followed by grafting, but it is estimated that at least 10 or 12 years must elapse before a tree from the seed will bring any return, whereas from cuttings a light crop may be expected the fourth year with fair attention.

As to whether large or small cuttings are preferable, opinions differ. Mr. Goodrich's experience favors large cuttings and short rather than long ones. His method is to plant them absolutely upright, the top several inches beneath the surface of the ground. By this process his percentage of loss is very small.

It is a common error prevalent in California to plant the trees too near each other. Many of the trees of Mr. Goodrich's orchard were already planted when he came into possession of it. The distance, 20 feet apart, he now finds altogether too close, and is obliged to remove the alternate rows each way, leaving the trees 40 feet apart. This is the distance he recommends, for the reason that the health of the tree demands abundant light and air, and furthermore, the enormous size which it attains in the usually long years of its existence requires at least that space.

Early Profits.

Doubtless many are deterred from engaging in olive culture by reason of the impression which generally obtains that so many years must elapse before any profitable returns can be realized from the outlay incurred in starting a plantation. Mr. Goodrich seems to have devised a method of obviating this difficulty by planting grapevines between, and thus, while he is waiting for the young olive trees to come into bearing, after two or three years he is getting fair pay from the vines. His opinion is that between the olive trees a row of peach, or some other early-bearing fruit trees, might be planted at 20 feet, and then at 10 feet a row of grapevines. After the lapse of a certain number of years, or whenever the olives begin to bear, and there is interference with them by the other trees and vines, simply dig them up. At this time, say from 8 to 10 years, the income from the olives, it is estimated, will amount to more than double that of the same number of acres of vines; and the rate of profit on the olive product would still continue to increase beyond that of the former for years to come. This conclusion is by no means theoretical. From the vines, mostly young, growing between the olive trees on the Quito farm, was manufactured near-

ly 9000 gallons of wine last year; and the olive crop, to all appearances, is equally as large as, in all probability, it would otherwise have been.

Where the plan of Mr. Goodrich is adopted, that of planting vines among the trees, an oil manufactory and winery may be combined—a matter of much economy, since the manufacture of oil and wine respectively engage separate and distinct seasons of the year.

The vines on the Quito farm are, of course, considered as an additional, but subordinate crop, and it was not the original intention of the proprietor to build a winery. The threatened low price of grapes in 1887 made it seem desirable. The dimensions of the building, 50x30 feet, were calculated for the estimated crop of the Quito at its highest production (not more than 150 to 200 tons), but, by the use of large fermenting tanks, somewhat crowded, and three fermentations and the immediate transfer of the wine to the cellar, or by providing cooerage in pieces of from 2000 to 5000 gallons, it would be

the view of ancient authority handed down through the ages, it would appear that after planting the olive may be left to take care of itself. Modern experience teaches that the olive tree, though by no means exacting, needs a certain amount of care, especially as regards pruning. In support of the contrary opinion, however, the fact may be cited that in certain olive regions of Europe, Africa and Asia, there are still many olive trees that receive no care whatever, and are never pruned. For practical information on this point the reader is referred to Mr. Ellwood Cooper's treatise on the olive, and other writers who have made this branch of husbandry their study.

Mr. Goodrich favors constant cultivation, which, however, should be shallow on account of the roots which grow near the surface of the ground.

The subject is too vast to attempt in this article anything more than a few general observations on its several divisions. There is,

in lubricating, and for numerous medicinal purposes.

Adulterations.

It is a well-known fact that it is difficult to get a pure article of oil in the American market. In fact, it is doubted that any of the oil imported from Europe and placed on our markets contains but a fractional part of the pure oil of the olive. What is not mixed with hog's lard and cottonseed oil before it is shipped to our shores is well attended to by our own enterprising wholesale merchants before reaching the consumer. As an evidence of the extent to which the fraud is perpetrated upon the public, I might state that when Mr. Goodrich, a few months ago, tried to obtain some pure olive oil in the city of Florence, he was gravely informed by a prominent exporter to whom he applied, that the genuine article could not, in his opinion, be had in retail quantities in that city. Thus it is, what we buy is a miserable adulteration with the exception of the comparatively small quantity supplied by those engaged here in this infant California industry.

California's Adaptability.

The profitable cultivation of the olive is beyond question, as attested by all who have made the subject a practical study. In fact it may be doubted that any section of Europe backed by the centuries of olive-production fame, has a percentage over some localities in this State. The greater evenness of climate here over that of most portions of Europe is of incalculable advantage to the California olive culturist. The disastrous winters which visit the former on the average of every nine or ten years, has kept the production so far below the demand that the high ruling prices have held out the temptation, above alluded to, of expanding the article by adulteration.

"This serious check to its development in Europe," says Adolphe Flamant of Napa, Cal., in his "Practical Treatise on Olive Culture," "is the very reason why its culture should be adopted fearlessly and extensively under the temperate climate of California, for which Providence has been so lavish in its beneficent gifts."

SAVING POSTAGE.—We lately referred to the fact that under the new postal convention Canadians can mail seeds, plants and cions to any point in the United States at the rate of four cents per pound, where persons in the United States must pay 16 cents. It is said that one seedsman, doing a large business at Rochester, N. Y., now ships his seed by the carload to the Canadian postoffice at the other end of the suspension bridge, where Canadian stamps are affixed to the packages and they are mailed direct to the U. S. buyers. The Canadian Government is satisfied that American seedsmen shall pay all their postage in the Dominion. Another seed firm is now sending out 500,000 catalogues. It is found cheaper under this new convention to send the catalogues in bulk to Canada and then to mail them under Canadian stamps to the United States. To offset this practice Postmaster-General Dickinson has issued a circular instructing postmasters to rate up postage on packages mailed in Canada for delivery in this country which bear indications upon their covers that they were sent by dealers in the United States. A change in our domestic postal rates is certainly called for.

CORN AND WHEAT.—The statistical returns at the Agricultural Department for March show the corn crop to be the smallest since 1884, estimated at 508,000,000 bushels, a decrease of about 100,000,000 from last year. The indicated stock of wheat in the hands of farmers is 132,000,000 bushels, as against 122,000,000 bushels at the same time one year ago; used in seeding, 34,000,000 bushels; home consumption, 187,000,000 bushels; exported, 61,000,000 bushels; visible supply, 38,000,000 bushels.

BUFFALO FARMING.—It is suggested in the *Globe-Democrat* that if some of the great cattle kings of the West would give up raising cattle and go into buffalo farming they would find it an immensely profitable business. Not only would every hide obtainable find ready sale, but the meat would find a market in the cities, and the refuse of the carcass could be made into the dozen articles of profitable commerce that the steer now affords.



SCENE ON THE QUITO OLIVE FARM, SANTA CLARA VALLEY.

possible to handle and store nearly 100,000 gallons.

Manufacture of Oil.

In considering a comparatively new and undeveloped fruit culture, it is well to look at its development in the future as regards machinery and methods. It will not be necessary for the farmer in every instance to provide himself with oil-crusher and press, or to know the processes of oil manufacture and take the risks of them, or set up the elaborate and expensive tanks for storing, and undertake the delicate and expensive processes of bottling and casing. As the grape farmer sells his grapes to a winery, the prune, peach and apricot raiser to a cannery or a drying manufactory, so the olive farmer of the future will perhaps sell his green olives for pickles and his ripe olives for oil at some mill, such as that of the Quito, as is done in Italy universally to-day. By this system the knowledge and experience which are necessary will be at the command of a large district.

General Care.

It is admitted by all experienced writers that the olive will survive greater neglect than almost any other fruit tree on the earth. Taking

however, such a lack of definite knowledge here on the question which must soon become one of broad and deep interest, that I will mention a few of

The Uses of Olive Oil.

The Bible teaches how the oil was regarded as a symbol of divine grace. Anointing was a common religious observance, a sacred rite of the Hebrews.

In a hygienic sense it was used for bathing. Athletes applied the oil with rubbing before appearing in the arena, as giving more suppleness and vigor to their bodies. It has never been disputed that the effect of olive oil over the human system is quite salutary. While some claim that all animal fat tends to injure the stomach and thins the blood, the oil of the olive aids digestion and the brain to attain the highest power of intellect. Its culinary uses are quite numerous—a fact sufficiently demonstrated by the amount—92,000,000 gallons—which Italy alone supplies for table uses.

The oil always has been the basis of very many perfumed preparations for the markets of the world. It is used in the manufacture of soap, of broadcloth, in dyeing, in lighting and

ENTOMOLOGICAL.

Further Notes on *Icerya*.

[EDITORS PRESS:—The following communication from Prof. Riley will doubtless be of interest to your readers. The *Icerya sacchari* referred to is the only other species belonging to the same genus as our *Icerya purchasi*, and infests sugar-cane in the island of Mauritius. The Dr. Icery referred to is the person after whom Signoret named the genus *Icerya*.—D. W. COQUILLETT, Los Angeles.]

My Dear Mr. Coquillett: I have just read your remarks in the *Pacific Fruit Grower* for February, and take occasion to send you a few other statements which you may deem of sufficient interest to publish.

On the general subject of the formation of technical terms it is hardly worth while to enter into discussion. As you know, I am by no means a purist in such matters, and where we have such authorities as Dr. Sharp in Coleoptera for terms like *Darwinhydrus* and *Huxleyhydrus* there is perhaps no limit to individual idiosyncrasies in this regard. The fact that authors have coined badly constructed words is scarcely justification for continuing the practice, and I would rather have a pure concoction invented without derivation than a derived one constructed in opposition to the ordinary rules of nomenclature. Signoret has been guilty of a great deal of poor work in this direction, but would hardly have been able to evolve *Icerya* out of *Isocera*.

However, I said I would give you some statements. As I wrote you before, I thoroughly studied Signoret's types while in Paris and satisfied myself that *sacchari* is distinct from *purchasi*. The settlement of this fact leaves the question of the original home of *purchasi* still open; for, though this species may be found to be indigenous to the islands of Bourbon and Mauritius, together with *sacchari*, i. e., both species may occur in those islands, yet there are stronger probabilities than ever now that the more prevalent belief that *purchasi* comes from Australia is the correct one. I have had considerable interesting correspondence lately which reads almost like a romance. Dr. E. Icery of Mauritius (as I learn from Col. Nicholas Pike, now of Brooklyn, N. Y., but formerly of Mauritius) was a well known planter in the District of Flacq. He wrote a great deal on the cultivation and manufacture of sugar, and was a ripe scholar and gentleman. Col. Pike brought home with him to this country specimens of the "Pou blanc" and gave them to the late Louis Agassiz. This "Pou blanc" had been described by Westwood in the *Gardeners' Chronicle* for Dec. 22, 1885, as *Dorthesia seychellarum*. In hunting up Westwood's figures and descriptions, I felt convinced that they belonged to *sacchari*, and, sure enough, my examination of the specimens confirms the belief. I will say nothing further now, however, as I hope soon to put together a supplementary article on *Icerya* with a statement of the parasites so far found in this country. C. V. RILEY.

Washington, D. C.

Suggestions From a Visitor.

EDITORS PRESS:—I feel it my duty to write a few lines to your estimable paper, thanking you and many of California citizens that treated us with so much courtesy as guests of the American Horticultural Society, from San Diego to Redding. Every place we made a halt or visit the people made us happy, because they were happy themselves—and no wonder, with such a climate, soil, and appurtenances to enjoy life, and to make a living by either farming or gardening, and fruit-growing in particular. We were astonished to see so much progress made in the several branches, especially in dried fruits, raisins, prunes, figs, and apricots, the last having no competition anywhere on the globe. The Japan persimmons, olives, nuts, almonds, English walnuts, pecans, chestnuts, all interested us; also some filberts—this last named but a few are yet grown, but seem to be a sure-paying crop, and then last, but not least, nearly all the citrus fruits, where the mountains can shelter the orchards from the northern winds and heavy frosts.

We don't regard the semi-tropical fruits as being as profitable as our northern varieties, because there are more ways of preserving the latter, and a wider range to send to market. The waste on citrus fruit is quite large, and the time for marketing quite limited, and excess of over-production very likely to occur, while the other fruits, either fresh, dried, or canned, have all the year and the whole world for a market. California is destined to furnish all the staple fruits, nuts, and wines for all America in a very few years, and for that matter Europe, too, in time, if the future planting and raising of trees continues to increase in proportion as it has done within the last five or six years.

But I fear there will be some drawbacks on account of the insect depredations, unless strict watch is kept and they destroyed as fast as they appear, because such a favorable climate will allow their increase 12 months in the year, while in our Northern States only the summer season favors them. I have reference to the scale insects in particular. I noticed them in some of the older orchards, in the southern counties, on almost every bush or tree except the pepper and pine trees. In mentioning the matter to some fruit-growers they referred me

to Professors Klee, Coquillett and Hilgard, as they are experimenting and have found cheap remedies for their destruction; but it takes a good deal of time and considerable expense to get a right to spray whole orchards, shade trees and bushes in dooryards, streets and fields, and unless all are gone over and insects killed in one season they will soon get the start again. The same varieties are more or less in the Northern States, but are not as tenacious because they have a shorter season to grow.

Washes Which Will Hold Fast.

These insects protect themselves as soon as they are set free from the mother scale, and finding a good lodgment, they build a scale over themselves and soon enlarge and do so as long as they live in your climate. With us, they

insects. All these substances can be diluted with water, but they want to be strong enough to form a coating over the insect and to last for at least a month or two. By that time it will crack by drying and then will scale off insects and all, and the bark will be clean and the wash will not do any injury to the fruit and foliage. It has worked well with us and we have no doubt will do so with you in your State. I hope some of your orchardists will try it with same results. GEO. P. PEPPER.

Pewaukee, Wis.

Wainwright's Spraying Appliances.

We are glad to see new inventions for insect destruction and to notice the growth of the

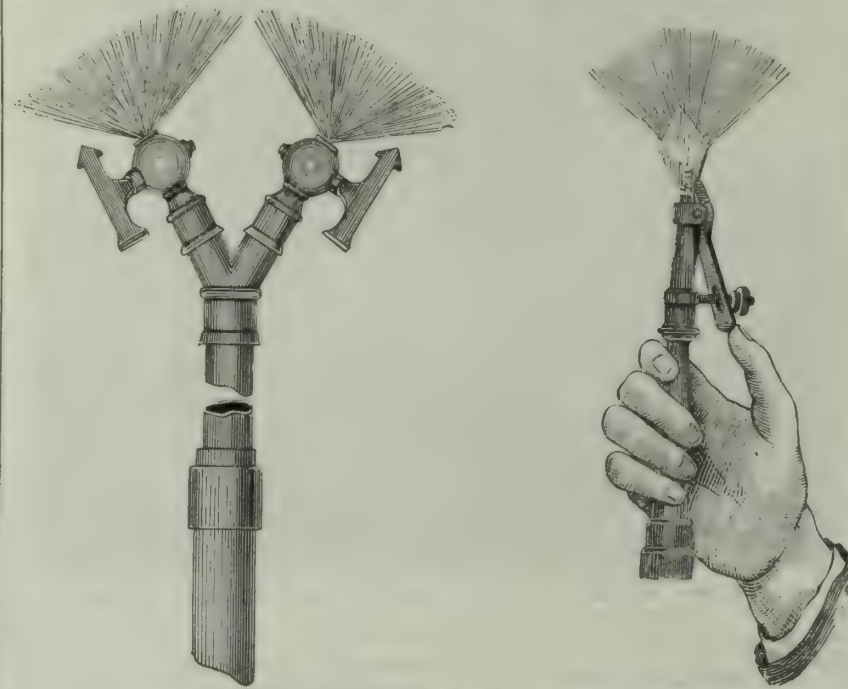


ORCHARD SPRAYING WITH EUREKA PUMP AND SPRAY NOZZLES.

only grow and increase when not frozen up, and therefore any substance that will encase them so that they cannot move and enlarge will destroy them, because they must have space and air. Any substance that will not injure the foliage and fruit, and at the same time is obnoxious to the insect,

business of those who manufacture and deal in spraying appliances, for it is an indication that the anti insect warfare is in earnest and that our profitable and promising fruit interests are to be preserved.

William Wainwright, whose establishment is



WAINWRIGHT'S EUREKA AND TELEGRAPH NOZZLES.

will destroy them. We have used glue diluted with water and added Scotch snuff; also tea from tobacco stems and glue, and if no cheap glue could be had, have used blood. We have also used resin soap, water and Indian turnip juice. All worked well when every limb was well painted over or sprayed. In your State the blood will answer best with either tobacco juice or pepper tea. I should try pepper tea made from your pepper tree leaves or seeds, with diluted blood just thick enough so it could be sprayed on with a force-pump or painted on with a brush, on or before the buds break or trees leaf out. Blood can be had at any of the slaughter-houses for only the labor of saving it. If tea from tobacco stems is used they can be had very cheap from any tobacco factory, especially after they had been condemned by the Custom House Inspector, and been sprinkled with gas, tar water or petroleum. We have seen the stems advertised for four dollars per hoghead of 500 pounds at Chicago and Philadelphia. If so treated they can be had very cheap and are worth more for the purpose mentioned as a wash for destroying

at 105 Beale St., upstairs, is bringing out many interesting devices in pumps, tanks, hose adjustments and nozzles, and has recently issued a large illustrated circular describing his appliances, which should be read by those who are examining this class of goods. We give on this page a general view of orchard spraying, which introduces some of the inventions to which we allude. On the wagon is the large Eureka pump and tank. The special claims of the Eureka pump are thus described:

The improvement consists of the employment of an extra inlet for the admission of air into the body of the pump and from there into the air-chamber or discharge pipe. These pumps are operated like other pumps, but the inlets are governed by stop cocks and check-valves. These air inlets can be placed on any style of pump, either in the plunger-rod or in an extra pipe with check-valve placed so as to allow air to enter the pump near the bottom or below it. The amount of air or liquid can be

controlled by the stop-cocks governing the air or liquid inlets. If it is desired to pump air alone, shut liquid inlet; if liquid is required, shut air inlet. If both air and liquid are required, open both stop-cocks slightly. The advantage these pumps have over others is, as both air and liquid can be pumped by the same pump at the same time, it enables the operator to force the liquid against any amount of elastic pressure in the air chamber (up to 100 pounds to the square inch if desired). As the air and liquid are somewhat mingled in their passage to the air chamber, it insures a continuous fine, misty spray, at a small cost of materials. Another advantage this pump has is, as the air chambers are extra large, by putting on the air pressure a continuous spray may be kept up for five minutes to two hours, according to the size of the air chamber employed, without using the pump, thus enabling one man to charge and use alone.

The way this principle is employed is seen on the left hand of the engraving, where the operator has charged the air chamber and slung the apparatus on his back and gone to spraying. The engraving also shows the arrangement for single and double spray tips, also the arrangements for bringing the spray to bear upon the different parts of the tree.

We also give views of the Eureka double nozzle and the Telegraph spray nozzle, the latter having been used with satisfaction in spreading whitewash on large barns and other outbuildings, the operation being much easier and cheaper than brush application. The Eureka and Telegraph nozzles are both easily adjustable, and all degrees from a solid stream to a misty spray can be secured with them.

The Funereal Month of March.

An observant metropolitan barber says that he can tell one's physical condition by the state of the hair!

The Bible tells us that with his hair gone Samson lost his strength. The Romans considered baldness a serious affliction, and Julius Caesar was never quite satisfied with himself because his poll was bare.

The face, however, is the open book and one can readily trace in its various expressions, lines, changes and complexion the state of the system.

The eye that is unusually bright and yet has a pallid brightness, the face upon whose cheeks nature paints a rose of singular beauty and flush, more marked in contrast with the alabaster appearance of the forehead and nose and lower part of the face, is one of those whom the skilled physician will tell you will some day dread the funereal month of March, because it is then that consumption reaps its richest harvest. Consumption, they tell us, is caused by this, that and the other thing, by microbes in the air, by micro-organisms in the blood, by deficient nutrition, by a thousand and one things, but whatever the cause, decay begins with a cough and the remedy that will effectually stop the cause of that cough cures the disease of the lungs.

That is all there is of it. The cough is an evidence of a wasting. To stop it effectually, a remedy must be used that will search out the cause, remove that and then heal the lung and do away with the cough. This is the power, special to itself, possessed alone by Warner's Log Cabin Cough and Consumption remedy. This is no new-fangled notion of narcotics and poisons, but an old-fashioned preparation of balsams, roots and herbs, such as was used by our ancestors many years ago, the formula of which has been secured exclusively by the present manufacturers at great trouble and expense. It is not a mere cold-dryer. It is a system-searcher and upbuilder and a consumption expellant. Where others fail, it wins, because it gets at the constitutional cause and removes it from the system.

J. W. Hensaw of Greensboro, Pa., on Jan. 15, 1888, reported that "he had derived more real benefit, for the length of time, from Warner's Log Cabin Cough and Consumption remedy than he had for years from the best state physicians."

If you have a cough, night sweats, "positive assurance in your own mind that you, oh—you, have no consumption," and yet lose flesh, appetite, courage, as your lungs waste away, you may know that soon the funereal month of March will claim you, unless promptly and faithfully you use the article named. If other remedies have failed, try this one thoroughly. If others are offered, insist the more on trying this unequalled preparation.

Some persons are prone to consumption, and they should never allow the disease to become seated.

An Open Letter.

FELTON, SANTA CRUZ CO., CAL., }
March 3, 1888. }

To the Bull & Grant Farm Implement Co., 14 and 16 Main St., San Francisco, Cal.

DEAR SIR:—Will you please send us a catalogue and price list of your Rushford Tubular Steel Axle Wagons? The Rushford Wagon I bought for our own use two years ago has proved itself to be A No. 1 in every respect. It has carried from two to three thousand pounds more than the guaranteed capacity, and is as sound at present date as when purchased. It is the best ironed wagon of any Eastern wagon we have ever handled. The wheels of this wagon are solid, and the tires heavy and well braced with good heavy iron. Please quote me prices for this season and oblige,

Yours respectfully,

W. H. TALBOT & CO.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., Room 3.

THE LOUISIANA TRACT!

SITUATE ONE MILE FROM THE FLOURISHING

City of Sacramento,

With a Population of 30,000, and

$\frac{1}{4}$ MILE from Terminus of an ELECTRIC RAILWAY, now in course of construction.

SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. 5 ACRES IN FRUIT, well attended to, will make a handsome income. One Acre in Strawberries will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$80, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

—APPLY TO—

EDWIN K. ALSIP & CO., - REAL ESTATE AGENTS, SACRAMENTO, CAL.

Catalogue of Lands issued monthly. Send for one.

HOMES and RANCHES!

E. TUCKER,

Real Estate Agent,

MYERS ST., OROVILLE, BUTTE CO., CAL.

Improved and unimproved lands to any extent from 5 to 5000 acres with good, comfortable homes and all necessary conveniences, for sale on desirable terms. These lands require no irrigation, Railways convenient, ample supply of water, and the climate cannot be surpassed. Apply as above.

PALERMO LAND & WATER CO.

DIRECTORS.

GEORGE C. PERKINS. HENRY WISE. D. K. PERKINS
C. W. McAFEE. A. S. BALDWIN.

Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES

At \$75 per Acre,

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot.

Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. One hundred and seventy-five acres at Palermo are now being set out in the choicest varieties of Florida Orange Trees. Maps and further particulars of

McAFEE BROTHERS, Agents, 10 Montgomery St., San Francisco.

T. B. LUDLUM & CO., Agents, Oroville, Cal.

SANTA YNEZ,

Santa Barbara County, California.

THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil.

TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for homes or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

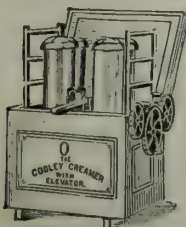
E. de la CUESTA, Agent, Santa Ynez.

McCLUNG & PRAY, Agents, 325 Montgomery St., San Francisco.

SIDNEY LACEY, Agent, Los Angeles.

COOPER & DREYFUS, Agents, Santa Barbara.

McCLUNG & PRAY, Agents, San Diego.



The Largest Creamery in the United States

The Big Foot, Ill. Creamery is claimed to be the largest Creamery in this country or the world. THE PRODUCT OF 1887 WILL REACH

\$200,000.00.

The patrons are Paid 27 Cents for cream equal to a pound of butter. It is run on the Cooley System of Cream Gathering.

The Largest Creamery in New England is run by D. WHITING & SON, Wilton, N. H. Patrons receive 29 CENTS for Cooley Cream equal to a pound of butter

The Largest Creamery in Penn., is the TROY CREAMERY, patrons are now paid 28 CENTS Per Pound.

A full line of Butter Factory Supplies, including ENGINES, BOILERS, CREAM VATS, CHURNS, WORKERS &c. Send for illustrated circulars. Plans and Estimates furnished free to purchasers.

VERMONT FARM MACHINE CO., Bellows Falls, Vermont.

DEWEY & CO. { 220 MARKET ST. S. F. } PATENT AGENTS. Elevator 12 Front.

FREE EXCURSION MERCED

COMPLETION OF THE

CROCKER AND HUFFMAN CANAL

Twenty-Seven Miles in Length; Capable of Irrigating 1000 Square Miles

GRAND CREDIT SALE AT AUCTION

3,000 CHOICE BUSINESS AND RESIDENCE LOTS 3,000

Sale without Reserve in the Fountain City of Merced

BY ORDER OF THE

PACIFIC IMPROVEMENT COMPANY

UNDER THE MANAGEMENT OF

BRIGGS, FERCUSSON & CO.

DAYS OF SALE

Tuesday, Apr. 10th, Wednesday, Apr. 11th, Thursday, Apr. 12th 1888

Sale Begins on Tuesday, at 1 o'clock P. M., and on Wednesday and Thursday at 10 o'clock A. M.

TERMS OF SALE

One-fourth cash; balance in three equal payments, due in six, twelve, and eighteen months, with interest at the low rate of 8 per cent. per annum. A deposit of ten per cent. will be required on the fall of the hammer; balance of cash payment to be made at the El Capitan Hotel, Merced, at the close of each day's sale, when contracts will be issued.

TITLE PERFECT. Deeds at Purchaser's Expense.

Special arrangements have been made by the Merced Board of Trade, for the Accommodation of all Excursionists, Regardless of Number.

LAKE YOSEMITE

Only 5 miles from Merced, is a square mile of water 30 feet deep, to be stocked with Fish, Steam Yachts, Sailing Yachts, Gondolas, Row Boats, Floating Islands for Music, Refreshments, etc., etc.

UNEQUALED WATER SUPPLY. The Crocker and Huffman Canal, costing \$1,500,000, with abundance of pure water, supplies the City of Merced.

Water from the YOSEMITE FALLS with ninety feet pressure at MERCED

The Future Manufacturing City. **FOUNTAINS SEVENTY FEET HIGH**

POWER AT NOMINAL COST. Flour Mills, Woolen Mills, Sash Factories, Machine Shops, and other

MANUFACTURING ESTABLISHMENTS are in immediate contemplation.

BUILDINGS TO BE ERECTED with large rooms supplied with power for all purposes.

POWERFUL TURBINES for manufacturing purposes. All waste water from Fountains and Turbines conducted into Irrigation Canals.

ELECTRIC RAILWAYS, Lights, Motor Power all produced by this economical and powerful Water Pressure.

TEN MAGNIFICENT COLONIES surround the future Fountain and Manufacturing City

IN THE THERMAL BELT only five miles distant.

FLOWING ARTESIAN WELLS at a depth of 160 feet.

NATURAL GAS only 400 feet from the surface.

RAISIN VINEYARDS, ORCHARDS, from 5 to 20 acres on installments.

ORANGE GROVES from 1 to 10 acres on installments, all adjacent to the CROCKER & HUFFMAN CANAL.

FREE EXCURSION

TO AND FROM **MERCED** TO PURCHASERS

EXCURSION TICKETS are sold good on all Regular Trains as follows

APRIL 9th and 10th, Limited to April 15th for return trip

All Tickets will be issued with a coupon attached, showing the amount paid; one coupon will be received from each purchaser as a credit on FIRST PAYMENT

Excursion Rates made known upon application at the Southern Pacific Company's Depot Office

For Maps, Catalogues and Full Particulars, Call upon or Address

BRIGGS, FERCUSSON & CO.

REAL ESTATE AUCTIONEERS

314 CALIFORNIA ST. SAN FRANCISCO, CAL.

MISSION ROCK DOCK

GRAIN WAREHOUSE,

SAN FRANCISCO, CAL.

75,000 TONS CAPACITY. 75,000

Storage at Lowest Rates.

OHAS. H. SINCLAIR, Supt.

Cal. Dry Dock Co., props. Office, 303 Cal. St. room 18

LOOK AT THIS.

Parties willing to invest in an Improved Grape Picking Implement, as well as some other improvements in Horticultural and Garden Tools, efficient and cheaply made, will do well to address

R. F. TALMADGE, SANTA ROSA, CAL.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

FINE CLEVELAND BAY.—Haywards Journal: H. W. Meek has purchased one of the finest imported Cleveland Bays that he could find—"Napoleon." He is a rich bay, with black legs, good mane and tail, and superior action; is very deep in the girth and has wonderful style. He took the \$75 premium in London, besides the silver medal where he was shown against horses of all ages and open to all England. He also took first premium at Middleton, in Tusdale, and second premium at Bowes, in 1885. Since he was imported in August last, he took the first premium at the Illinois State Fair, at Olney, and first at the Fat-Stock Show at Chicago. Napoleon is half-brother to Baron Hilton, of the well-known Cook Breeding Farm, Contra Costa county, who has quite a reputation as a prize-winner on this coast. This horse was brought to this coast by Mr. Seth Cook, and Mr. Meek is to be congratulated on his good fortune in securing such a valuable animal.

Butte.

IRRIGATING BY PUMPS.—Oroville Register: A number of parties in this county have made practical tests of the pump. Among them are E. Fagin, V. P. Richards and Wm. Mould of Gridley. They are using the well-known Thomson & Evans patent crank and fly-wheel pump. Mr. Fagin tells us that his pump throws 5000 gallons an hour, is easily managed, and is rarely out of order. The Thomson & Evans pumps have taken premiums at many of the county and district fairs, as at the State Fair. For less than \$500 a man can fit up a pump that will irrigate his whole ranch, if he desires it, while a cheaper pump will answer all purposes for his orchard and garden.

A TOUGH HEN STORY.—Gridley Herald, March 15: Fred Haack is the owner of a hen that is hard to equal as a natural curiosity. The fowl has one head and neck, but two well-developed bodies and four legs, and it uses all the latter when walking. The greatest curiosity about biddy is that she lays two eggs at the same time, and has averaged 58 eggs a month for the last four months. Her last brood numbered 27, and she raised every one of them. She is of the Plymouth Rock variety.

Fresno.

GREAT SLAUGHTER OF JACK-RABBITS.—Selma Cor. Chronicle: The first rabbit-drive in Fresno county occurred March 9th, to-day, at Wildflower, twenty miles southeast of Fresno and eight miles from Kingsburg, Selma and Fowler, a line of men two miles long starting three miles east of the corral and going west to it. There were 300 men on foot, armed with sticks, at the start, which number had increased to 500 at the end. They were two hours in making the drive. Two wings had been built, half a mile long, each leading to the corral. There was a gate four feet wide and a chute 30 feet long leading into the corral, which was 60 feet in diameter and surrounded by a fence seven feet high, made of wire screen. The scene as the rabbits went in was most exciting, men, women and children hallooing at the top of their voices. Many rabbits turned and escaped before entering the wings. When the gate was closed the men entered and the slaughter continued for half an hour. Hundreds of rabbits had been killed in the morning against the fences and 4005 were killed in the corral. Though there were 500 men on the drive, the line was not compact enough, probably 1000 rabbits escaping through the line, though many were killed in the attempt. Most of those in the drive were inexperienced, but they worked well. The drive was on foot, on account of the country being generally fenced. R. B. Butler, a leading Fresno man, was marshal, with an able corps of assistants on horseback. At the end of the killing the chute was three feet deep with dead rabbits, and the air was filled with fur like a snowstorm. All parts of Fresno county were represented, and there were many people from Kern and Tulare. Some of the dead rabbits were hauled away for hog and chicken feed, but most of them were left on the ground. There will be another drive near Wildflower on Thursday, March 22, when the wings of the corral will be changed to the west side of the inclosure to accommodate the people on that side. The expenses of the drive were \$600, which was contributed by the citizens of Wildflower.

Humboldt.

SHEEP LOST.—Blocksburg Cor. Standard, March 19: The sheepmen of the eastern portion of Humboldt and Southwestern Trinity have suffered great loss of sheep this winter, owing partly to the cold, wet weather, and partly to the long continued dry spell in the fall. The rains held off so late that the cold weather came on before the grass could start, and consequently the sheep were very poor and weak and commenced dying early in the season. Then again the coyotes and other wild animals so destructive to the flocks are becoming very numerous throughout this section of the county. Unless they are checked soon the sheepmen will not be bothered about paying the five cents extra license which the supervisors of Trinity county have levied upon them. I made a flying visit among the sheepmen a short time ago, and learned from them that their losses were much larger than ever known before, being nearly one-half their entire bands, and they

were still dying. I noticed along the many trails which I was obliged to follow that the ranges were spotted with dead sheep. Cattle and horses have wintered very well considering the long cold season, the losses being very small compared to that of sheep.

Los Angeles.

MORE FLOWING WELLS.—Ontario Record, March 14: Splendid progress is being made in the development of artesian water north of Pomona for use on the northern portion of the (Chino) ranch. Five fully equipped steam well-boring machines are in active operation, and four flowing wells have been already secured. Cement pipe is being manufactured on the ground for conducting the water, two gangs of men, using 100 barrels of cement per week, being constantly employed. This enterprise will involve an expenditure of not less than \$200,000.

SPRING NOTES FROM ORANGE.—Cor. Times, March 15: The mocking-birds are making delightful music. The hills are green and beautiful. The early grain is in fine condition. Ranchers are busy in all directions, turning under the luxuriant growth of weeds. Now is the time to trim hedges, and many men are busy putting them in proper shape. The ladies are improving these fine days by setting out plants, shrubbery and flowers in their ornamental gardens.

ALHAMBRA is to have an Industrial and Citrus Fair. It will open March 29th and close Saturday, 31st. Excursion trains will bring the people from different points, and a very entertaining exhibition is looked for.

AZUSA PRODUCTS.—News: Mrs. Anna E. Logan, residing near Azusa, from three pounds of potatoes, received by mail from friends in the East, planted in April, 1887, and dug in July, obtained 200 pounds, 180 of which were immediately replanted, and in December were dug and yielded 2500 pounds, were sold, and brought four cents per pound. The beauty of these potatoes was in their uniform size and quality. . . . H. D. Briggs, one of the progressive farmers in the Azusa valley, on five acres of land this season raised as follows: On one acre of four-year-old trees, 115 boxes of oranges, which sold at \$3 a box; on 1 1/2 acres of apricots, three-year-old trees, five tons, which sold at \$30 per ton; on one acre of peaches, three-year-old trees, two tons, which sold at \$30 per ton; on 1 1/2 acres of alfalfa, which was cut seven times, 14 tons of hay, worth \$10 per ton, and on the same ground four tons of barley hay and two tons of corn.

Merced.

ANOTHER HUGE RESERVOIR.—Merced Cor. Chronicle, March 19: Merced is to have another mammoth reservoir. The location is a narrow defile, where Miles creek emerges from the foothills, about 14 miles east of town. This reservoir will be 60 feet deep, and cover about a quarter-section of land. It is intended to store water for irrigating the Ostrander colony, comprising about six sections of very fine land, lying midway between Merced and the foothills, and its estimated capacity is sufficient for the successful irrigation of 10 or 12 sections. The dam will be about 800 feet long and 60 feet high at the creek. A force of men and teams is already on the ground, and the work is being done in a thorough manner, under the supervision of competent engineers. The plans and specifications for the work were prepared by C. D. Martin, the engineer who completed the great Huffman-Crocker canal and reservoir, and who says it can be completed before the rains set in next fall.

Nevada.

CLOVER AT ROUGH AND READY.—Tidings, March 15: James Huitt has now cleared off and ready for clover about six acres of new ground. Clover does well in this part of the foothills. Mr. Balch last year put new ground in clover, cut two heavy crops during the season and had left splendid fall pasturage. The first crop was the heavier, and this he housed for his own use; the second crop was baled and sold, and this second crop when baled gave three tons and twenty pounds to the acre.

MAPLE SUGAR.—On the Brier farm, southeast of Grass Valley, are a number of sugar-maple trees. They are indigenous and there is a large grove of them. This spring Gardner Moulton, who owns the place, made a lot of sugar from the sap of these native trees. He was not well prepared for the business, and wasted a good deal of sap, because the vessels he used to catch it were too small and ran over when not closely watched. He made about 50 pounds of sugar from 15 trees, and besides the sugar has a nice lot of syrup. We believe this is the first time that sugar has been made from a native tree in California.

Placer.

FINE FIGS.—Newcastle News: H. E. Parker of Penryn showed us some fine specimens of his Smyrna figs the other day, and they are beauties. They are thin skinned, and as transparent and rich in sugar as any figs we have ever seen. The specimens shown us had undergone no manipulation in curing. They were simply placed in the sun and left there for a period of eight days—were neither rubbed, dipped, nor sulphurized. Mr. Parker has had many applications for cuttings from his trees, but has resisted all temptations of fancy prices, and is determined to keep them intact.

Sacramento.

DURHAM IMMIGRATION.—Record Union, March 17: Col. Jos. Combs of Linneus, Mo., arrived in this city yesterday, having left

Kansas City on Monday last. He has on the road 50 head of thoroughbred Shorthorns, comprising Marys, Josephines, Belinas and Venuses, which are to be sold here, though the day of the sale has not yet been decided upon. The pedigree of each one is said to be certified to by the American Shorthorn Association.

San Benito.

HORSE MARKET.—Free Lance: Saturday, March 3d, the date for the second monthly Horse Market, opened with the clouds thick overhead and the rain pouring down in torrents. In spite of this a large percentage of the 35 horses that had been registered were at Kent's stable before 9 o'clock, and the large building was tasked to its utmost limit to contain not only Mr. Kent's individual stock, but the horses brought for sale. Five buyers had come in on Friday evening's train, and Saturday noon's brought three more, making eight in all. On Saturday ten horses were sold, mostly intended for use in San Francisco, and on Sunday four more were sold, making 14 in all. Had it not rained so hard during this time, undoubtedly more horses would have been sold. With two exceptions the horses sold were of draft stock and purchased for teaming purposes in San Francisco. By next month the season for buying horses will have opened very briskly. Stock will then be in good condition and will command good prices.

San Bernardino.

ORANGE SHIPMENTS.—Press & Hort., March 17: Following is a review of the orange shipments from Riverside for the current season:

	Cars.	Boxes.
December shipments	18	5,271
January	54	15,650
February	143	40,969
March	78	12,148
Total to date	293	83,927

MOUNTED POLICE OR SHOTGUNS?—In a recent issue of the Press an account was published of an attempt to rob the orchard of B. B. Barney. The attempt was frustrated by Mr. Barney's foreman frightening away the thieves and discovering the fruit in sacks. Sunday, a successful raid was made on the orchard of Mr. Bryant, who lives near Mr. Barney. Twenty-five Navel trees were stripped clean of fruit. As yet no clue to the thieves has been discovered. The loss to Mr. Bryant is fully \$100. More money in fruit has been lost this season through incursions of tourists and other thieves than to support a mounted police system for three years. There is evidently a gang working the orchards in Riverside, and growers having groves in isolated sections should look out before it is too late. Since the above was in type we have ascertained that on Saturday night, A. M. Denig's orchard on Magnolia avenue was entered and over \$200 worth of Navel taken.

CROSS FERTILIZATION.—Valley Echo: Mrs. J. J. Evans has handed us a cluster of oranges showing the tendency of this fruit to grow "sports." Two years ago this tree bore Navel oranges. A year ago no observations were taken. This year no outside navel-mark is visible, but some of the fruit has the characteristic embryo orange inside. They all, however, show a mixture with the Blood variety, the red showing plainly in the juice capsules. Doubtless the Navel blossoms were fertilized by Malta Blood pollen.

San Joaquin.

EDITORS PRESS:—We have had our alternate sunshine and shower. Our hills and plains are brilliant with flowers. The grain, which came on slowly at first after warm weather set in, having been somewhat stunted by the unusual cold, is now doing well, and though not so forward as usual in years called "good," the prospect is fine for a fair-to-grand harvest. Feed in the foothills is good and stock of all kinds is doing well.—Mrs. J. M. K., Tracy.

EXTENSIVE FRUIT-PLANTING.—"R." sends the Stockton Independent a long account of a tour of inspection, which he made on the 9th instant, through lands being planted to fruit trees, vines and berries in the vicinity of Lodi. We give an abridgment of his report. Hon. B. F. Langford said that he had not planted any trees or vines on the home-ranch this year, but on a farm about four miles further up the river had planted 8500 peach trees, suitable for canning, drying and shipping purposes. Senator Buck, who bought 400 acres in the Langford Colony, had just finished planting the entire tract with varieties divided as follows: Silver prunes, 3750; French prunes, 3750; olives, 4380; peaches, Salways, 3000; M. & S., 3500; Early Crawford, 735; Tuscan Cling, 480; Mary's Choice, 200; Mother Porter, 1000; Selby's Cling, 4380. . . . A. T. Hatch has a section adjoining Mr. Buck on which about 30 men were at work, and I. H. Clancy, his foreman, said they would wind up the entire 640 acres in a few days, with 1400 olives as a border enclosing the whole body of land. Inside of this border will be two rows of White Adriatic figs, numbering 3000, while the body of the orchard consists of 11,400 Nonpareil, 11,400 IXL, 7000 Hatch's Favorite, 2400 Ne Plus Ultra and 200 Drake's Seedling almonds; 800 Orange Cling, 500 Lovell, 2000 Muir, 700 Sasquehanna, 600 Tu-can Cling and about 2000 other peaches; 100 Catherine prunes and 25 Simoni prunes. This land was plowed 12 inches deep and the trees planted 25 feet apart. . . . Close by, W. R. Strong & Co. have 320 acres under the superintendency of J. H. Andersop. These gentlemen are planting about 40 acres the present season, consisting of 1000 Navel oranges, 3000

assorted peaches, 1000 apples and 1000 apricots. . . . A mile or more westward H. J. McLean is planting 40 acres to Bartlett pears, 20 to assorted cherries and 20 to German and assorted prunes. Reed & Co. of Sacramento have 160 acres of this tract, and are planting the same to nursery stock, except 40 acres which are being planted to citrus fruit. . . . R. Franklin, four miles west of Lodi, has 80 acres planted to grapes. . . . Many other persons were mentioned as having set smaller areas with trees, vines and small fruit.

San Diego.

IN SAN JACINTO FIELDS.—Cor. Union, March 8: Glorious weather for the farmers. The wheat and barley, square miles of it, are flourishing like the green bay tree. . . . The alfalfa fields present a beautiful appearance. The rank, green stalks are about a foot high. San Jacinto alfalfa, be it remembered, grows without being irrigated and six and seven fine crops of hay are harvested each year.

WILD HOGS.—Among the cotton-wood forests that stretch along the San Jacinto river for so many miles roams a band of wild hogs, which offer rare sport for the hunters. One adventurous gentleman, seeing some young pigs asleep in the sunshine, laid down his gun, and slipping up to them with Indian cunning, seized one in each hand, while visions of roast pork danced through his mind. Upon the pigs delivering themselves of a brace of piercing squeals, the mother, a large and ferocious sow, rushed open-mouthed from a neighboring thicket. Nimrod had little time for reflection—dropping one of the porkers, he walked up the slanting trunk of a large tree, thinking that half a loaf was better than no bread—when the sow started up the tree after him! The hunter immediately lightened cargo by heaving overboard his remaining pig, which, falling a distance of 10 or 12 feet, was stunned by the shock. Its parent, having now no further object in climbing the tree, descended, sniffed her fallen offspring, and plunged into the thicket. The hunter, upon coming down, secured his pig and went home in triumph.

ORANGES AND HAY.—Mr. Alph Burgess brought to the Record office, from the Sanitarium in Paradise Valley, Wednesday, some of the finest oranges ever raised in this vicinity. In every point looked at by orange-growers they were perfect. They were Navel and Mediterranean sweets. Mr. Burgess also had barley hay three feet long and fine alfalfa fully two feet in length. This species of geranium, he says, is unusually abundant. In fact, the rains have been so well timed this year, a large hay crop is now assured. Hay is selling at \$30 per ton, but the large crop of fine grass is likely to send the price down to about \$10 to \$12.

San Mateo.

OLIVES AND WALNUTS.—Redwood Times and Gazette: Sickert & Billings have planted about 1000 olive trees this season. They intend to plant more of these valuable trees the coming season, also about 500 prune trees. Last year about 1000 walnut trees were planted on their place. We think Portola valley can claim the distinction of having the largest olive and walnut orchard in the county.

Santa Barbara.

AUSTRIAN MUSTARD.—Lompoc Record, March 10: Mr. McKay has received from Austria a quantity of the Austrian red mustard said to be superior in quality to the English mustard and equal in its yielding qualities. Wm. Shean has contracted to put in 20 acres at 3 cents per pound for the yield. If this seed is what is claimed for it, and this section proves favorable for its production, the farmers may be benefited by the change. The seed is small, only a size larger than the wild black mustard.

Santa Clara.

A BAD BIRD.—San Jose Herald, March 13: A vicious rooster belonging to M. F. Keane, who lives on Santa Teresa street, on Sunday afternoon attacked a lady and felled her to the ground, one of his spurs entering her neck to the depth of half an inch, and before she could rise he badly lacerated one of her hands. Regaining her feet and seizing a stick, she put the ill-mannered bird to death. The rooster had been noted for his many successful conflicts with other barnyard fowls and with dogs and cats, but never before attacked a woman.

INCORPORATED.—Record Union, March 20: Articles of incorporation were yesterday filed with the Secretary of State of the Mountain View Canning Co., incorporated for the purpose of buying and selling green and preserved fruits and vegetables, etc., and the carrying on of a general mercantile and commercial business at Mountain View, in the county of Santa Clara. Directors—Daniel Flint, O. P. Askam, J. E. Williams, John Bergin, H. McCleary, D. T. Bateman, Mountain View; W. A. Nygh, S. F. Capital stock, \$50,000, divided into 5000 shares of the par value of \$10 each.

Solano.

A NEW COMPLAINT AGAINST THE ENGLISH SPARROW.—Dixon Tribune, March 17: Owners of brick buildings are making war upon the English sparrow. A great many of these voracious little birds have made their homes in Dixon. They usually build their nests in brick walls. They peck the mortar away until the bricks are generally loosened.

THAT MYSTERIOUS CATTLE AILMENT.—P. W. Dillon, one of the farmers near Benicia who lost so much stock by what the veterinary sur-

geons termed anthrax, insists that the disease has not been correctly diagnosed, and as an evidence of it, says horses that were stall-fed and kept in the stable were not infected when brought into contact with animals in the last stages of the disease. Anthrax is known to be contagious. He also says that ducks, geese, goats and sheep have died in the same mysterious way, and anthrax has never been known to attack poultry. The town trustees of Benicia are not entirely satisfied with the report made by the veterinary surgeon, and propose personally to inspect the locality in which there has been so much fatality among the stock, spread canvas on the ground, catch the deposit of smoke and gas from the smelting works for a few nights, and have the same analyzed.

Shasta.

BATTLE CREEK ITEMS.—Cor. Cottonwood Index, March 15: A few fruit trees in this vicinity are beginning to bloom. Loomis & Cook are planting out a young orchard this spring, over 400 trees, consisting of apples, pears, prunes and peaches. They have an orchard of bearing trees, and know that fruit will pay. Last year they raised fine fruit, some of the apples and peaches weighing a pound each.

Sutter.

HORTICULTURISTS ORGANIZE.—Sutter Farmer, March 16: The adjourned meeting of the horticulturists was held on Wednesday afternoon at the courthouse. The following citizens were present: H. Luther, J. J. Pratt, R. C. Kells, J. H. Stewart, C. E. Williams, A. D. Cutts, Francis Hamlin, H. P. Stabler, Geo. Ohleyer, B. F. Walton, B. G. Stabler, J. P. Onstott, S. McClure, C. C. Newkum, J. B. Wilkie, F. Hause, T. F. Giblin, and A. B. Van Arsdale. The Committee on Constitution and By-Laws made their report. This was adopted seriatim with a few amendments. The following permanent officers were elected: Pres., B. G. Stabler; V. P., P. L. Bunce; Sec., H. P. Stabler; Treas., Geo. Ohleyer; Entomologist, H. P. Stabler; Directors, B. F. Walton, C. E. Williams and R. C. Kells. The election being over, J. J. Pratt, Sup't of the Sutter cannery, read an essay which was highly commended, and received with thanks by the society. A committee was appointed to confer with Prof. Hilgard of the State University in relation to establishing an experiment station in this, the central portion of the Sacramento valley. Membership fees were fixed at \$2.50, dues to be fixed hereafter. Most of those present signed the roll as members. The meeting was harmonious and enthusiastic and did a good day's work in a good cause. The third Wednesday of each month was selected for regular meetings.

Tehama.

GLANDERS AGAIN.—Red Bluff Sentinel, March 17: Dr. G. H. Bailey, who is recognized as one of the best veterinary experts on contagious diseases, was sent to Col. O. E. Moore's ranch near Kirkwood by the county supervisors to examine horses which had been reported to Supervisor Hook as having some peculiar disease. Dr. Bailey, with Supervisor Mooney, examined the stock of horses and found several glandered ones, which the manager of the ranch agreed to destroy at once.

Tulare.

ONE OLIVE.—Visalia Delta, March 15: Wiley Watson's olive tree, which is nearly 30 years old, has borne regularly every year since the first crop was produced. Cuttings have been taken from the tree frequently by residents of Tulare county, and so great has been the demand this year that fully 3000 cuttings have been cut from it and planted in the valley and foothills.

STALLION SHOW.—On Saturday last the owners of fine stallions and their progeny paraded the same on the streets of Visalia. A few days before an exhibit was made in Hanford. The stock shown here was from all parts of the county, and will compare favorably with the choicest in the State. There were fewer draught horses exhibited than on previous occasions of this kind, although there are numbers of such in the county. Road stock, however, is plentiful, and most of those on exhibition were of this class. On previous occasions there have been a greater number of stallions in the parade, but never before so large a proportion of fine animals. Tulare county farmers and stock-raisers have been breeding to the best strains for several years past and the result is a marked improvement in the character of stock in general. The mustangs once so plentiful are becoming extremely scarce. A number of the stallions exhibited are from imported sires secured at great cost, and are in no way inferior to them. The display was a creditable one, and one in which horsemen were greatly interested.

Yolo.

SETTING THEM TO STAY.—Yolo Mail, March 17: Geo. Biner, four miles northeast from Woodland, has a fine young orchard and vineyard of about 10 acres already started. This season he will make the experiment of planting eight acres of apricots where they will remain. This will not only save transplanting but he believes will make stronger, healthier trees by reason of not having disturbed their roots. The experiment will be watched with interest by fruit-raisers.

MERINO HORNS.—At Armstrong & Alge's meat market is a ponderous pair of mounted horns from one of Frank Bullard's premium Spanish merino rams. The ram was one of the great-great-grandfathers of Mr. Bullard's flock and was valued at \$300. The horns are fully

16 inches in circumference at the base, and over two feet long each.

Yuba.

ENGLISH SPARROWS.—Marysville Appeal: The other morning, W. F. Peacock, who is an authority on birds, pointed out a number that had then alighted on a building on Second street. "Those," said he, "are the English sparrow. They are the first ones of the kind which I have seen here, and as they are among the most destructive birds there are, their presence here will be the means of exciting the fruit-growers and gardeners to some action looking to their destruction. In my judgment, it would be well for the city authorities to take some steps toward exterminating them. In the lower counties they have caused considerable trouble lately, and in the East it is not an uncommon thing for a small number of them to kill a tree in a few minutes. They are also killers of their kind, driving almost every other sort of bird from the vicinity in which they come."

ARIZONA.

ASH TREES FOR SHADE.—Phoenix Herald, March 8: W. J. Murphy of the Grand Avenue Co. has contracted with Fowler Bros. for 1000 two-year-old ash trees, which are to be set along the Grand avenue. This will be a great improvement for that part of our city. The ash is rapidly supplanting cottonwoods as shade trees about town, and nothing better has yet been found for our avenues and drives.

LIVE-STOCK INTEREST.—Phoenix Herald: Mr. Miller's herd of thoroughbred Herefords, Mr. Brill's herd of thoroughbred Holsteins, and Mr. Trask's herd of thoroughbred Galloways are not surpassed in any country. The facilities for breeding fine stock here where it can run on pasture the year around, if so desired, are so much superior to any country where it is necessary to stable the cattle, and even grain-feed them to get them over the winter, that those who have devoted themselves to the rearing of fine stock are rapidly securing a foothold here while property is comparatively cheap. To-day, for the age of the business here, we can show an unusual quantity of pure-blooded stock, and this is as true of horses as of cattle.

OREGON.

BUTTER FOR ASIA.—Oregonian, March 9: Mr. Wm. Dunbar, who lately returned from China, has orders to send several tons of Oregon butter over there as soon as the price is low enough. There is a market over there for a large quantity of butter which is supplied chiefly at present from Holland and Italy, the butter being put up in tins. This coast being so much nearer should supply that market, but Oregon is not likely to do much toward it, as we are importing large quantities of California butter at present.

SHEEP ON A RAMPADE.—Early last Friday morning as a band of sheep belonging to W. W. Spaulding was being driven up First street, on their way to the slaughter-house, they seemed seized with an insane desire to get something to drink, and, smashing two squares of glass out of the doors of Ginochio's liquor store, they passed in like a flood. The fumes of liquor affected them as much as a human, and, coming out, they rushed across the street, jumped through the glass door of Blumauer's drug store, and invaded the building. The smell of castor oil and bisulphide of carbon did not suit them, so a lot of them went upstairs to Thwaite's photograph gallery. The frantic efforts of herders and collie dogs at length succeeded in starting the sheep on the broad road to the slaughter-house.

ENSILAGE.—Mr. Jackson, who lives in sight of Oregon City, called this week with a specimen of ensilage that he made on his farm and is feeding with success to his stock. His silo is 12x20 feet and high enough to hold a large quantity. The specimen left is English rye grass that was put in whole and is preserved in good order. It is fragrant and cattle like it. He ensilaged a large quantity of corn, which is all fed out or he would have brought a sample in. It has proved a complete success with him, and he will write in full concerning the way he preserved the fodder and the kinds of feed he preserved.

MUTTON AND WOOL.—Rogue River Courier: Wm. Chapman, living in the southern part of Josephine county, last year leased a band of 500 sheep to other parties, receiving one-third of the profits, both of wool and increase. The wool was sold for \$149; 260 lambs, at \$2 per head, amounted to \$520, which, added to the first sum, gave Mr. Chapman \$669 as his net gain. Count his band of 500 sheep worth \$1200; out of a \$1200 investment he received a gain of \$669, was out neither time in their care nor money for feed. This is decidedly big interest. What country can beat this record in sheep raising? Others are as good, but great loss is generally sustained during winter months. Mr. Chapman said his sheep wintered well, but few dying.

Carriages.

We are receiving 10 carloads of Carriages, Buggies and Wagons from the Briggs Carriage Company of Amesbury, Mass., which will be sold at prices that will be satisfactory, considering style and workmanship. Quality of material guaranteed the best.

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And a perpetual water-right goes with the land bought. Tracts of 20 acres will be sold for \$500—only one-third cash; balance, one-third in two years, and one-third in three years, with ordinary interest.

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MUSIC IN THE SPRING.

There are yet some months of cool weather in which to prepare and practice music for the concluding concerts and festivals of the season.

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Now let girls and boys begin to practice the sweet **CANTATAS—Voices of Nature, or Forest Jubilee Band or MERRY COMPANY or NEW FLORA'S FESTIVAL**, each 40 cents, or \$3.60 per dozen.

Pupils of the higher schools will like **DRESS REHEARSAL** (50 cts., or \$4.50 per dozen), **NEW FLOWER QUEEN** (60 cts., or \$5.40 per dozen), or **HAYMAKERS** (\$1.00 or \$9 per dozen.)

Fine Cantatas of moderate difficulty for adults are: **HEROES OF '76** (\$1.00), **HERBERT AND ELSA** (75 cts.), **JOSEPH'S BONDAGE** (\$1.00), **REBECCA** (65 cts.), **RUTH AND BOAZ** (65 cts.), **WRECK OF HESPERUS** (35 cts.), **FAIR MELUSINA** (75 cts.), **BATTLE OF HUNS** (80c.) Send for lists.

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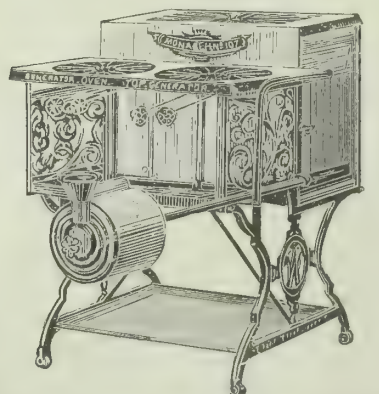
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Gasoline Stoves, \$5 to \$35. Gas Stoves, 75 cents to \$35. Oil Stoves, 75 cents to \$30.

WOOD AND COAL RANGES.—Royal, No. 6, \$16. No. 7, \$20. Pacific No. 6, \$18. No. 7, \$25. Lamps, 20c. to \$10. Hanging Lamps, \$2 to \$25. Agate Ware, Tin Ware, and Kitchen Ware at low prices.

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Free Coach to and from the Hotel.

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Mechanics' Institute Fair for 1888.

The Board of Trustees announce that the Twenty-third Industrial Exposition of the Mechanics' Institute will open in its grand exhibition building, bounded by Larkin, Hayes, Polk and Grove streets, on Tuesday, August 7, 1888, and will close on Saturday evening, September 15, 1888.

The past exhibitions held by the Institute have done more than all other means combined to illustrate the advance in inventions and mechanic arts upon this coast. The Mechanics' Institute of San Francisco was first organized in 1855, but it was reincorporated in 1869 under the provisions of a liberal Act of the Legislature providing for the formation of Mechanics' Institutes, Chambers of Commerce and kindred useful bodies. The designs and objects of the association, set forth in its articles of incorporation, are most important and useful to the commonwealth, and include the maintenance of a great and growing library of circulation and reference, the formation of classes and delivery of lectures for tuition, and the purchase of property and erection of buildings for any scientific, mechanical and literary purpose.

Article VI of its articles of incorporation reads as follows: "No shares of stock, nor any individual right in the property of this association, shall exist or be acquired during the existence of the association, but the property belonging to, and in the name of, the Mechanics' Institute shall be held in trust by the trustees for this association, and never be diverted from the purposes and intention for which it is organized."

All the profits and pecuniary results of the Exposition, library, property and enterprises of the Mechanics' Institute inure solely to public and useful ends and not to the private or personal benefit of any one.

The membership of the Mechanics' Institute is large, and it is supported by all classes; it is primarily an association of mechanics, and its exhibitions are emphatically expositions of Pacific Coast industry. During the past two years the management has greatly enlarged the scope of the fairs, which now include comprehensive exhibits of the natural products of our soil, the fruits of husbandry, also ores, minerals and timber, and other exhibits illustrative of the natural wealth of our State and coast.

Regarding the coming Exposition, it is the intention of the management to make every effort to surpass the successes of the last few years. Everything points toward a prosperous year. A large concourse of visitors from the East is expected, and the Exposition will furnish a grand opportunity of displaying the products of our workshops and manufactories, and of advertising the capabilities of the climate and soil of this coast, and its advantages for residence and investment.

The San Francisco & North Pacific R. R. Co., the North Pacific Coast R. R. Co. and the Pacific Coast Steamship Co. (Messrs. Goodall, Perkins & Co., agents), will transport exhibits free of charge, and the Southern Pacific Co. has also adopted a liberal policy regarding the exhibitions of the Mechanics' Institute.

The exhibition building is complete in all of its appointments. No charge is made to exhibitors for space. Steam-power and water furnished free. Arrangements are being made to secure art exhibits, pictures, statuary, etc., of unusual merit. A large orchestra of skilled musicians, including solo performers, will render a grand concert each afternoon and evening during the continuance of the Exposition. Other attractions and interesting features will be presented from time to time.

The rules and regulations governing the Exposition, premium-list and applications for space will soon be ready, and can be had or will be sent, with any further information desired, on application at the office of the Institute, 31 Post street, San Francisco, Cal.

A Pioneer Saddlery Establishment.

A RURAL representative had the pleasure of an interview with Mr. E. O. Robbins, Western agent for Smith, Worthington & Co., 40 Warren street, New York City, wholesale dealers in harness and saddlery goods. This house was established in 1794, and has been continuously in the same family for four generations.

R. F. Briggs & Co., importers and manufacturers of carriages, 220 and 222 Mission street, have handled a stock of fine harnesses from this house for several years. Their customers and especially horsemen have given an unqualified indorsement of their goods in workmanship, artistic taste and durability.

Mr. Robbins has been highly pleased with our climate and material prosperity, and feels keenly his good fortune in escaping the terrible blizzard that has swept over the East.

WATERING AUSTRALIAN DESERTS.—Chaff y Brothers, the founders of Ontario, in San Bernardino county, are reported to be making rapid progress with the new irrigated colony, which they are establishing on a large tract of land granted them by the Government of Victoria, on condition that they bring water on it. The enterprise is entirely novel in Australia and the easy-going Antipodes gaze upon the doings of the enterprising, go-ahead Americans with open-mouthed wonder. A large area has been planted in fruit trees and vines, and all the lots on the main avenue of the townsite have already been sold.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING MARCH 13, 1888.

379,441.—SNOW PLOW—L. J. Bergendahl, Pendleton, Ogn.

379,360.—MAPS—W. M. Bours, Stockton, Cal.

379,501.—SWITCH FOR ELECTRIC-LIGHT CIRCUITS—Brann & Kinney, S. F.

379,306.—OPERATING CABLE RAILROADS—Clement & Watriss, S. F.

379,372.—NON-POLARIZING CONSTANT CURRENT BATTERY—F. J. Crouch, Eugene City, Ogn.

379,512.—WINDMILL, S. M. Fulton, Galt, Cal.

379,399.—RAILROAD TIE—Jos. Jacobs, S. F.

379,319.—POCKET RECEPTACLE—S. Mendleson, Los Angeles, Cal.

379,348.—SEAL LOCK—Waldron & Boller, Folsom, Cal.

379,428.—STATION INDICATOR—J. W. Warhurst, S. F.

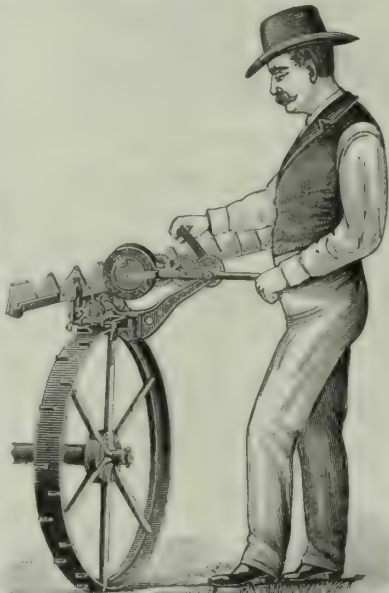
379,432.—COMBINED CHAIR, FISH-PLATE AND RAIL COUPLER—W. Wilt, Eureka, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

A Mower-Knife Sharpener.

Now that abundant rains have given prospect of a good growth of hay, interest is quickened in devices for securing the crop. The engraving on this page represents a man in the act of sharpening his mower-knives with the "Dutton grinder," the device being readily clamped to the wheel of any mowing machine, and with it any kind of a mower-knife can be ground, whether the sections are long or short. It is light, weighing but 20 pounds.

The essential feature of the grinder is its conrundum-wheel and its peculiar construction.



The Dutton Mower Knife Grinder.

There is a hole three inches in diameter in the center of the wheel, made water-tight by the flanges which clamp the wheel and hold it in position. When the machine is to be used, this hollow space is filled with water through a small hole in the side of one of the flanges, which hole is then plugged up. By turning rapidly the water is driven through the pores of the wheel, by centrifugal force, completely wetting its grinding surface, thus preventing the temper of the knife from being drawn and destroyed, which would be done if the wheel were used dry. The water coming from the inside prevents gumming or glazing of the surface. When a mower-knife is to be ground, one edge of the surface of the wheel is brought into contact with the bevel of the knife section, at its bottom. The wheel is made to pass along the bevel to the point of the section, being controlled with the left hand. When one side of a section is ground the wheel is swung so that the outer edge of its surface is brought in contact with the bevel of the adjoining section, which is then ground in the same way.

Other information about the grinder can be had by addressing the manufacturers, the Higginum Manufacturing Corporation, who have an announcement in our advertising columns.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,

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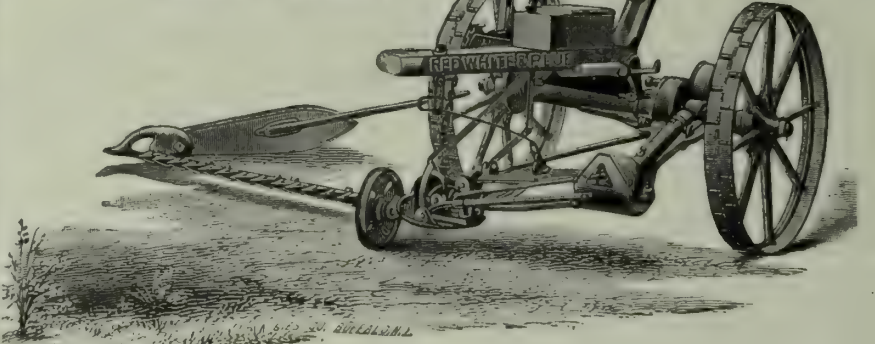
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PERFECT BALANCE,
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Rocking Cutting Bar. Latest Improvements.

BE SURE AND EXAMINE IT CAREFULLY.

Floating and Rocking Bar.

No Weight on Horses' Necks.

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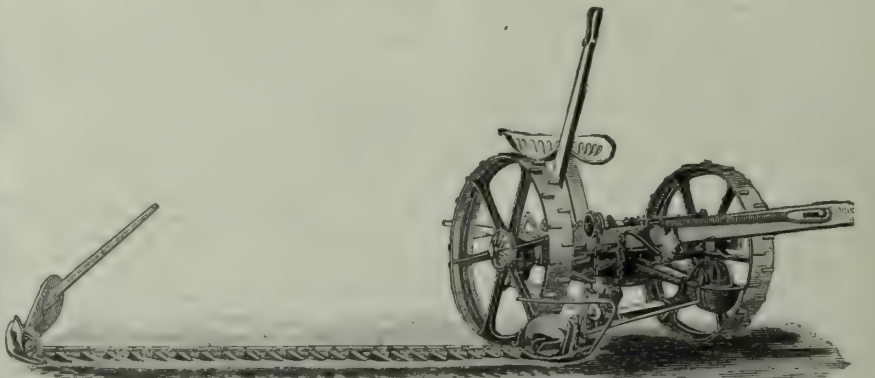
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Write for our new Catalogue of Machinery and Wagons—just issued.

STANDARD MOWER.



4 ft 8 in., 6 ft and 7 ft. cut.

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Refers by permission to B. D. Murphy, San Jose; J. R. Weller, Milpitas; Brown & Wisdom, Elliott, San Joaquin County; G. A. Conrad, Stockton; Isaac Repperdan, Modesto, and 500 other farmers in California whose names we can give on application at

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SAN JOSE,

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800 Acres Rich, Level Land.

To some one who will summer fallow and cultivate well, will be furnished free water and use of 160 acres of good land (S. E. Sec. 13, T. 21, R. 23) within 9 miles of Tulare, S. W. Forty acres formerly plowed. Land on all sides cultivated and pastured. Water for irrigation (if needed) free. Also (without water) 640 acres (Section 13, T. 23, R. 24), four miles westerly of Tipton and 8 P. R. R., all in Tulare County and the Artesian belt. For particulars call on E. M. DEWEY, 7 miles S. W. of Tulare, or A. T. DEWEY, 220 Market St., San Francisco.

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CLAY CRUSHERS, BEST IN THE

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TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land? DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost? DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10 acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

BRIGGS, FERGUSON & CO., General Agents,

314 California Street, - - - - - San Francisco, Cal.

OR RIVERSIDE, CAL.

FERTILIZERS!

Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

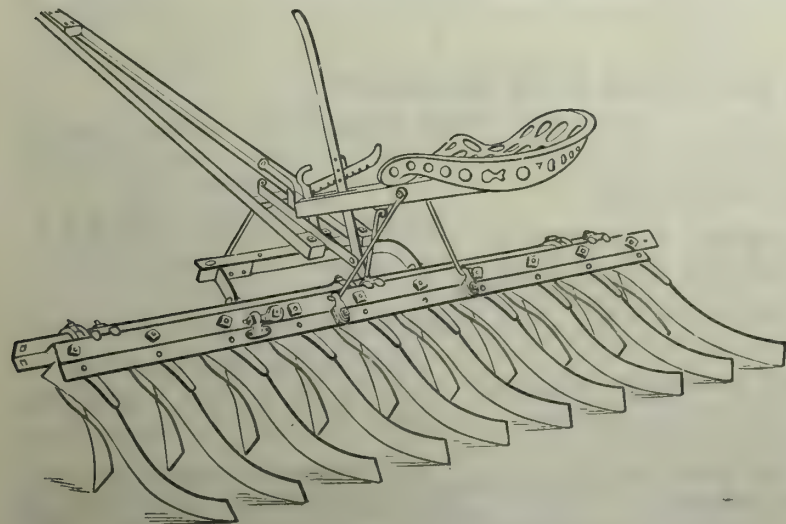
Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

California Bone Meal and Fertilizer Co.,

116 CALIFORNIA ST., SAN FRANCISCO.

ACME PULVERIZING HARROW, CLOD CRUSHER & LEVELER.



DON'T BE DECEIVED BY WORTHLESS IMITATIONS.

All genuine bear Trade-Mark, have Steel Clod Crushers, Double FLEXIBLE Gang Bars, and the Improved Style also has

ADJUSTABLE REVERSIBLE COULTERS,

Which when worn may be turned end for end, thus giving double the amount of wear. Works the entire surface of the ground. No other Harrow combines these points.

Sizes: 3 to 12 Feet. With or without Sulky.

ILLUSTRATED PAMPHLET FREE.

DUANE H. NASH, Sole Manufacturer,

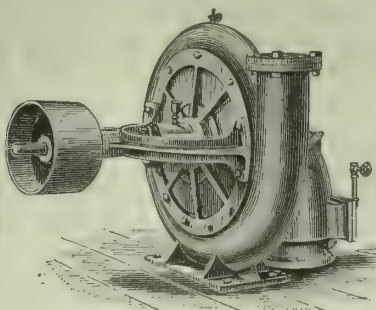
MILLINGTON, MORRIS COUNTY, NEW JERSEY

SOLD BY:

BULL & GRANT FARM IMPLEMENT CO.,

14 & 16 Main St., San Francisco, and 211, 213 & 215 J St., Sacramento, and

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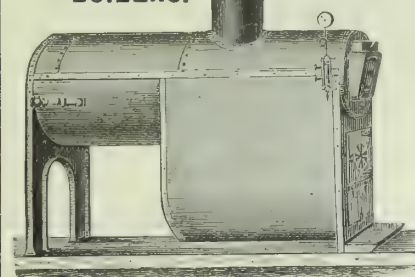
Jackson Centrifugal Pumps.

JACKSON
Automatic
Expansion
SELF-OILING ENGINES.

Made in ten sizes, from two to sixty-horse power, and carried in stock for prompt delivery.

"ECONOMY"
PORTABLE
BOILERS.

MOUNTED ON
SKIDS.
2½ to 20 H. P.



COMPLETE

Power and Pumping
PLANTS

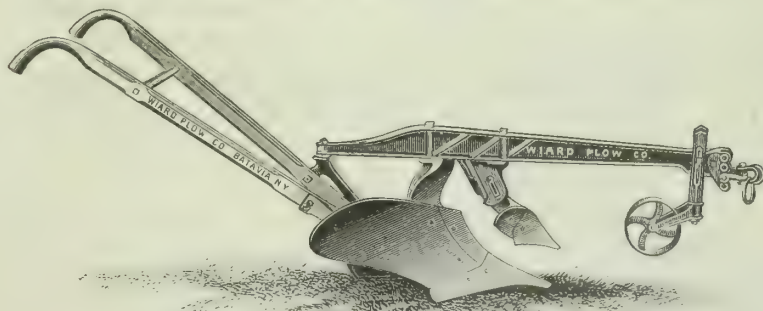
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With Either Chilled Iron or Steel Moldboards.



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Flat Land Plows with Wood, Cast, or Malleable Iron Beams.

Swivel Plows for Level Land or Side Hill, with Late and Important Improvements.

OUR PLOWS ARE FIRST-CLASS IN ALL RESPECTS,

And take the lead wherever introduced.

We offer to sell exclusively to good, responsible, live men at Central Points in the Pacific States, and solicit correspondence and inquiries.

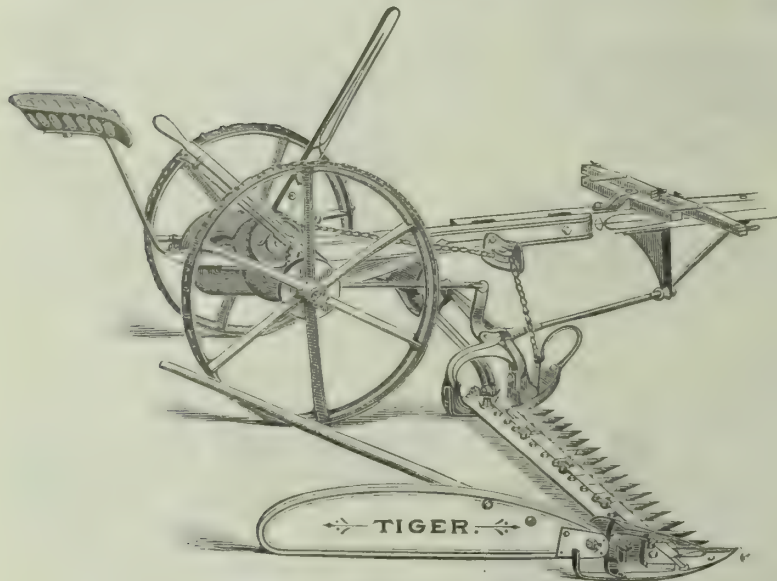
WIARD PLOW COMPANY,

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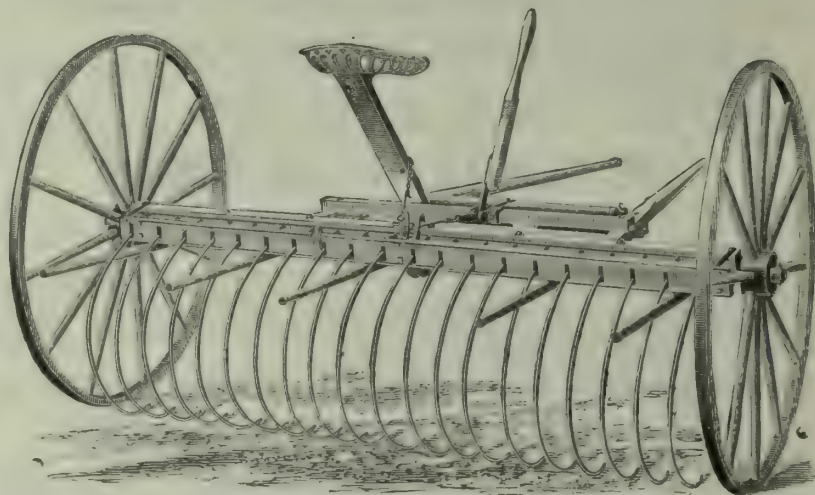
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TIGER MOWER and TIGER RAKE

Have Won a World-Wide Reputation.



THEY STAND THE TEST OF TIME.



WITHOUT A PEER ON THE CONTINENT.

Although these machines have now been upon the market and in practical use for years, and notwithstanding the insidious imitations of cheaper machines, nevertheless the Tigers have steadily increased in popularity, and the season just closed enjoyed the largest sale ever before had. Each season brings new laurels, new victories, new medals, new encomiums from both the Trade and the Farmer. Remember, the best is the cheapest. Catalogue free.

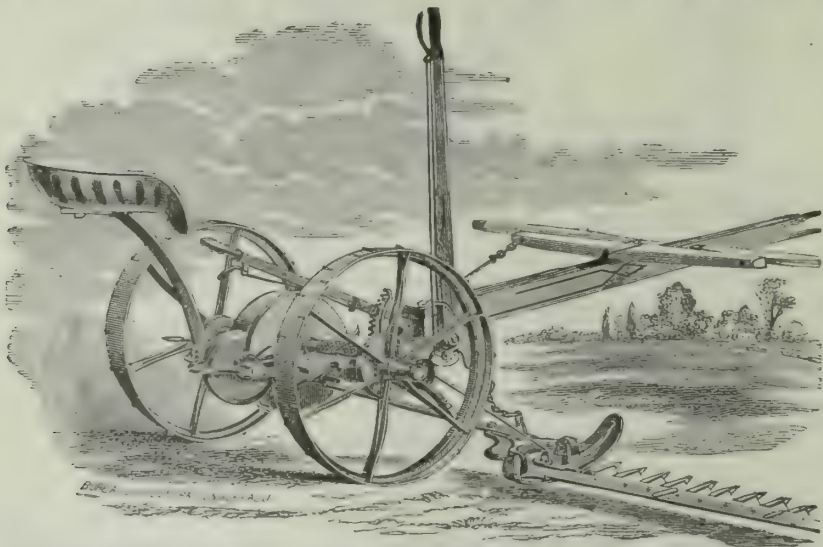
SAN FRANCISCO:
Junction Market, Pine and
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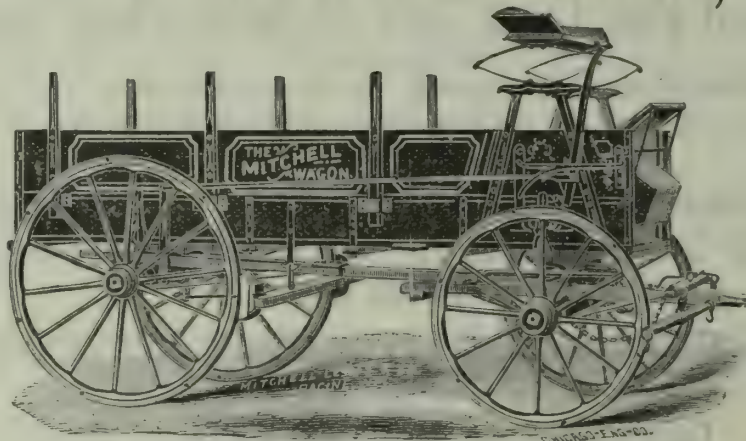
THE MITCHELL WAGON,



A COMBINATION OF STRENGTH AND DURABILITY.

No Grass grows that it will not cut. The only machine with Enclosed Gear, having only two wheels and two pinions. Perfect Rocking Bar, Adjustable Pitman and Crank Shaft Boxes.

PRICE, \$75.00.



MONARCH OF THE ROAD,

Stands to-day at the head and front of all competitors, and is known far and wide as the

Strongest, Most Durable, Best Ironed, Best Finished and Lightest Running Wagon in the world. IRON AXLES, TUBULAR AXLES, STEEL and CAST SKEINS always in stock. Buy the Mitchell and have no other.

If there is no Agent near you for the Mitchell Farm and Spring Wagons and Empire Mowers, write direct to

BURGE & DONAHOO, General Agents and Dealers in Farm Machinery,

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Well Drills
FOR EVERY PURPOSE
SOLD ON TRIAL.

Investment small, profits large. Send 25c. for mailing large illustrated Catalogue with full particulars.

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GOULDS & AUSTIN,
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SHIPPING AND COMMISSION HOUSE.**

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

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CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager,

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**J. L. HEALD'S
AGRICULTURAL WORKS,**
Crockett, Contra Costa Co., Cal.

Stationary Engines and Boilers.

Portable Straw-Burning Boilers & Engines.

IRON AND BRASS CASTINGS.

Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,
including Grape Crushers and Stemmers, Elevators, Wine Presses and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.

A San Joaquin Valley Farm.

A RURAL representative on a recent visit to Stockton visited the "Home Farm" of Mr. L. U. Shippee, president of the State Agricultural Society. This tract of land, containing about 1000 acres, lies seven miles northeast from the city of Stockton, and may be classed as a representative California farm.

Twenty years ago the waters of the Calaveras river during the winter season flooded a large portion of this section, rushing madly through tule, willow and swamps. The pioneers built levees, enlarged and straightened the river-bed, and during all these years this section has been noted as one of the most productive and fertile sediment lands in the great San Joaquin valley. The road leading from Stockton to the "Home Farm" is a turnpike and graveled. Each side of the road and through the lane to the farmhouse is lined with stately sugar pines from 10 to 30 feet in height. On a slightly elevated knoll is a two-story house surrounded by numerous outbuildings, a vineyard and orchard in which are mammoth fig trees and the evergreen orange. This is the breeding farm for several other ranches, aggregating over 30,000 acres, a goodly portion of which is cultivated.

This tract is fenced into large and small inclosures with a view to breeding fine stock of various kinds. There is a lack of symmetry in the arrangement of the large buildings and stables, and they seem to have been constructed and extended from time to time in any direction to meet the demand for additional quarters. Leading from the main stable is a one-fourth mile track by the side of which was a long line of paddocks, while at a short distance on a slight elevation are sheds for sheltering the merino sheep and thoroughbred cattle. It seems to have been the idea of Mr. Shippee to establish a breeding farm where all classes of thoroughbred stock could be grown, adjacent to the city of Stockton, his residence, so that the enterprise could be under his personal supervision. Twenty years ago he commenced importing thoroughbred merino sheep and has continued to improve his flock by periodical importations, and now has 500 registered merino sheep that have been known and recognized as one of the finest and most meritorious flocks in the United States. Of graded sheep he keeps from 25,000 to 30,000 annually. In rearing jacks and jennies he has been very successful, as his first importations were of the best known strains. Mr. David Reavis of Chico purchased three jacks at the "Home Farm" on the 7th inst., for \$7000, and was offered a good advance on his purchase before leaving San Joaquin county. There is now a herd of 21 and the jack at the head, over 16 hands high, is but one remove from a famous jack imported from Spain. In noted breeds of poultry and leading classes of hogs the "Home Farm" is well stocked.

During the last ten years, Mayor Shippee has naturally drifted into breeding horses, and has four distinct classes, viz.: draft, carriage, roadsters and trotters, with noted stallions for each class. Hawthorne by Nutwood stands at the head of trotters, a Blackhawk for roadsters, a horse resembling the Cleveland bays but with more bone for carriage horses, and an imported Scotch for draft horses. He has now a herd of 400 head of horses, and is the third largest breeder in this State.

Although Mr. Shippee is president of the San Joaquin Savings and Loan Society and Mayor of the city of Stockton, with the assistance of an able corps of experienced and intelligent horsemen, he manages this great breeding establishment with commendable results. During the last year he scored several notable triumphs with his string of trotters, and the teams of mules, draft, carriage and roadster horses bred by him at the "Home Farm" are probably second to none on the Pacific Coast.

The growing demand for horses for specific purposes, and the science of combining qualities and "nickings," has become a study among a large number of our leading citizens, and with the growth, social development and attractions of our common country, fashionable and speedy breeds of horses are in growing demand at enhanced prices.

MONOPOLIES.—Judge Grant of Mariposa county, an old subscriber of the RURAL, writes: "Your article on strikes and monopolies pleases me. You say there is a remedy. What is there but the strong arm of the law and armies to enforce it?" The remedy that we foresee is the force of public opinion crystallized into such laws as may be necessary. The enforcement of these laws will be accomplished by something stronger than armies—the popular will of the American people. We have confidence in this power and we invoke it. It will be manifested in ballots, which, on this side of the world, can accomplish more than bullets.

MERCED LOTS.—We gave recently a long account of the opening of the new irrigation works in Merced county, which, besides bringing abundant water for irrigation of agricultural lands, is to supply the town of Merced with water for fountains as well as for domestic use. The natural result of this is a movement in town property in Merced, and, appreciating this fact, the Pacific Improvement Company orders a sale of Merced lots under the management of Briggs, Ferguson & Co. An attractive advertisement in this issue gives full particulars. The announcement should receive the attention of those interested in town property in promising locations.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps. U. S. A.)

DATE.	Portland.				Eureka.			Red Bluff.			Sacramento.			S. Francisco.			Fresno.			S. L. Obispo.			Los Angeles.			San D.										
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Weather.	Rain.	Temp.	Weather.	Rain.	Temp.	Weather.	Rain.	Temp.	Weather.	Rain.	Temp.	Weather.	Rain.	Temp.	Weather.	Rain.	Temp.	Weather.	Rain.	Temp.	Weather.								
Mar. 15-21.																																				
Thursday.....	.00	46	Nw	Cy.	.00	50	NE	Cl.	.00	68	N	Cl.	.00	64	Nw	Cl.	.00	66	N	Cl.	.00	60	S	Fr.	.00	62	S	Cl.	.01	62	SE	Cy.	.04	62	SW	Fr.
Friday.....	.00	58	Nw	Cy.	.00	56	Nw	Fr.	.00	74	N	Cl.	.00	64	Nw	Cl.	.00	60	E	Cl.	.00	70	Nw	Cl.	.00	68	N	Cl.	.00	66	S	Fr.	.00	60	Nw	Cy.
Saturday.....	.00	58	S	Cy.	.00	50	N	Cy.	.00	70	N	Fr.	.00	66	Nw	Cl.	.00	59	SW	Cl.	.00	70	SE	Cl.	.00	73	W	Cl.	.00	64	SE	Cl.	.00	62	SW	Cy.
Sunday.....	.12	46	S	Cy.	.01	48	N	Cl.	.00	68	N	Cl.	.00	66	Nw	Cl.	.00	57	NE	Cl.	.00	68	Nw	Cl.	.00	—	—	—	.00	62	W	Cy.	.00	64	S	Fr.
Monday.....	.01	50	S	Cy.	.00	52	N	Cl.	.00	64	N	Cl.	.00	62	Nw	Cl.	.00	68	NE	Cl.	.00	64	SW	Fr.	.00	66	Nw	Cl.	.00	64	Nw	Fr.	.00	62	W	Fr.
Tuesday.....	.00	54	Nw	Fr.	.00	52	N	Cl.	.00	74	N	Cl.	.00	64	Nw	Cl.	.00	62	W	Cl.	.00	68	SE	Cl.	.00	57	S	Cy.	.00	62	E	Cy.	.00	64	Nw	Cl.
Wednesday.....	.00	54	Nw	Cl.	.00	52	Nw	Cy.	.00	68	E	Fr.	.00	64	S	Cl.	.00	57	SW	Fr.	.00	72	S	Cl.	.00	67	SW	Fr.	.00	70	W	Cl.	.00	62	Nw	Fr.
Total.....	.13				.01				.00				.00				.00				.00				.00				.01				.04			

EXPLANATION.—Cl. for clear; Cy. cloudy; Fr. fair; Fy. foggy; — indicates too small to measure. Temperature, wind and weather at 12.00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

The Best Drier

Does the best work with the least labor and with the least expense for fuel. It has a single drying chamber in which the draft moves horizontally either way, alternately, lengthwise of the chamber. The hot-air draft is admitted into the chamber at the proper temperature, and in its passage as far as the middle it is reinforced, as fast as it tends to decline, by means of radiators within the drying chamber connected with the furnaces in the heating chamber. On reversing the draft at intervals the drying process is thoroughly equalized throughout the chamber, and no injury occurs to the first fruit or material with which the hot-air draft comes in contact. All the heat generated is utilized. It is charged by means of cars containing the material to be dried, which remain in the chamber during the process of drying. There are no sliding or swinging doors to the chamber. The cars are put in and withdrawn from the chamber without letting in a deluge of cold air, or in any manner interfering with the draft or drying process. The cars, no matter how large or heavily laden, are moved easily by one person. The largest sized drier of this kind, although having a capacity of 50 or 100 tons to the charge, and having a forced or exhaust wheel draft, can be reduced in a few minutes to the smallest sized fruit-drier having a natural draft and the heating facilities and quantity of fuel required for the lesser drier are also quickly and successfully reduced to the minimum. This drier is in no danger of burning, as the heating apparatus nowhere comes in contact with woodwork. The apparatus used is all well made and is durable, simple in construction and is easily understood and easily managed. It has no automatic or complicated gearing whatever, or other machinery of any kind except such as is required to run the exhaust wheel of the largest sized driers. The chamber has openings only on one side and all the work of changing the trays or material is done on one floor. It is adaptable to any kind of fuel that can be used for heating or making steam, and will dry anything that requires to be dried in any quantity and as quickly as it is desirable to have it done. It can be constructed on a large or small scale and will work as well on a small as on a large scale. It is especially adapted to raisin vineyards and fruit and hop ranches, large or small, as well as for companies, communities or colonies. A large one would answer for a tract of country several miles in extent. The cost of construction depends on the size and the purpose for which it is to be used. In a short time a more complete description of this drier, with illustrations, will be found in this paper; until then parties inquiring should address, Agent of the Best Drier, P. O. Box 2361, San Francisco.

SPANISH INSTRUCTION.—Prof. De Philippe's new method of teaching the Spanish language is a work which by its entire practicability and simplicity commends itself to any one desirous of acquiring a thorough knowledge of the Spanish tongue as it is used in all ordinary usages and customs of every-day life. The long and eminently successful experience the professor has had as teacher has enabled him to produce just such a work as his "Simplified New System of Acquiring the Spanish Language"—the best of its kind. Our increasing social as well as commercial relations with the Spanish-speaking people of our sister republic of Mexico render just such a work of peculiar interest to Californians.

Injurious Insects of the Orchard, Vineyard, Field, Garden, Conservatory, etc.,

Remedies for their extermination.

By MATTHEW COOKE.

Late Chief Executive Horticultural Officer of California. Illustrated with over 750 wood-cuts and 25 pages of classified illustrations. This book is designed for the use of orchardists, vineyardists, farmers and others interested in the subjects treated. It is designed to convey practical information concerning some of the species of insects injurious to the industries of cultivators of the soil, and those interested in earth produce generally. Price \$4, postpaid. For sale by DEWEY & Co., publishers, 220 Market St., San Francisco.

A Rare Chance.

The Gabilan Rancho, situated in Monterey county, containing 7665 acres, is offered at \$38.50 an acre, for 30 days, on long time and easy terms. Address, J. C. HOAG, 312 Van Ness avenue, San Francisco.

Buena Vista Rancho.

A portion of this Rancho, suitable for mixed farming or dairying, containing 1672 acres, will be offered for 30 days at \$35 an acre, one-third cash, balance in three years. Address J. C. HOAG, 312 Van Ness Avenue, San Francisco, or TYLER BEACH, San Jose.

The Melbourne International Exhibition.

Australia celebrates the centenary of her settlement by a grand International Exhibition at Melbourne, commencing August 1st next and continuing for six months. Congress has appropriated \$50,000, will appoint commissioners to represent the United States, and it is hoped that very many private firms will make exhibits. The government of Victoria controls the exhibition and gives space and steam for motive power free. The exhibition building and annexes will cover 24 acres of ground, and the display, both local and from foreign countries, will be the largest ever seen in the southern hemisphere. Goods for exhibition are admitted duty free. Australia is a rich and growing country. American goods sell well there, and the comparative nearness of Australia to America should inspire our business men to control her markets. Mr. John M. Ives who for the past three years has been in the antipodes as manager for the well known Safe Cure House of H. H. Warner & Co., has just returned with letters from the chief secretary and commissioners; also blank applications for space, which he will be pleased to send free on application to him at Rochester, N. Y. Applications should be made at once, as goods must be in position not later than July 1st next.

Who Is It?

Who sent us a postal note from Middletown, Lake county, without sending his name?

Who did the same thing from Selma, Fresno county, some time ago?

It is impossible to give proper credits unless people will send their names with the remittance. Let all subscribers take notice.

P. S.—If people wonder why their letters are not answered or the paper stopped when they omit the postage stamp on their letters, or misdirect them, or give them to parties who never mail them, whose fault is it?

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.
JOHN G. H. LAMPADUS—S. L. Obispo & S. Barbara Co.'s.
G. W. INGALLS—Arizona Territory.
WM. WILKINSON—Fresno Co.
A. F. JEWETT—Tulare Co.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
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E. H. SCHAEFFLE—Calaveras and Sacramento Co.'s

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

IT STANDS AT THE HEAD!



DO NOT FAIL TO SEE THE "DOMESTIC" Before Buying a Sewing Machine.

It is the leader in practical progress. Send for price list to J. W. EVANS, 29 Post St., S. F.

California Inventors

Should consult DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors for better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 220 Market St., San Francisco Elevator, 12 Front St.

NURSERY FOREMAN WANTED.

Must have a knowledge of the general nursery business. State terms and references. Write to

C. M. SILVA & SON, Lincoln, Placer Co. Cal.

ONE PACK May I O U Home Cards, One Pack Escort Cards, One Pack Flirtation Cards, One Pack Hold-to-the-Light Cards, The Mystic Oracle, with which you can tell any person's age; and large sample book of Hidden Name Cards. All for only a 2-cent stamp. BANNER CARD CO., CADIZ, OHIO.

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BUSINESS COLLEGE, 24 POST ST., S. F.

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SEND FOR CIRCULAR. E. P. HEALD, President.

C. S. HALEY, Secretary.

WINCHESTER HOUSE,

44 Third Street, San Francisco, Cal.

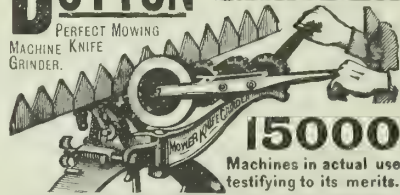
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And upward. ROOMS WITH OR WITHOUT BOARD. FREE COACH TO THE HOUSE. J. POOLEY.

DUTTON GRINDER



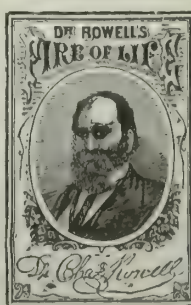
Machines in actual use testifying to its merits. Can be carried into field and attached to Mowing Machine Wheel. New Descriptive Catalogue free. HICCANUM MANUFACTURING CORPORATION, Successors to R. H. ALLEN & CO. 189 Water St., N. Y. Main Office, Hiccanum, Conn.

This space is reserved for the NEW HOME SEWING MACHINE COMPANY, 725 Market St., Bancroft History Building, S. F., Cal.

FIRE OF LIFE A MAGIC CURE

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Everybody should have it. G. G. BURNETT, Agt 327 Montgomery St., S. F. Price, \$1.00. Sold by all Druggists. Call and see DR. CHAS. ROWELL OFFICE, 426 Kearny St., San Francisco.



GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, H. MEYRICK, Box 5, Santa Cruz, Cal.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

EL ROBLAS RANCHO, Los Angeles, Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford cattle. Information by mail. C. F. Swan, manager.

VALPARAISO PARK, Thoroughbred Poled Angus and Durham Cattle. Thoroughbred Berkshire Swine. Address E. D. Atherton, Menlo Park.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

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COTATE RANCH BREEDING FARM, Pages Station, S. F. & N. P. R. R. F. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Geo. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicest blood strains.

JERSEYS—THE BEST HERD—All A. J. C. C. registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

H. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands; Aargie's and Case Straus. Punch for ringing bulls, \$1.00 postpaid. Berkshire Swine, Catalogues. E. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

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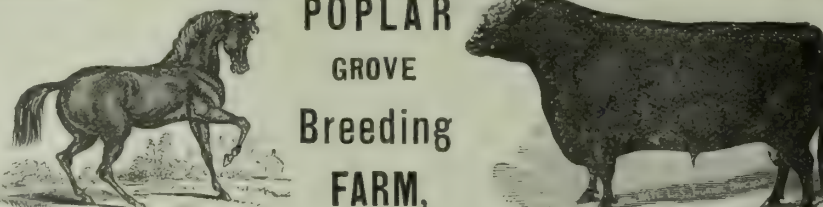
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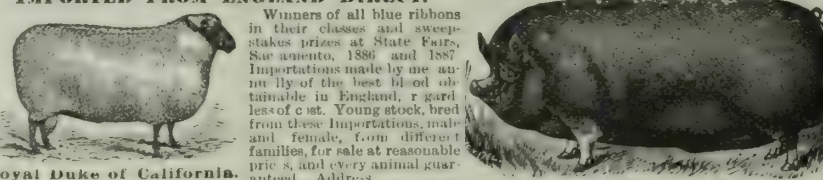
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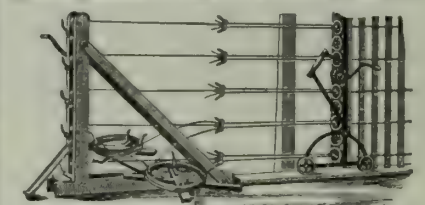
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DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
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in adding my testimony to that of Dr. Schneider as
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returns the user a better money value than a low-grade
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, March 21, 1888.

Continued fair weather caused freer trading in farm produce, but under heavier receipts vegetables shaded off. In cereals the market was of a mixed character, corn and oats ruling strong and slightly higher, and wheat and barley lower on Call, but for sample parcels, except on forced sales, there was no change. The European and Eastern markets were quiet, but the tone generally for wheat was firm. To-day's London cable was as follows:

LIVERPOOL, March 21.—Wheat—Inactive. California spot lots, 65 sd to 68 8d; off coast, 33s 3d; just shipped, 33s 3d; nearly due, 33s 3d; cargoes off coast, fair inquiry; on passage, not many bids in market; French country markets, mostly turn dealer; wheat on passage to Continent, 240,000 qrs.; wheat and flour on passage to U. K., 1,865,000 qrs.; wheat and flour in Paris, quiet.

Foreign Review.

LONDON, March 19.—The *Mark Lane Express*, in its weekly review of the grain trade, says: The English wheat trade is not improving. The sales of the week were 77,227 quarters, at 30s 6d per quarter, against 41,865 quarters, at 32s 11d, during the corresponding week last year. In foreign trade stagnation also prevails. The imports of wheat are smaller, but the proportion of flour is large and keeps down prices. The freight per steamer on wheat from New York to Liverpool is only 2d per quarter, and there is a prospect that wheat will again be paid for as ballast. Flour barely maintains its former values and maize is slow to sell. Grinding barleys are against buyers at 3d dearer. Oats were in small supply during the week, seven cargoes being sold, two withdrawn and two remain. At today's market English and foreign wheats were weaker at a decline of 6d. Flour was in large supply at 3d to 6d lower.

California Products in Chicago.

CHICAGO, March 17.—Choice fruit is rather scarce and firm. More or less fruit of all kinds is coming in and is somewhat off quality. This rules slow. Good fruit has a good selling demand and is selling at much better prices. The extension of the strike to the Santa Fe railroad, it is feared, will reduce the receipts of oranges from California. The greater part of that fruit is coming over the road mentioned. If the delay affects the consignments it will be the cause of firmer prices. The following prices ruled to-day: California Riverside oranges, \$3@3.25; other California kinds, \$2.75@3; California No. 2, other kinds, windfalls, \$1.75; California Navel, Riverside, \$5.50@6; California Navel, \$4.50@5; California lemons, firm, but rather slow, \$1.50@1.75 per box.

The California dried fruit market is rather easy. There is some demand and there are also fair offerings of the several lines. Buyers, in looking around, are somewhat reluctant about paying the prices which are asked, and sales are, therefore, a little slow, and the market is inclined to be rather easy. At the same time, so far as prices are concerned, there is no material change to note. We quote: Peaches, sun-dried, in sacks, 1/2 lb. 11@12c; do, evaporated, unpeeled, in sacks, 1/2 lb. 13@15c; do, boxes, 1/2 lb. 13@15c; do, peeled, in sacks, 1/2 lb. 17@22c; do, in boxes, 1/2 lb. 22@25c; apricots, sun-dried, in sacks, 1/2 lb. 10@11c; do, evaporated, in sacks, 1/2 lb. 12@16c; plums, pitted, in sacks, 1/2 lb. 11 1/2@12 1/2c; prunes, small, 1/2 lb. 8@10c; do, fancy large, 1/2 lb. 13@14c; nectarines, according to quality, in sacks, 1/2 lb. 5@12c; raisins, loose Muscadel, two-crown, 1/2 box, \$1.35@1.45; do, three-crown, 1/2 box, \$1.50@1.65; do, London layers, 1/2 box, \$2.30@2.35.

Sales of hops are about moderate, the market in about all respects the same as lately quoted. Good to choice grades meet with moderate and steady trade. They are also steady, for the supply is rather small. Common qualities are rather neglected, being very little called for. Pacific Coast, choice, 1/2 lb. 12@14c; do, common to prime, 9@12c.

Beans were without quotable change, either in tone of the market or prices. There is a small jobbing trade, but there do not appear to be any large lots selling. The supply on the market is small. California, according to quality, \$2.25@2.85.

Eastern Wool Markets.

BOSTON, March 16.—There have been very few features of a new or interesting nature to notice in the wool market during the week. Business has been almost entirely suspended since Monday last. The tone of the market is firm for desired grades, but much of the Territory wool offering, and some other kinds, are of such undesirable character that dealers are obliged to accept prices that show considerable concessions. The only activity in the market is seen in medium wool. Total sales of foreign and domestic were 2,296,500 lbs. Quotations are: Ohio and Pennsylvania X and XX, 30@32c; No. 1 Ohio fleeces, 35@36c; Michigan do, 28@29c; No. 1 Michigan fleeces, 35c; combing and delaine fleeces, 32@38c; unwashed combing, 22@29c; Territory, 18@21c; Texas, 12@20c; Kentucky, 28c; California spring, 14@21c; do fall, 8@17c; unwashed and unmerchantable fleeces, 10@23c; super and extra pulled, 24@25c; Australian, 35@41c; River Platte and Carpet, private terms.

NEW YORK, March 16.—Wool is steady. Domestic fleeces, 22@37c; pulled, 18@40c; Texas, 13@22c.

Eastern Grain Markets.

CHICAGO, March 21.—Wheat steady; cash, 72 1/2c; April, 72 1/2c; May, 71 1/2c. Corn steady; cash and April, 46c; May, 49 1/2c. Oats, steady; May, 30 1/2c.

NEW YORK, March 21.—Wheat—90 1/2c for cash, 89 1/2c for March, 88 1/2c for April, 89 1/2c for May, 88 1/2c for June and 87 1/2c for July.

California Raisins.

NEW YORK, March 19.—California raisins are beginning to reflect an upward tendency. Sales were made Saturday of some 3500 boxes of the best

brand—three-crown—loose in bulk at \$1.85, though a considerable portion was at an advance to \$1.95. This latter price is now firmly required for Lion brand, bids having been made in instances of \$1.90 which were declined. The stock is closely concentrated and interior markets are said to be about bare. The position of Malaga warrants this increase in the value of the domestic. The stock of the former on the 18th inst. was placed at 19,000 boxes.

Local Markets.

BAGS—The pool have marked prices up another point. Their ultimate figure is said to be 10c for Calcuttas. The market is quotable, for June-July delivery, 8 1/2@8 3/4c.

BARLEY—The market ruled weak throughout the week, owing to buyers bidding low and a strong selling pressure so as to save expenses. For futures, trading on Call was fair, with cross orders made at lower prices. To-day's record of sales is as follows: Morning Session: Buyer season—200 tons, 8 1/2c; 600, 8 1/2c; 200, 8 1/2c. Buyer 1888—100 tons, 8 3/4c; 400, 8 3/4c. Afternoon Session: Buyer 1888—200 tons, 90c @ ctl.

BUTTER—Heavy receipts, warm weather, and buyers being offish, the market shaded off, closing weak. Last year at this time there was heavy panning, but so far this season there has not been any.

CHEESE—Receipts are coming in more freely, and naturally the market is tending down, for buyers take sparingly and sellers are more anxious.

EGGS—The market gained in strength, but with freer importation of Eastern, there is a weaker feeling. The consumption continues large.

FLOUR—The market is steady, with a good demand ruling.

PROVISIONS—Hog products of all kinds are very firm, with further advances looked for in lard, hams and bacon.

WHEAT—The market for sample parcels has partaken somewhat of a deadlock character—any selling pressure was met by lower bids, and a buying demand by higher askings and higher sales. Good to choice wheat is very scarce, with millers having considerable trouble in having their wants met even at \$1.37 1/2 to \$1.40. In futures, the market has been quiet, with sales on Call reported to be chiefly cross orders at lower prices, so as to get actual wheat for less money. At today's Call, the reported transactions are as follows:

Morning Session: Buyer season—800 tons, \$1.34 1/2; 100, \$1.34 1/2; 100, \$1.34 1/2. Buyer 1888—100 tons, \$1.42 1/2; 100, \$1.42 1/2; 100, \$1.41 1/2; 200, \$1.41 1/2; 900, \$1.42. Afternoon Session: Buyer season—200 tons, \$1.34 1/2; 100, \$1.34 1/2. Buyer 1888—400 tons, \$1.42 @ ctl.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to Mar. 19, '87.	July 1 '87 to Mar. 17, '88.
Flour, qr. sks.....	3,417,931	2,762,235
Wheat, cts.....	10,529,152	7,048,440
Barley, cts.....	1,948,985	1,898,664
Oats, cts.....	115,691	131,802
Potatoes, sks.....	706,768	947,490
Corn, sks.....	73,451	171,501
Rye, sks.....	20,249	15,826
Buckwheat, sks.....	5,547	2,919
Beans, sks.....	402,522	368,491
Bran, sks.....	358,573	376,638
Hay, tons.....	78,327	89,671
Salt, tons.....	17,348	12,240
Wool, bls.....	45,391	40,154
Hides, No.....	81,038	77,258
Raisins, 20-lb boxes.....	135,479	107,150
Quicksilver, flasks.....	13,609	22,479
Hops, bls.....	12,824	14,968

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to Mar. 19, '87.	July 1 '87 to Mar. 17, '88.
Flour, sks.....	111,621	217,545
Wheat, cts.....	478,052	825,030
Barley, cts.....	5,253	75
Oats, cts.....	288,197	185,825
Corn, cts.....	80,936	12,590
Wool, bales.....	9,063	7,370
Bran, sks.....	27,918	51,298
Hops, bales.....	754	398
Hides, No.....	25,356	23,047
Rye, cts.....	4,798	4,798
Potatoes, sks.....	88,182	53,991

Cereals.

At brief intervals since October last *Bradstreet's* has given statements of the production, imports and exports of wheat in nearly all the wheat-growing and wheat-importing and wheat-exporting countries of the world, most of them for periods of 10 years, sometimes more, and in a few instances less. The averages for 10 years were given for each country—embracing production, imports, exports and supply, excepting a few unimportant countries where the crops are not officially reported, and which were estimated, as in the case of Chili, Egypt, South Africa, Tunis, Serbia and Mexico. The reports from remaining countries were taken from the official figures, and are regarded as approximately accurate. The population of Europe in 1886 has been given at 347,000,000, against 331,000,000 in 1880, and 289,000,000 in 1860, and 216,000,000 in 1830. The average yearly production of wheat of the world, for 10 years, has been about 2,010,417,924 bu., and the average wheat production of Europe for the 10 years ended with 1886 was 1,172,356,052 bu., annually. The average aggregate quantity of wheat left over for home use for the 10 years ending March, 1886, was 1,998,101,960 bu. for all the countries named, and for Europe the average quantity left for home use for 10 years ended in 1886, was 1,333,135,399 bu. The wheat-growing countries of Europe in the 10 years ended with 1886 exported a yearly average of 136,547,017 bu. of wheat to countries of Europe that produced less wheat than they consumed. The latter, besides importing from the wheat-exporting countries of Europe, imported from wheat-growing countries without Europe for the 10

years ended December, 1886, an average of 160,779,257 bu. of wheat annually, or its equivalent in flour, making the annual average from all countries imported by Europe 297,326,274 bu.

Advices from Australia are to the effect that there were there about 80 vessels chartered to carry wheat to the United Kingdom, and the demand for ships continued active. The surplus available from South Australia is now estimated at 425,000 to 500,000 tons, of which two-thirds, or say, 325,000 tons (1,400,000 qrs.) will probably find a market in Europe. During the past year (1887) the exports were 128,000 tons, of which only 199,827 qrs. wheat and 156 tons flour went to Europe, intercolonial markets thus absorbing 71,000 tons, and Europe only 57,000 tons. In Victoria the crop was not turning out so satisfactorily, owing to the rain, but it was expected that the surplus for export would reach at least 150,000 tons (650,000 qrs.), against an actual export in 1887 of 220,000 qrs.

According to Government returns just published the Russian wheat crop of 1887, including Russian Poland, was about 31,000,000 qrs. against 24,000,000 qrs. in 1886, and 28,500,000 qrs. in 1885. The rye crop had a surplus over 1886 of about 12,000,000 qrs. One peculiarity of the 1887 crop was the increased quantity of winter wheat as compared with 1886, the Azima wheats harvested last autumn showing 6,000,000 qrs. surplus over the previous year, but nearly 1,000,000 qrs. below that of 1885. There is a large quantity of wheat in Russia awaiting export.

Mail advices from the winter wheat sections are unfavorable and generally indicate considerable danger to the crop, with more or less damage, and an exceptionally fine season will be required to make a fair crop of winter wheat; thus far it has been the reverse. So far as the condition of the crop is concerned Kansas has kept at the head of the procession, with promises of a full average, though the acreage has been reduced materially, and we learn that the reserves of wheat back in farmers' hands are comparatively very small indeed, the local mills having paid such high prices early in the season that wheat was marketed very freely. In Missouri the condition is almost uniformly good, but the central district is suffering somewhat of late. Tennessee promises an excellent yield, but Kentucky is considerably below an average. From Ohio and Indiana we have more complaints of severe weather and trying effects on the crop than in any other two States in the winter wheat belt. Recent reports say in Indiana the late sown acreage is large, which is very unpromising. Winter wheat in Illinois has already suffered considerably, and it will take but a few days more of dry winds to seriously injure it. The Michigan crop is uneven, the growth being small, and it still looks short and thin. The month of March, as usual, is characterized by freezing and thawing, which cannot be otherwise than highly injurious to the young and tender wheat plant. In the Northwest the receipts have fallen off, and it is claimed that the wheat is being absorbed by millers quite rapidly, so that there is comparatively little accumulation there. A good milling demand is also reported for wheat in the Northwest from outside points, and stocks in country elevators are reported to have been reduced 900,000 bushels during the month of February.

Oregon mail advices continue to report Valley wheat at \$1.25 on wharf or \$1.27 1/2 f. o. b. (f. o. b. is an abbreviation of "free on board" of boat, steamer or cars as the case may be.) and \$1.20 on wharf or in warehouse, and \$1.22 1/2 f. o. b. for Eastern Oregon. Shipments continue to be made to this city quite freely, and as the steamship company dispatches a steamer every three days the 20,000 tons mentioned some time ago is being delivered quite rapidly in this city. The freight is 13 1/2c per cental. Crop advices, as a rule, are not as favorable as at this time last year.

In this State advices regarding the wheat crop are uniformly good, but then there is no certainty regarding crops, owing to the sudden climatic changes. In the local market choice wheat is held very strong and buyers are compelled to bid well up to have their wants met. The supply of good to choice shipping is scarce, as is milling wheat.

Barley has ruled weak throughout the week, owing to the bears hammering futures down on Call and dealers bidding lower for actual grain. Their plea is higher overland freights. The consumption in this State was never before larger, owing to its relative cheapness. Many stablemen use ground barley, bran and middlings, mixed with chopped straw in lieu of hay, owing to the high price of the latter. Of necessity they feed some hay, but as it is, as little as possible. The stock of barley in the State is decreasing quite rapidly; about the only places having much are the southern coast counties. B-tter prices are looked for before the close of next month. Choice brewing and choice Chevalier are scarce and for straight parcels full prices are obtainable.

Oats are strong. Receipts coming in are being warehoused. Last year Nebraska sent us heavy supplies, but so far this year none has come to hand from that source. It is stated that the stocks in Oregon and on Puget Sound are quite light and will be wanted chiefly for local use.

Corn made another advance the past week, closing strong at full figures. High markets at the East, higher overland freights and a good demand are the prime factors in promoting a better market with us. Rye and buckwheat are steady at current quotations.

Live-Stock.

Bullocks are a shade easier under freer offerings. The consumption will not be so large as soon as vegetables begin to come in freely with prices lower. Mutton sheep are barely steady. Hard grain-fed hogs are wanted at a slight advance. Milch cows move fairly free, with a good demand for the more choice. There are a few number of cows owned by dairymen than two years ago. In horses the market shows a decided improvement. Workhorses ranging from 1000 lbs up sell at from \$150 to \$300 each. A matched team of dark bays, good steppers, good appearance and kind disposition was sold the past week at \$1500. This is above the market, but the span were well mated and can be used for the family or road. Matched teams sell at from \$750 to \$1200. Single-footers, general utility, bridle and driving horses are more inquired for.

Fruits.

Choice apples are scarce and hard to get even at an advance on \$1.75. The general demand is only fair. Common apples are slow.

It seems that so far this season, an unusually large

quantity of common oranges have been sent to this market. They are sent, as a rule, in poor condition and without due selection. Being more or less dirty or black, and of irregular size, they sell low and slow. Good to choice oranges brushed off, and of attractive size and color, sell well and readily. The shipments up north have been and continue to be very heavy, keeping the more choice well-conditioned fairly well cleaned up.

In limes and lemons, there is nothing new to report. Good keepers of the former are wanted to fill shipping orders.

The stock of dried fruits is being steadily lowered, under a good (for the season) call. The supply here is, without a doubt, not sufficient to meet the coast trade, but then if values are advanced, too high consumption is curtailed. Dried apples are a shade higher, with a still higher range looked for.

London layer raisins are hard to get. Choice loose Muscadel are growing scarcer. The market for all kinds is gradually strengthening.

Feedstuff.

Feedmeal and cracked corn are higher. Ground barley is in good demand, as are bran and middlings. The supply of the three latter is quite liberal.

Hay is strong at full prices. While some choice sells at \$20, yet it is hardly safe to calculate on so high a price, for the sales are in a small way. At present high prices buyers confine their purchases as far as they can to actual week to week requirements.

Vegetables.

With clearer skies, warm days and foggy or dewy nights, garden truck grows rapidly. It will be only a question of a few days before all kinds of spring vegetables come to hand. Asparagus is lower and weak, as are green peas. Some of the latter were marketed from Alameda. Tomatoes are scarce, as are cucumbers. Mushrooms are in liberal receipt, but prices hold steady.

Potatoes weakened off still more, with a weak closing. Heavy receipts and only a fair call are the chief reasons for the decline. As spring vegetables come in, old potatoes move more slowly. New potatoes are coming in more freely, but as yet, sell high.

Under light receipts and a good demand, onions, as usual at this season of the year, are higher and strong at the advance.

Miscellaneous.

Poultry weakened off the past week, closing weak under free receipts and a fair demand.

Warm weather forced game on the market, causing a lower range in values.

In hops the movements have been very free for both home and shipping. Choice, straight parcels are very scarce, the bulk being irregular and generally poor.

Beans are steady, with a strong tone under light supplies.

In seeds the demand is falling off.

In wool there is nothing to report. The stock here is poor and undesirable and for which the only buyers are scourers. Medium and fine wools, if healthy, clean and lively, will command good prices this year.

San Francisco, March 21, 1888.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, March 21, 1888.	
Apples, bx com.....	80 @ 1 00
do choice.....	1 25 @ 1 75
Apricots, lb.....	— @ —
Bananas, bunch.....	2 50 @ 5 00
Blackberries, cr.....	— @ —
Cantaloupes, cr.....	— @ —
Cherries white bx.....	— @ —
do black bx.....	— @ —
do Royal Ann.....	— @ —
Cherry plums.....	— @ —
Crabapples.....	— @ —
do French.....	10 00 @ 12 00
Gourmands ch.....	— @ —
Gooseberries lb.....	— @ —
Figs, black bx.....	— @ —
do white bx.....	— @ —
Grapes, white.....	— @ —
do black.....	— @ —
do Rose Fern.....	— @ —
do Muscat.....	— @ —
do Tokays.....	— @ —
Isabel.....	— @ —
Wine, Zinfandel.....	— @ —
do Mission.....	— @ —
do Rose Fern.....	— @ —
do Cal box.....	— @ —
Lemons, Cal, bx 100 @ 3 00	
do Sicily, box 400 @ 5 00	
do Australian.....	— @ —
Nectarines box 100 @ 1 50	
Oranges, Combr 100 @ 1 75	
do choice.....	1 75 @ 3 00
do Navel.....	— @ —
choice.....	4 50 @ 6 00
do do Com.....	3 50 @ 4 00
do Panama.....	— @ —
Peaches, br.....	— @ —
Peppercorns, bx 100 @ 1 50	
do choice.....	— @ —
Pears bx.....	— @ —
do choice.....	— @ —
do Bartlett, bx 100 @ 1 50	
Persimmons.....	— @ —
Jap, bx.....	— @ —
Pineapples, doz 200 @ 4 50	
Plums lb.....	— @ —
Pomegranates, b.....	— @ —
Prunes lb.....	— @ —
Quinces bx.....	— @ —
Raspberries ch.....	— @ —
Strawberries.....	— @ —
Watermelon, 100.....	— @ —

VEGETABLES.	
Asparagus bx.....	1 25 @ 2 00
do extra choice.....	— @ —
Okra, dry, lb.....	15 @ 20
do green bx.....	— @ —
Parsnips, ct.....	2 00 @ 3 00
Peppers, dry.....	— @ —
do green, lb.....	10 @ 15
Pumpkins prot.....	— @ —
Squash, Marrow.....	— @ —
do, soo.....	22 50 @ 25 00
do Summer bx.....	— @ —
String beans lb.....	— @ —
Tomatoes box 200 @ 3 00	
do choice.....	— @ —
do do.....	1 00 @ 1 50
Beets, sk.....	— @ —
Cabbages, 100 lb.....	90 @ 1 00
Jarrols, sk.....	30 @ 45
Eggplant, 9 lb.....	— @ —
Garlic, lb.....	— @ —
Green Corn, cr.....	— @ —
do sweet corn.....	— @ —
do large box.....	— @ —
Green Peas, lb.....	6 @ 9
Sweet Peas lb.....	— @ —
Lettuce, doz.....	— @ —
Lima Beans lb.....	— @ —
Mushrooms, lb.....	10 @ 30
Rhinbarb lb.....	4 @ 6
Cucumbers, doz 1 50 @ 3 00	

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, March 21, 1888.	
Beans and Peas.....	15 @ 18
Bayo, ct.....	2 25 @ 2 50
Butter.....	— @ —
Cash.....	3 75 @ 4 00
Red.....	2 20 @ 2 50
Pink.....	2 20 @ 2 50
Large White.....	3 50 @ 4 00
Small White.....	4 00 @ 4 50
Lima.....	3 25 @ 3 50
Wild Peas, blk eye 2 00 @ 2 10	
do evaporated.....	2 00 @ —
do Niles.....	2 10 @ —
BROOM CORN.....	— @ —
South'n perton.....	60 @ 80 00

Northampton, 60 @ 80 00	Jersey Blues....	— @ —
CHICORY.	Humboldt.....	— @ —
California.....	do Kidney.....	— @ —
German.....	do Peablow.....	80 @ 90
DAIRY PRODUCE, ETC.	do Ohio.....	— @ —
BUTTER.	do Oregon.....	80 @ 1 00
Cal. fresh roll, lb.	Peerless.....	75 @ 90
do Fancy brands	Salt Lake.....	— @ —
Pickle roll.....	Sweet.....	2 00 @ 3 50
Parkin, new.....	POULTRY AND GAME	
Eastern.....	Hens, doz.....	6 00 @ 7 50
CHICKS.	Broilers.....	6 00 @ 10 00
Chesee, Cal., D.,	Ducks, tame.....	9 00 @ 13 00
Eastern style.....	do Mallard.....	— @ —
EGGS.	do Sprig.....	— @ —
Cal. ranch, doz.	Geese, pair.....	2 25 @ 2 75
do, store.....	do Goslings.....	— @ —
Ducks.....	Wild, doz.....	— @ —
Oregon.....	Turkeys, B.....	15 @ 20
Eastern.....	do Dressed.....	19 @ 23
FEED.	Turkey Feathers,	
Brn, ton.....	tail and wing.....	— @ —
Feedmeal.....	Snipe, Eng., doz.	— @ —
Gr'd Barley ton, 18	do Common.....	— @ —
00 @ 19 00	Doves.....	— @ —
Hay.....	Quails.....	1 00 @ 1 25
Middlings.....	Hare.....	1 00 @ 1 50
Oil Cake Meal, 32	Venison.....	— @ —
50 @ 50	PROVISIONS.	
do new process.....	Cal Bacon.....	11 @ 12
Straw, bale.....	Heavy, lb.....	12 @
FLOUR.	Medium.....	12 @
Extra, City Mills	Light.....	12 @
4 00 @ 4 35	Extra Light.....	13 @
do O'ntury Mills	Lard.....	9 @ 11
3 75 @ 4 00	Cal Smoked Beef	
Superfine.....	Hams, Cal.....	12 @ 14
GRAIN, ETC.	do Eastern.....	14 @ 15
Barley, feed, cbl.	SEEDS.	
do, Brewing.....	Alfalfa.....	8 @ 9
Chevalier.....	Canary.....	3 @ 4
do Coast.....	Oat.....	11 @ 12
Buckwheat.....	White.....	20 @ 22
Corn, White.....	Cotton.....	2 @ 3
Yellow.....	Flaxseed.....	4 @ 4 1/2
Small Round.....	Hemp.....	10 @ 11
Nebraska.....	Italian Ryegrass	
Oats, milling.....	Perennial.....	7 @ 8
Choice feed.....	Millet, German.....	5 @ 6
do good.....	do Common.....	5 @ 6
do fair.....	Mustard, white.....	2 @ 2 1/2
do black.....	Brown.....	3 @ 3 1/2
do Oregon.....	Rape.....	14 @ 15
Eye.....	Ky. Blue Grass.....	15 @ 17
Wheat, milling.....	do quality.....	13 @ 15
do Choice.....	Sweet V. Grass.....	17 @ 18
do fair to good	Red Top.....	9 @ 10
Shipping choice	Hungarian.....	8 @ 9
do good.....	Lawn.....	80 @ 40
do fair.....	Mesquit.....	8 @ 9
HIDES.	Timothy.....	7 @
Wet salted.....	TALLOW.	
HONEY, ETC.	Grude, B.....	2 @ 4 1/2
Beeswax, lb.....	Refined.....	— @ —
Honey in comb.	WOOL, ETC.	
Honey in comb,	FALL—1887.	
fancy.....	Humboldt and	
Extracted, light	Mendocino.....	15 @ 18 1/2
do dark.....	Sac'to valley.....	12 @ 15
HOPS.	Free Mountain.....	15 @ 18 1/2
Oregon.....	N'bern defective	
California.....	S Joaquin valley	
Pickling.....	do mountain.....	12 @ 15
Red.....	do Cava's & F'th'l.	12 @ 17
Silverskins.....	Oregon Eastern.....	14 @ 20
Cut.....	do valley.....	16 @ 21
NUTS—JOPPING.	Southern Coast.....	9 @ 14
Walnuts, Cal., D.		
do Chile.....		
Almonds, hdshl.		
Soft shell.....		

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SAN JOSE AGRICULTURAL WORKS,

San Jose, Cal.

HARVEST QUEEN

FOR 1888. THE MOST COMPLETE HARVESTER IN THE FIELD.

AGRICULTURAL IMPLEMENTS.

370 MAIN ST., STOCKTON, CAL.



OUR HARVEST QUEEN (COMBINED) HARVESTER.

Sizes—10, 12, 14 and 16-foot cut. Each Machine has Steel Shafting and Straw Dump, which saves all the Straw and Chaff. Header easily detached to ship or pass through 10 foot gate. SEND FOR PRICE LIST AND TESTIMONIALS TO

M. & W. MANUFACTURING CO.,
Stockton, Cal.

The Ertel VICTOR

AUTOMATIC FOLDER.



DOUBLE-ACTING PERPETUAL HAY AND STRAW PRESS.

A Machine imitated but not equalled, Baling Hay or Straw faster, more compact, easier, more economically (to load 10 to 15 tons to the Car) than is done with any other so warranted or no sale. Circulars mailed free address, Geo. Ertel & Co., Quincy, Ill.

THE LEADING BALER IN THE MARKET.

PROTECTED BY 744 PATENTED CLAIMS.

GOULD'S

SPRAY PUMP

—WITH—

Bamboo Extension all fitted up,
Complete with Hose, Barrel
and Spray Nozzle.



This cut shows in faithful operation our Gould's Spray Pump; they are utilized for spraying Fruit Trees, Orange Groves, Vines, and in fact, all trees or shrubbery infested with the destructive insects which infest and do so much injury in Orchards, Vineyards, Orange Groves, etc. They are made entirely of brass, with the exception of frame and handle, and are strong and heavy; the valves being made entirely of metal, will not be affected by the corrosive solutions such as Canstic Soda, Acids, Lye, or any other solution that may be used to kill the destructive insect.

NOTICE.—Ongert's Liquid Tree Protector is the best Spray for killing Red Scale, Black Scale, White Cushion Cottony Scale, San Jose Scale, or any other insect.

Send for Special Circular and Prices.

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GOULD'S SPRAY PUMP.

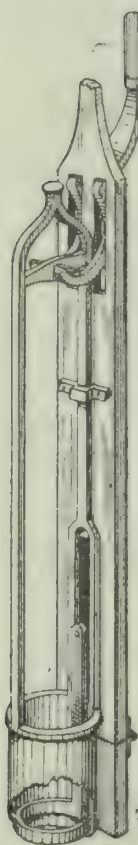
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Seeds, Plants, Etc.

ORANGE TREES FOR SALE

—AT THE—

ANAHEIM EVERGREEN NURSERY



The Oldest Established Nur-
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100,000 1 and 2-year old Orange and
Lemon Seedling Trees.

20,000 Pepper Trees 3 to 5 feet high,
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150,000 Blue Gum and Monterey Cypress
IN BOXES.

A large stock of Italian and Weeping Cypress, Pines
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50,000 Fruit Trees of all kinds.

The Evergreen Trees are taken up with my

PATENT TRANSPLANTER,

With a ball of earth around the roots, just as if they
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Alfalfa, Grass, Clover, Vegetable,
Flower, Fruit, and Seeds of every
variety. Special low rates for
quantity.

B. F. WELLINGTON,

Seeds and Improved Egg Food,

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NAPA VALLEY NURSERIES.

ESTABLISHED 1878.

Fruit Trees, Grapevines, Resistant Grape-
vine Stock,

And everything to be found in a first-class Nursery; also
the following new fruits, obtainable only at these Nurse-
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Clyman—Earliest and finest shipping Plum.

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Send for catalogue and price list. All stock unirri-
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SIBLEY'S TESTED SEEDS
CATALOGUE FREE. Containing
all the latest novelties and stand-
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Flower Seeds. Gardeners every-
where should consult it before
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Address: Hiram Sibley & Co.,
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KY BLUE AND SEEDS
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160 ACRES NURSERY!

1,500,000 TREES AND VINES!

W. M. WILLIAMS & CO.'S

SEMI-TROPICAL AND GENERAL

NURSERIES

Fresno, Cal.

We would respectfully call the attention of the public to our very complete list of Nursery
Stock for the ensuing season, consisting of a full line of all the Standard Varieties of

APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, NECTARINE, Etc., Etc.,
BESIDES A LARGE STOCK OF THE GENUINE

WHITE ADRIATIC FIG,

Guaranteed, and the NEW LYONS CLING PEACH. We have an immense stock of ROOTED
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Send for Catalogue and address all correspondence to FRESNO, CAL., Box 175.

460 ACRES.

INCORPORATED 1884.

CALIFORNIA NURSERY COMPANY

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FRUIT & SEMI-TROPICAL.

GRAPEVINES, SMALL FRUITS, ETC.

Largest Stock on the Pacific Coast!

SPECIALTIES:

PLUMS, PRUNES AND APRICOTS, ON MYROBOLAN STOCKS.

Facilities for Packing and Shipping to Distant Points are Unsurpassed.

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Catalogues for 1888 Now Ready.

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Westcott Brothers,

SEED MERCHANTS.

"WESTCOTT STANDARD,"

HARDY NORTHERN-GROWN SEEDS,

FROM MINNEAPOLIS, MINN.

Will be a Special Brand of Seeds Guaranteed by us as Good and Reliable.

406 and 408 SANSOME STREET,

SAN FRANCISCO, CAL.

Correspondence solicited from Merchants, Farmers and others. All kinds of Seeds, Lawn Grass, Plants
and Bulbs always in Stock.

SEEDLESS OONSHIU.

See PACIFIC RURAL PRESS of January 21, 1888, page 53.

And other Japanese Oranges, Citrus Japonica, Chestnuts, Camphor, Persimmons, Bamboo,
Mulberry, Palms, Cycas Resoluta (large), Loquats, Ooji Tea Plants and Tea Seed, etc.

Send for Circulars, etc.

JAPANESE TREE IMPORTING CO.,

Office, 120 Sutter St., San Francisco.

Nursery, corner Van Ness Ave. and Union St. (Presidio cars from Market St. Ferry pass the door.)

The City of Sydney brings us 10,000 more Oonshiu, making
50,000 to date, and a Variety of other Trees, Etc.

FRUIT TREES.

ESTABLISHED 1863.

FRUIT TREES.

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—AGENT—

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NOW OFFERS THE LARGEST STOCK OF

FRUIT TREES, GRAPEVINES, OLIVES, SMALL FRUITS, Etc.,

Ever offered on the Pacific Coast at very low rates. Samples on hand at below address.

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SEEDS.

SEEDS.

We also offer at lowest rates a large and fresh stock of

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All of which are thoroughly tested before being sent out. Large stock of Ornamental Trees and Plants, Bulbs,
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Agent for California Nursery Co. in San Francisco.

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Valley Nurseries,

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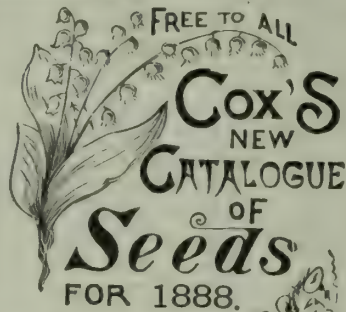
Orange and Lemon Trees,

SHADE TREES,

Evergreen Shrubs, Roses,

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Our New Catalogue for 1888, mailed free on applica-
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Flower, Grass, Clover, Tree and Field Seeds; Australian
Tree and Shrub Seeds; native California Tree and Flower
Seeds, Fruit Trees, and many new novelties introduced
in Europe and the United States.

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PACIFIC NURSERY,

Baker & Lombard Sts., San Francisco

F. LUDEMANN, Proprietor.

Offers Fruit and Ornamental Trees, Flowering Shrubs
in well-cultivated plants and selected varieties.

ROSES.

Splendid collection of Teas and Everblooming sorts;
also Tree Roses from 3 to 4 feet high of the best sorts.
Camellias, Rhododendrons, Azaleas Indica, Arancarias,
Variegated Hollies, Laurustinus and New Laurus in select
varieties.

OLIVES.

Picholine, Mission, Manzanilla, Learayanli Nevardillo
and other sorts.
Blackberries and other sorts of berries in good
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ROSES, PALMS, MAGNOLIAS, Evergreen and Ornamental Trees,

12 VARIETIES OF OLIVES,

CAMPHOR TREES, CORK OAKS,

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Send for Catalogue.

John Rock,

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Monterey Cypress transplanted, 6 to 10 inches high, of
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spaces); 8 to 12 inches, of 70 trees per box, at \$2 per box
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inches, at \$8 per 1000.

Monterey Pines, 6 to 8 inches, of 100 trees per box, at
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payment for sample boxes. All trees delivered in good
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SPECIAL.

Bermuda Grass Seed,

\$2.50 per pound.

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NEWCASTLE EARLY APRICOT,

Earliest in Cultivation.

HANDSOME AND GOOD FREESTONE.

Good Shipper and Productive.

All kinds of Fruit Trees and Small Fruit Plants. Send
for Catalogue.

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VITIS CALIFORNICA SEEDS.

Five pounds and over, \$1 per pound; less than five
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Vitis Californica Seedlings, Phylloxera Proof.

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Seeds, Plants, Etc.

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LONG RED MANGEL,
YELLOW GLOBE MANGEL,
SUGAR BEET SEED.
10 lbs. by Express, \$2.50.

Pure, Fresh, Reliable.

Farmers who keep Cows or Hogs should Plant Beets.

Send for my New Catalogue on Beet Culture, or "How to Plant, Tend, and Feed Mangels," free to all. Also

Pure-bred Poultry and Eggs For Sale.

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W. C. DAMON,
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100,000 BARTLETT PEAR TREES.

The best kind for Shipping and Canning.

General assortment of all kinds of

FRUIT and ORNAMENTAL TREES,

Including

ORANGE and LEMON TREES.

Also, a large stock of imported Fruit Tree Seedlings, Apple Pear, Myrobalan Plum and Mazzard Cherry.

Send for prices. Address,

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E. J. BOWEN'S SEEDS.

ALFALFA,
ONION SETS,
GRASS,
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VEGETABLE and
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Large Illustrated Descriptive and Priced Seed Catalogue, containing valuable information for the Gardener, Farmer, and Family, mailed FREE to all applicants.

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ROSES

ALL VARIETIES, SIZES AND PRICES
FINE EVER-BLOOMING PERPETUAL,
CLIMBING AND MOSS ROSES.

NEW AND RARE FLOWER SEEDS.

HARDY PLANTS, New Moon Flower, Clematis, Spring Bulbs, JAPAN LILIES, New Chrysanthemums, and our Wonderful ORNAMENTAL VEGETABLES. Everything sent safely by mail or express to all points. We offer Choice NEW THINGS and STERLING NOVELTIES in all departments. Our NEW GUIDE, 100 pp., elegantly illustrated, describes over 1500 NEWEST and CHOICEST Varieties of ROSES, SEEDS, PLANTS and BULBS, and tells how to grow them free. If you wish to plant anything, send for it. 20 Years Established. Over 60 Large Greenhouses. THE DINGEE & CONARD CO. ROSE GROWERS, WEST GROVE, Chester Co., Pa.

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Write for special bargains on the following trees:

5,000 Winter Nelis Pears,
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10,000 Eastern and California Black Walnuts.

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One year old, stocky, well rooted trees, grown without irrigation, \$25 per 100.

HUNGARIAN and GERMAN PRUNE, \$18 per 100
BARTLETT PEAR, one year old, \$10 per 100; two year old, \$15 per 100—Nursery prices. One-year-old Apple \$10. All orders for the country carefully packed to secure them against weather, etc.

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GRASS, CLOVER, VEGETABLE, TREE AND FLOWER

SEEDS

FRESH STOCK. LOW PRICES. IN LOTS TO SUIT.

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TRUMBULL & BEEBE,

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FANCHER CREEK NURSERY, Fresno, Cal.,

OFFERS THIS SEASON FOR SALE A FINE ASSORTMENT OF

FRUIT & ORNAMENTAL TREES.

SPECIALTIES:

WHITE ADRIATIC FIG, SAN PEDRO FINEST TABLE FIG, JAPANESE FRUITS, OLIVES, POMEGRANATES, MULBERRIES, TEXAS UMBRELLA TREES and also a fine collection of PALMS, YUCCAS, ROSES, and OLEANDERS.

Send 10 cents in stamps for a sample of the dried and cured Adriatic Fig. Fall catalogue now ready. Address all letters to F. ROEDING, Fresno, Cal.

STOCKTON NURSERY,

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ADRIATIC and SAN PEDRO FIGS.

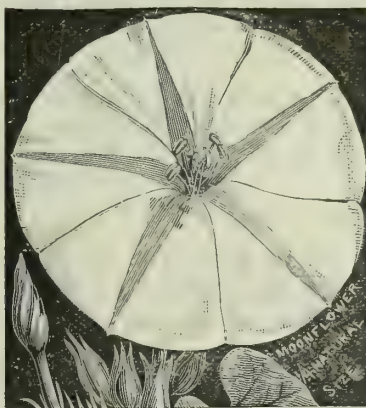
French Walnuts, Home-grown Oranges and Rooted Grapevines.

Illustrated Catalogue and Price List for the season of 1887-88 free to all sending for them. All Trees, Vines, etc., guaranteed free from scale and other injurious pests. A certificate of inspection furnished to all. A full line of Fruit and Ornamental Trees, Shrubs, Vines and Hothouse Plants.

E. C. CLOWES, Proprietor

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OUR MANUAL OF EVERYTHING FOR THE GARDEN



is this season the grandest ever issued, containing three colored plates and superb illustrations of everything that is new, useful and rare in Seeds and Plants, with plain directions of "How to grow them," by PETER HENDERSON. This Manual, which is a book of 140 pages, we mail to any address on receipt of 25 cents (in stamps). To all so remitting 25 cents for the Manual we will, at the same time, send free by mail, in addition, their choice of any one of the following novelties, the price of either of which is 25 cents:—One packet of the new Green and Gold Watermelon, or one packet of new Succession Cabbage, or one packet of new Zebra Zinnia, or one packet of Butterfly Pansy, or one packet of new Mammoth Verbena, or one plant of the beautiful Moonflower, (see illustration), on the distinct understanding, however, that those ordering will state in what paper they saw this advertisement.

PETER HENDERSON & CO. 35 & 37 Cortlandt St., NEW YORK.

PICHO LINE OLIVES

For Spring Planting.

FOR DESCRIPTION AND PRICE ADDRESS

LUTHER BURBANK, - - Santa Rosa, Cal.

SANTA ROSA NURSERIES.



Warranted Seed.

I have founded my business on the belief that the public are anxious to get their seed directly from the grower. Raising a large proportion of my seed enables me to warrant its freshness and purity, as see my Vegetable and Flower Seed Catalogue for 1888, FREE for every son and daughter of Adam. It is liberally illustrated with engravings made directly from photographs of vegetables grown on my seed farms. Besides an immense variety of standard seed, you will find in it some valuable new vegetables not found in any other catalogue. As the original introducer of the Eclipse Beet, Burbank and Early Ohio Potatoes, Hubbard Squash, Deephead Cabbage, Cory Corn, and a score of other valuable vegetables, I invite the patronage of the public. JAMES J. H. GREGORY, Marblehead, Mass.

PARSONS' FRUIT EVAPORATOR.

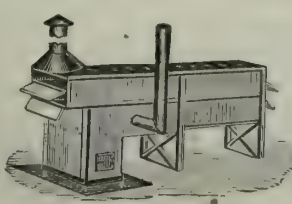
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Prices from \$85 to \$1000.

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Scientific Principles.

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At San Jose Agricultural Works,
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GRANGERS' BANK

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Authorized Capital, - - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$624,160.

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LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

DEPOSITS received. CERTIFICATES OF DEPOSIT issued payable on demand. BILLS OF EXCHANGE of the Atlantic States bought and sold.

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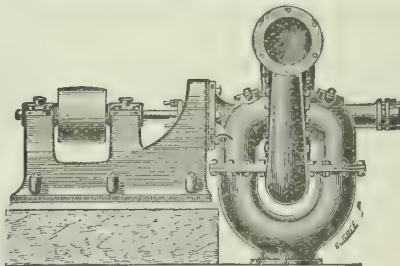
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H. P. GREGORY & CO.

SAN FRANCISCO, CAL.

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IRRIGATING PUMPS.

WE ALSO CARRY IN STOCK THE LARGEST LINE OF

MACHINERY

In the UNITED STATES,

Consisting of Wood and Iron Working Machinery. Pumps of every description.

ENGINES AND BOILERS

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Boots and Shoes,

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Full line of Ladies', Misses' and Children's Fine Shoes

AGENT FOR

Howell's Men's \$3.00 Shoes

In Button, Congress and Balmorals; Opera and French Toes. SEND FOR TRIAL PAIR.

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NATURAL GAS & OIL WELL TOOLS.

Revolving Jetting, Hydraulic, Diamond, Prospecting Well Tools, Wind Engines and Deep Well Pumps. Treatise on Natural Gas, or our Encyclopedia, mailed for 5c. The American Well Works, Aurora, Ill.

ADRIANCE "BUCKEYE" MOWERS.

MAKE SURE THAT YOU BUY THE BEST MOWER MANUFACTURED.

One that will Outwear two of any other make of Machine.

One that is very Simply Constructed and the Lightest Draft.

One that will do Better Work than any other Mower made.

TRADE-MARK "BUCKEYE."

The Machines built under the Trade-Mark "BUCKEYE" by Adriance, Platt & Co., Poughkeepsie and New York, have secured and retained the preferences of a large majority of the farmers of the PACIFIC COAST DURING THE PAST 30 YEARS.

We have the exclusive right to the use of the Trade-Mark "BUCKEYE" as applied to Mowers and Reapers on the Pacific Coast, and caution farmers against any fraudulent attempts to steal our reputation.

BE SURE YOU GET THE

"GENUINE ADRIANCE BUCKEYE."

ADRIANCE, PLATT & CO.

The Adriance Buckeye Mower is made in two sizes:

Size B cuts a swath of 4 feet 3 inches.

Size A cuts a swath of 4 feet 6 inches.

The Adriance Reaper cuts a swath of 5 feet.

Each Mower is furnished with Two Complete Scythes, Two Extra Knife Sections, Two Extra Guard Fingers, etc.

Hodges' Haines' and Hodges' Case Headers, the Rice Straw-Burning Engines, Gold Medal Separators, Perkins' Windmills, Etc., Etc. Sole Agents' for THE "SCHUTTLE" FARM WAGONS, "TAYLOR" and "RELIABLE" SULKY RAKE.

HAWLEY BROTHERS HARDWARE COMPANY, San Francisco, Cal.



REPAIRS.

CONVENIENCE AND CERTAINTY OF PROCURING FIXTURES FOR REPAIRS are very important points for a farmer to consider when selecting a machine.

We caution farmers against buying Mowers on account of the CHEAPNESS IN PRICE. The failures in the past few years of manufacturers who tried to put CHEAP machines on the market have caused trouble in getting extra parts for such machines as were sold, and have fully demonstrated the truth of the old axiom,

"The Best is the Cheapest."

And the "BEST" is

The "BUCKEYE."

Each Reaper is furnished with Two Complete Scythes (or sickles, if preferred), Two Extra Knife Sections and Two Extra Guard Fingers, etc.

Screw Wrench, Punch, Cold Chisel, Oil Can, Bolts, Rivets, etc., and Whiffletrees and Neck Yoke, furnished with EACH Mower or Reaper.

Send for Special "BUCKEYE" Descriptive Pamphlet with Reduced Prices for 1888.

33 and 35
Main Street,
SAN FRANCISCO.

FRANK BROTHERS,

33 and 35
Main Street,
SAN FRANCISCO.

DEALERS IN

AGRICULTURAL IMPLEMENTS

Buggies, Carts, Harness, Etc.,

Including a Full Line of the Well-Known

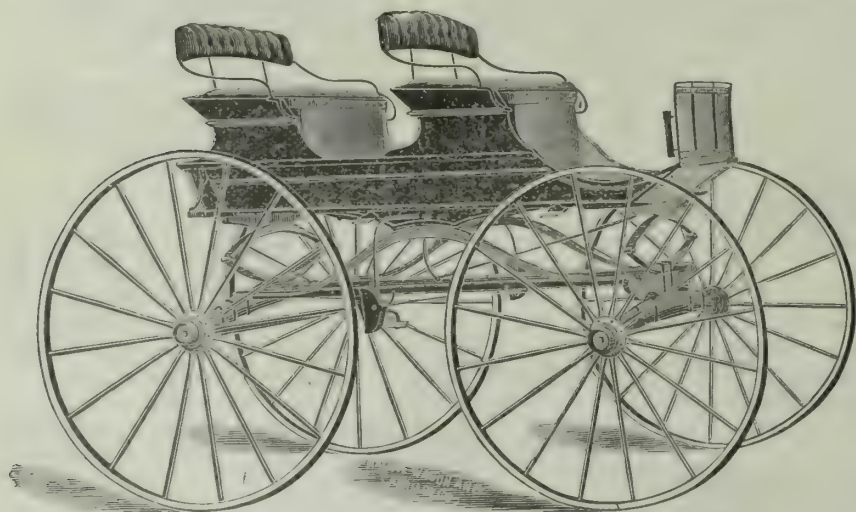
RACINE SPRING WAGONS.

No other Spring Wagon brought to this market shows the careful manner of construction, thorough regard for details of manufacture and general finish that the Racine does.

THE FLINT ROAD CART.

LIGHT, EASY RIDING, AND ALL MATERIAL.

GENERAL AGENTS FOR



Walter A. Wood Mowers, Reapers, and Binders.

WALTER A. WOOD MOWER, with Tilting Bar, is the most powerful mowing machine built; it will cut worse crops and cut them cleaner, and endure more severe usage than any other. It is capable of cutting through any growth possible for a mowing machine to deal with.

It will cut a larger acreage than any other, before becoming impaired by wear. Farmers relying on inferior mowers often suffer even more serious losses than frequent outlays for repairs, as breakages arising from cheap construction are most apt to occur at the very time when the work of the machine is most indispensable and when the damage from delay is most disastrous.

The strength of the Wood Mower is marvelous, yet is conjoined with mechanical movements so perfect that a man can draw the Mower in gear and mow grass.

As the driving wheels are very high and stand wide apart, the machine performs its work with a steadiness not found in any other Mower. This conduces not only to powerful cutting and durability, but to the comfort of the driver—it is the steadiest and easiest riding Mower in use.

The underdraft rod, instead of drawing by the pole, draws directly from the cutting apparatus to the horses' shoulders, and in such a manner as to leave just so much of the weight of the cutter bar on the ground as to insure close cutting and light draft.

All clutches, clutch gears, and shifter levers have been dispensed with, avoiding their wearing and slipping out of gear. In their stead are direct shifter cams on the drive wheels. These cams are not subject to any wear whatever. They are the perfection of simplicity, and communicate all the power of the drive wheels instantly.

The Mower is most admirably adapted for cutting down and tangled crops and any grass that is in bad condition. By a lever the guards can be raised and lowered instantly without the driver leaving his seat or stopping the machine, and without cramping the action of any part of the machine.

THOMAS and ROYAL RAKES, COATES RAKES, Etc., Etc.



TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 22.

SAN FRANCISCO, SATURDAY, MARCH 31, 1888.

\$3 a Year, in Advance
SINGLE COPIES, 10 Cts.

The Peen-to Peach and its Offspring.

Our Florida friends seem to have set far greater store by the peculiar peen-to or "flat peach of China," and to have secured much more from it than have Californians. The variety was brought to California many years ago.

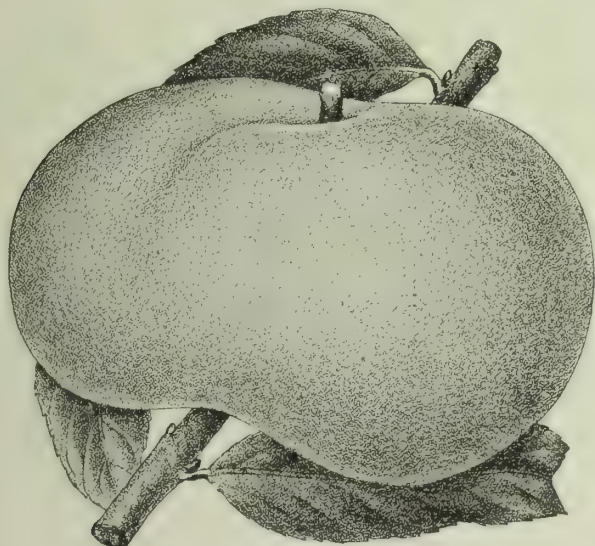
grower, we are not aware that anything has been done with the peen-to in California.

In the Southern States the variety seems to have been more fortunate in attracting attention, and in addition to the direct use made of it, it is a parent of varieties which seem to be promising. The growth of seedlings from the

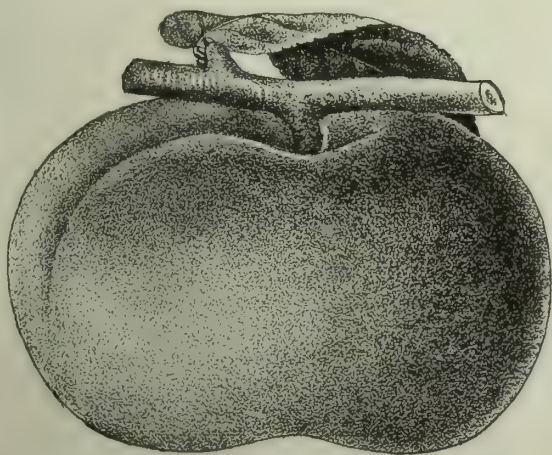
perennial tree, as he remarks concerning it, "of nearly evergreen foliage," from a sub-tropical country—a country with winter rains and dry summers. From the sub-tropical temperature to which the peen-to is native, Mr. Mott argues its fitness to Florida, and California can go a point further than Florida, for we have

Of seven seedlings grown by Mr. Bidwell, the fruit from four was round or oblong, like the usual shape of the peach, and three were flattened at stem and blossom end, like the peen-to. Two of the round varieties have been disseminated, and are known as Bidwell's Early and Bidwell's Late, as shown in the engraving.

PEEN-TO.



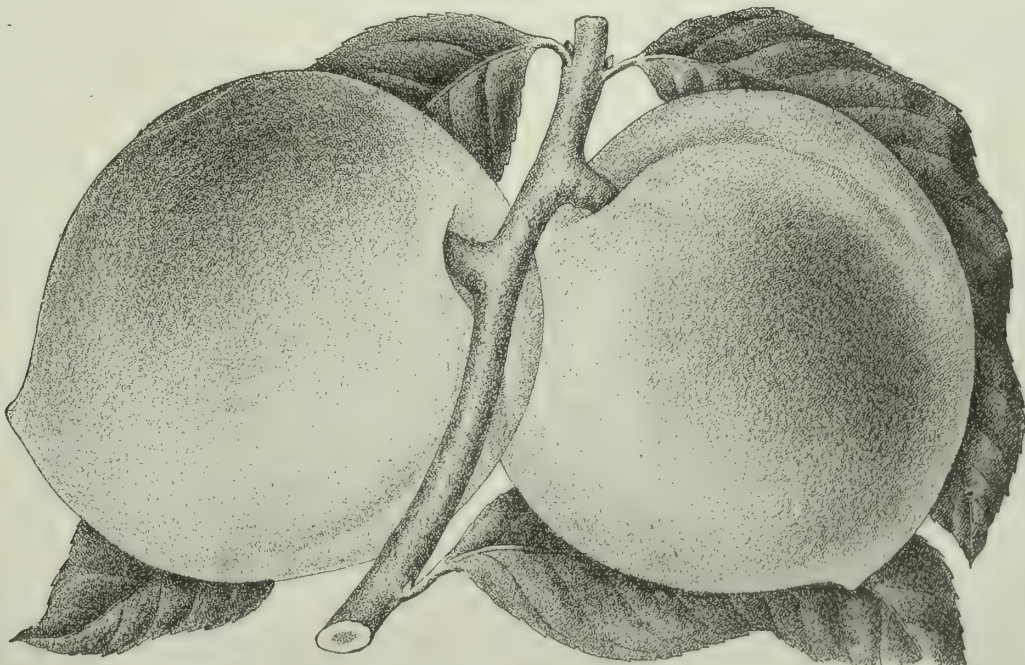
IMPROVED PEEN-TO.



BIDWELL'S LATE.



BIDWELL'S EARLY.



THE FLAT PEACH OF CHINA AND SEEDLINGS GROWN FROM IT IN FLORIDA.

The first fruit the writer saw in California was grown in the garden of Mrs. Longstreet in Los Angeles in 1878, but the fruit first appeared some time earlier than that date. The trees were brought to California from Australia, and from Australia also the variety was secured by P. J. Berckmans of Georgia as early as 1869. He grew his trees from pits. During the last ten years the peen-to has fruited in several parts of the State, and has been shown from time to time at the meetings of the State Horticultural Society by James Shinn of Niles. More than as a curiosity, or as a fruit relished by the

peen-to has received much attention from A. I. Bidwell of Orlando, Florida. They have been described and illustrated in the *Florida Dispatch*, from which source we derive our engravings and the data which we shall present. It is possible that California growers may like to try Mr. Bidwell's varieties and perhaps to test seedlings from the peen-to on their own account.

As to the origin of the peen-to, Mr. James Mott, author of "Peach Culture in South Florida," says, without question it is of that family found wild by Atchison, in Afghanistan, a

both the sub-tropical temperature and the alternate seasons, wet and dry, which Florida has not.

Our engravings show the peen-to as usually seen and the improved peen-to, a seedling grown by Mr. Bidwell in 1882 and fruiting in 1884. Bidwell's Improved Peen-to is described as follows: General appearance, fair; size, medium; shape, flat, somewhat thicker than the peen-to; color, pale yellow, tinged with green and washed with red; cling, flesh, white, fine grained, melting and juicy; sweet with slight noyau flavor; quality, good.

ings. A brief description of these varieties is given on another page of this issue. The great change secured by the growth of seedlings of the peen-to will interest many of our readers who are experimenting with California seedlings of different kinds.

THE Kansas City pork-packers propose to sue William G. Bartle of St. Louis for \$60,000 damages, originating in his depositions before the House Committee on Agriculture concerning the manufacture of lard and packing of meats from diseased animals.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Northern Santa Clara.

EDITORS PRESS:—In resuming my notes on Santa Clara county, I beg to notice briefly some of the important enterprises of the northern portion. At the same time I do not wish it understood that there are not many other industries in this section besides those I shall here mention that are equally worthy of public attention. In fact, the country around Mountain View and Mayfield will compare well in almost every respect with the most highly favored portion of the county, and the great wonder is that it has not kept full pace with the advancement which has been made south of it, which, of course, is not so conveniently situated as regards the distance and time to San Francisco.

The passenger on the cars, halting at the depot of Mountain View, is likely to form an opinion that the town is of much less importance than what it really is, from the fact that a considerable part, known as Old Mountain View, lies a mile west of the station, and is not seen at all in traveling through by rail. The population is variously estimated from 800 to 1000. A more enterprising spirit has taken hold of this community than formerly, as is evidenced by the number of new buildings being erected and the inauguration of several new enterprises. Among these is the Mountain View Cannery, with a capital stock of \$50,000, divided into 5000 shares. This is regarded as a most timely move, as a very large amount of fruit was necessarily wasted last year by reason of the lack of an establishment of this kind in the neighborhood. Among the most enterprising and prosperous patrons of the RURAL PRESS in the neighborhood, upon whom I called, is Frank P. Beverly, who is the proprietor of a 100-acre farm at the edge of town. He adopts the most approved methods of culture, and can show a balance on the right side of the ledger at the end of each year.

L. M. Ehrhorn has a model 30 acre orchard of pears, French prunes and other choice varieties of fruit trees. Fruit-growers may gather some valuable hints from the scientific methods pursued on this ranch. One theory I thought worthy of note, adopted by Mr. Ehrhorn, is to plow under the leaf mold every second year and cultivate the alternate season, whereas some pursue a different course. This idea not only appears possible, but is backed up by the most satisfactory results, as attested by a yield of 10 tons of apricots from only 500 three-year old trees, and five tons peaches from 300 trees of the same age. Another idea with which I was favorably impressed is Mr. Ehrhorn's plan of spading the ground up to a good depth around each tree instead of simply plowing as closely as possible and afterward scratching the ground over with a hoe, as is the custom of many. There is not only the advantage of better culture gained by this method, but there is less likelihood of bruising the trees when coming in contact with the plow or singletree, and what is of still greater importance than all other considerations named, it very greatly lessens the danger of gophers burrowing around the tree and destroying the same, as it is a well-known fact that this animal seeks the more compact portions of the earth rather than the very loose places to burrow in the ground.

Contrary to what might be supposed, women usually succeed in fruit culture in this valley quite as well as men. This conclusion has been forced upon me by an extensive observation during this season, and never more forcibly than in the instances of Mesdames M. M. Atwell and Wm. F. Perkins, both of whom have thrifty plantations near town and are appreciative readers of the RURAL PRESS.

I recently passed a very pleasant night with Capt. O. H. Wakelee and his estimable wife at their comfortable homestead, 2½ miles west of Mountain View, and near the foothills. The Captain here owns an orchard of 40 acres and a vineyard of 15 acres, and let the reader distinctly understand that by these terms is not meant simply the space of so many acres covered with indifferent varieties of fruit trees and vines, and the attention paid them of that careless character so common to this and every other section of our country. All the particular care and attention with which Mr. Ehrhorn is credited above, Capt. Wakelee may lay just claim to in the pursuit of fruit-growing. Every tree on his place, after having been carefully selected, was planted in holes dug three feet in dimensions, carefully and continuously cultivated in the proper season ever since; and, as might be naturally supposed, the orchard ranks hardly second to any in the valley, and of course, that means in the whole State. It is needless to enumerate the different varieties of fruit trees in this orchard; it should suffice to say that few kinds known to California soil and climate are found missing on this place. Capt. Wakelee produced apricots of the Royal variety, last season, which averaged from seven to nine to the pound, and a few measured eight inches in circumference. The writer, after having taken a careful survey of the entire valley, and studied the advantages to which each section lays claim, is of the candid opinion that the merits of the Mountain View section have been very much overlooked, while other, and perhaps less favored districts, have reaped the gain. At all events, I should say, visit this part of the country, examine the soil, see what thrifty

fruit trees are produced here, talk to such men as Capt. Wakelee and a dozen others I might name in his neighborhood, and see if your verdict is not the same as that to which I have come, that at existing prices of land compared with lands elsewhere with equal advantages, this is one of the best sections of California in which to seek a home.

A day or two later I visited the Palo Alto ranch, about one mile west of the S. P. R. R., and about an equal distance from Mayfield and Menlo Park. On my way to this famous stock-ranch I halted at the site of the great Stanford university and took a hasty survey of operations. Upward of 100 men are constantly employed on the grounds, and the masonry is well under way. Hundreds of people are attracted to this place almost daily, and particularly on Sundays, to witness the busy scene.

But the affairs of Palo Alto interested me the most, and, believing that many of your readers would likewise be interested in some statistics relating to one of the finest stock-farms in America, I will close my letter with a few facts concerning it.

Within this vast domain is included more than 10,000 acres of fertile land, upon which was produced last year 5000 tons of hay, 20,000 sacks of barley, 28,000 bales of straw, besides corn, carrots and other products in large quantities.

At the trotting stables there are stalls for 550 horses. This includes the barns for stallions in service, large, commodious, and convenient barns for horses being broken and in training, and stalls for brood mares. About half a mile beyond the stables a white fence incloses a double line of paddocks on either side of the avenue. To the left of one row of paddocks is another fine avenue, a quarter of a mile in length, which is kept in condition for speeding, and is used when the tracks are out of condition. Still to the left of this road is another double row of paddocks, adjoining which are rows of large, comfortable boxes for brood mares.

At the termination of the avenue first mentioned there is a large space in which are four large handsome stables, each of which contains 40 or more stalls. Directly opposite these stables, about 100 yards away, are rows of box-stalls to the number of 150 or more, in which are stabled yearlings and weanlings. Near these stables is a large mill for grinding and steaming feed; then come the stables for work horses, then the offices, and near them are two excellent training racks.

Governor Stanford employs on this ranch over 200 men, and the pay-roll averages \$7500 per month.

Palo Alto is the home of one of the most noted horses in the West—Electioneer, purchased by Senator Stanford 10 years ago of Mr. Chap. Bachman, Stony Ford, N. Y. He is now 20 years old, and his descendants number a large per cent of the 500 head that grace the landscape of the Palo Alto.

No admirer of really fine horses and an ideal paradise for rearing the same could fail of being delighted with a visit to this magnificent stock-farm.

F. B. L.

Birds and Boys and Bugs.

EDITORS PRESS:—I don't know if this Court can entertain your proposed amendment to the complaint against the "sapsucker." The Court will take the matter into consideration and render a decision at a future date; but at present the Court is scratching the summit of its oabze over the classic expression "hausetellat orifice." Happening this morning to be feeding the pigs, as I leaned against the hog-lot fence I repeated those words aloud, whereupon the pigs immediately wooo-wooh-woohed as they ran across the lot to wheel about in battle array against the opposite fence. The use of that beautiful expression in your critical note of March 24th (see RURAL PRESS, page 251) has brought to my mind the real meaning of the word "exhausted." It seems to be from the Latin, and means *sucked out*. Therefore, it is not exactly a nice word for a tea-party of the Ladies' Aid Society. In my early youth I often heard of being "sucked in," as, for instance, when one boy deceived another, the deceiver joyously derided the deceived as being "sucked in, y-a-a-a-h!"

Now, as the peculiar manners and tricks of all boys are odorous of a remote antiquity in some cryptogrammatic manner (whoop, that's a big healthy word) handed down from father to son, or, at least, from son to son, I would like to ask of the followers of Champlillon, Enin Bey, and others, if there is anything about a boy being sucked in by another boy upon the monuments of most ancient Egypt.

Speaking of boys brings me back to the *Picus*. Perhaps several old subscribers to your paper will remember that when they were boys in the middle western wooded States, in their voluntary studies of natural history, the woodpecker, the ground squirrel and the whoodle-bug were interesting objects to study. The *picus* of that country is mostly the large red-headed woodpecker, and he or the squirrel I need not describe; but the whoodle-bug perhaps needs some literary attention. It probably belongs to that family of insects called the ant lions. I don't know if it is a fly or a beetle, or a bug, among scientists. But among boys it is a bug—at least among American boys—about a half-inch long, with a long nose and with a steel spring in its back, and it gets under the dry side of a log or a ledge of rock

cropping, or anywhere that there is dry dust and ants, and there it makes a funnel-shaped pit-fall about the bigness of an acorn. It secretes itself in the dust in the bottom of this pit-fall, leaving in sight only the tip end of its nose. The ant, which is a great insect for business (Mark Twain says so), comes to the rim of this funnel-shaped pit-fall and takes a view, concludes he'll go down and get that bug at the bottom. That ant is doomed. The whoodle-bug grips that ant, sucks his blood (or whatever his formic acid is), and then by means of his steel-spring spinal power, gives a snap that sends the carcass of the dead ant out of and far beyond the pit-fall. Then the whoodle-bug cleans up and prepares for another ant. Such are about the practical points in its history, but the small boy has another use for this bug, a use which, I doubt not, is in some unremembered and unrecorded way connected with the Egyptian holy bug (or scarabæus) of the pyramidal era. When the American small boy finds the pit-fall funnel aforesaid he gets down on his hands and knees with his face directly over the pit-fall and begins a murmuring incantation, the translation of which is:

"Whoodle-bug!
Whoodle-bug!
Whoodle-bug!
Come up, come up;
Whoodle-bug,
Come up."

And the bug reveals himself in response to the murmur of the incantation. And, by the way, I seem to notice that nearly all brainy small boys have a love for incantation, mummy and rude efforts at legerdemain. Is this the inherited prehistoric savage haunting the horizon of civilization? And now, do you think that, supposing some cataclysm that would totally cut off a colony of uneducated persons of a civilized race from all historic advantages, do you think that the old savagery of the race would instinctively assert itself?

And speaking of instinct brings me back the clairvoyancy, as you call it, of one class of *picus*. How a woodpecker, the true *picus*, knows there is a grub—nay, more than that; how he knows there is going to be a grub in an acorn next springtime is a wonderful question, to which, so far as I know, there is yet no answer. I have seen, what no doubt others have seen, a flock or company of woodpeckers in the redwood forest, or rather on the edge of the forest, where the redwoods meet the oaks, pick little holes in the coarse outer bark of a redwood tree from bottom to top, all around, up to the height of 150 feet, and put an acorn in each hole. But now, as acorns are not of exactly even size, the *picus* must have some mechanical clockworks in his head which enable him to know how to cut holes of various sizes. And it is singular that a *picus* always finds, at the first grab, the acorn which will fit the hole he intends it for. He never misses. While the bluejay—a different bird, of another class—in attempting to imitate the woodpecker and steal the use of the latter's industry, will grab an acorn, fly to a hole cut by the *picus* to find that it will not fit the hole, and drop it, with a squall or squawk, and go for another acorn, and so seeming to be fooling away his bluejay energy, just for fun. But it is to be closely observed that in each acorn stored away by the *picus* there is the egg of a grub; but if a jay succeeds in storing acorns they may or may not have grubs in them—most likely not. And whether the jay ever comes back after his stores I have not yet found out for certain. I rather think not, however, because a bluejay had rather steal than enjoy the rewards of honest labor.

J. W. GALLY.
Pajaro Township, Santa Cruz Co., Cal.

THE FIELD.

Prison Bags.

We alluded last week to the alleged combination in the grain-bag market and to the importance of the bugs from San Quentin as a factor in the situation. The report of Warden McComb, submitted at the meeting of the Directors on March 24th, and the action thereon, are given herewith:

To the Honorable State Board of Prison Directors—GENTLEMEN: I have the honor to report that the preparations for working the jute-mill at night having been completed on the 11th of this month, a second shift of operatives was organized, and on the night of the 12th the mill was worked till 10 o'clock and the prisoners were returned to their cells without confusion, disorder or inconvenience of any kind. The experience of the succeeding nights was similar to that of the first night, and now the night work is no longer an experiment, but an assured success.

As has been reported to you from time to time, abundant precautions have been taken to guard against attempt to escape, or to create confusion. The cell buildings are now inclosed within a high fence of scantlings, which continues as a narrow chute along the south wall of the prison until it ends against the west wall, which is also the east wall of the jute-mill building. Through these heavy walls a sap lyport is cut, and the chute thus conducts the prisoners from the cellhouses to the jute-mill without releasing them from the confinement of the prison-wall. As the jute-mill is also surrounded by a wall, nothing remains to be done while the prisoners are at work but to carefully patrol the walls and keep the men inside. To aid the guards in this duty, and to show the prisoners the futility of any attempt to escape, powerful electric lights are placed

at each corner of the smaller yard and others at different places about the grounds. The hand railing which has been put along the top of the wall enables the guards to move securely and with facility from one point to another in case their services should be needed, and lookout houses on the walls are occupied by the reserve force of guards who are off duty, but can be aroused by electric bells and brought on the walls in less than a minute. The second shift of prisoners is as safely guarded and with as little danger as the day shift.

The mill itself is lighted by gas, the flames being secured within a lantern. These lights are placed so as to enable the operatives to work the looms and spinning machines to the best advantage, and except for the inexperience of the new hands the work is accomplished as readily at night as in the daytime. The San Rafael Gas Company has taken great pains to give sufficient pressure by means of an exhaust pump and an automatic regulator.

The prisoners have been deprived of the direct issues of groceries from the Commissary Department, which were made a means for trafficking and bartering, and are now furnished with an improved ration as soon as the report on their diligence and skill shall entitle them to it. The new plan works very satisfactorily, as is shown in the increase of the daily output of the jute-mill and to all other branches of labor. The average number of bags produced by the day shift is far above that of the best single day's work last season. As soon as the night shift can be filled to the proper limit the output will be double.

Before commencing to run the mill exclusively on grain bags there were several orders on hand that occupied the looms for some time, but those orders have been completed and the mill is now running entirely on the manufacture of grain bags. Thus far 350,000 have been completed, with the prospect of adding about 14,000 each day, when the full complement of men can be put at work. It is a simple matter of calculation to ascertain how many bags can be produced during the year. If the farmers wish to buy for use as late in the season as September, there will be two million bags available for this year's harvest.

The newspapers of the State have widely spread the announcement that farmers could procure their bags direct from the prison, and numerous inquiries have been received. Quite a number of orders has already been filled, and others are constantly arriving. Judging from present appearances, we shall have no difficulty in disposing of all the bags that can be manufactured here in that way.

Letters of inquiry have also been received from dealers in grain bags, and my replies were framed so as to insure the carrying out of your plan, while not denying the inquirers the privilege of purchasing if the conditions could be accepted. In order that my action may not be misunderstood, I quote the reply to one firm of dealers who wished to secure a very large number of bags.

[The letter to which Gen. McComb refers is dated March 15th and was printed in full in last week's RURAL. It refused to furnish bags to the dealer, but offered to ship them to consumers and send the bills to the dealer, but not to amount in the aggregate to more than 200,000 bags. This offer was not accepted. Gen. McComb concludes his report as given below.—EDS. PRESS.]

There is a large supply of jute on the way from Calcutta, which will probably arrive about May 15th. The total value of this supply is about \$83,000, to meet which we will have the amount of the revolving fund, \$40,000, and the products of sales, which will easily reach the required \$48,000. This supply will keep the mill running till next season, and will enable us to enter the market with a large stock of bags to meet the demands of purchasers.

As this report is already lengthy, I will not add anything about the improvements which are under way, trusting that they will commend themselves to your notice.

I have mentioned the lack of available operatives for the double shift in the jute-mill, and now add that other work has been stopped in order to use the men for the jute-mill, and still the force is deficient. I therefore respectfully request your honorable Board to transfer 150 prisoners from Folsom institution at once, so that their labor can be made use of for this season's needs.

Very respectfully,
JOHN MCCOMB, Warden.

After the reading of the report, Director Sonntag submitted a resolution fixing the maximum price of bags at eight cents each. Director Luttrell submitted the following as a substitute, which was unanimously adopted:

WHEREAS, The plan of selling grain bags to the farmers direct having met with gratifying success, as is shown by the large number of orders booked at the prison; and whereas it is proper that the enterprising farmer should not be restricted when he avails himself of the opportunity of dealing directly with the Warden of the prison to procure the number of bags necessary to sack his crop; and whereas the farmers have been notified through the newspapers and by circular of the price of bags from day to day; and whereas an order for 500 bags has received as much consideration and as prompt attention as an order for 50,000 bags; thus encouraging both the small and large purchaser; and whereas we believe that no other plan could be devised to govern the dealings of this institution with the farmers which could give such general satisfaction; therefore, be it

Resolved, That the Warden be directed to continue the plan which has been inaugurated of giving the lowest price of bags each day to all inquirers, the offer to remain open until return of the mail from the point of inquiry; and when the order to purchase is received, either from the party himself or through his Grange association, or through his banker or local merchant, accompanied by check, it shall be filled in regular sequence for any number of bags that the mill may be able to supply, or which the Warden may consider prudent to sell.

Resolved, further, That until the further order of the Board the price of bags shall not exceed eight cents a bag.

On motion of Director Sonntag it was decided to transfer 150 able-bodied prisoners from Folsom to San Quentin for service in the jute-mill at the latter institution.

THE DAIRY.

Dairying in California.

The forthcoming *Overland Monthly* for April will contain an article by R. G. Sneath, the well known proprietor of the Jersey Farm Dairy at San Bruno, on "Dairying in California," from which we take the following:

Dairy farming is one of the most important industries in the civilized countries of the world, and the health, wealth, and prosperity of a country is largely denoted by the extent and condition of its activity.

Before the advent of Americans in California, the country was almost exclusively pastoral—overrun in fact with vast herds of wild cattle, valued principally for their hides and tallow. The climate, soil, and natural grasses of the country in favorable seasons produced such a prolific growth of animal life that a suppression, through occasional droughts and lack of feed, seemed not an unmixed evil.

Through isolation and the survival of the fittest, these cattle became in time a specific breed, truly Californian and unlike those of any other country, although in general appearance somewhat related to the native Texan and Mexican cattle. On the settlement of the country by Americans, who brought with them many domestic cattle from the Eastern States, the crossing with the native cattle commenced, and this course was pursued until the natives and their crosses have entirely disappeared, and in their places, although less in number, may be found improved breeds of cattle from almost every portion of the world, until it may be fairly claimed that but few countries can exhibit a larger percentage of superior cattle.

A thorough examination of the reports of consuls upon "cattle and dairy farming" in other countries, as compiled by the Secretary of State for 1887, with illustrations, shows very clearly that very few countries produce cattle that are superior in any respect to those now being raised in California, notwithstanding her youthful existence.

It is perhaps not remarkable that a mild climate, an abundance of food, with pure air and water, should produce such apparently wonderful results, without the skillful and devoted attention necessary in more unfavorable climates. The result, when in addition to the natural advantages those helpful measures in vogue in older communities are employed, cannot be otherwise than favorable. And who knows but that in time, with more advantages, California may yet take the lead in the production of fine cattle?

Mountain Dairies.

While the whole of California, even in her mountain heights, is well adapted to pasturage, the coast counties are perhaps the most valuable for that purpose, because the moisture from the ocean gives a longer period of growth to the grasses. Most of the present dairies are located along and near the Pacific shore, although there are many small dairies in the interior valleys, supplemented by others in the mountain valleys for summer use, thereby rendering the business continuous.

After the spring grass in the lower valleys begins to dry up and turn yellow, in the middle of May or first of June, the drive to the mountains begins. One or two wagons are loaded down with dairy utensils, plain household furniture, groceries, and table supplies. Then the cattle are rounded up and started with the teams on the road to the mountains. It generally takes about a week, making from 10 to 20 miles daily, and camping where good feed and water may be had along the road. Women very seldom accompany these trains, as it is a very rough and unpleasant trip through heat, dust, and bad roads; but when the mountain meadows are reached, and comfortable quarters have been provided, with a good range for the cattle, the business becomes very enjoyable. It is profitable as well, and continues until October, when the frosts of winter signal their return.

Cattle raised in the mountains are more healthful and vigorous than those from the valleys below. The mountain grasses are much more nutritious than lowland, though more scanty, and these with the mountain air and pure cold water have a wonderfully beneficial effect upon animal life. The butter made in those districts is always in demand at the highest market prices.

Irrigation.

The irrigation of pasture land for dairy purposes has not received the attention it deserves; for there are thousands of farms within the State that could be made very profitable with a moderate degree of enterprise and expenditure, by the careful use of water upon good strong land. Alfalfa, rye grass, and orchard grass, and perhaps many other sorts, can be kept growing vigorously along the coast during the whole year, with a moderate application of water during the summer season; and this where without irrigation the business would be quite unprofitable. The same may be said of the warmer interior valleys, by exercising more care and using more water.

Success in dairying depends almost entirely on an abundance of good feed, good water, and the best of animals. With plenty of good nutritious feed and pure wholesome water, however, almost any healthy common-grade cows, with the poor milkers culled out, will be profit-

able; but to insure good profits the animals must be of the best, and reared to the business.

Dairy Cattle.

The best are not always thoroughbreds, for crosses of common stock with thoroughbreds frequently produce large and rich milkers. Thoroughbreds are likely to recede in value as milkers, because they are generally expensive, and the owner is slow to part with them because of any deficiency in milk, while he will not hesitate in sending grades to the block should they fail to give satisfaction. So a constant selection from the grades will in time furnish better milkers, on an average, than unselected thoroughbreds. In fact, success cannot be attained except by discarding at once every animal that fails in her performance at the pail, no matter whether of high or low degree.

Most of the thoroughbred cattle imported in early days were of the Shorthorn breed, only a portion of which were of a decided milk strain. Good beef, which the Spanish cattle, so called, did not furnish, was more important than butter and cheese. Besides, the country was full of cows that might be crossed with the larger Shorthorns, and thus an improved animal was had that not only furnished good beef, but to some extent could be used for dairy purposes. A few Ayrshires and Devons of good blood came too, and these also were an improvement. Then the noted Jerseys were received in large numbers as the favorite family and dairy cow. The climate of their native home being similar to that of California, it was believed that they would not only thrive, but perhaps excel their previous records by the change. This has happened in some cases, and if they had been treated as less valuable cows have been—that is, by discarding all the poor milkers and those in low vitality—those remaining would have been a great improvement over those of the original importation. The failure to do this has stocked the country with a large number of Jerseys of little practical value. The crossing of large first-class Jersey bulls with the common-grade cow has been attended with good results, the product being of good size and vitality, and the milk not only much richer, but of fair quantity. Where this process has been followed intelligently, and the small milkers discarded, dairies have been made profitable.

Later on, the Holstein-Friesian, Hereford, Polled Angus and Galloway were imported in considerable numbers, the three latter principally for beef purposes, and the Holsteins for both meat and milk. The latter, in fact, have been imported of late years in quite large numbers, and they are now, perhaps, more popular than any other breed for dairy purposes. They give a reasonably rich milk and a much larger average quantity, and are perhaps more gentle than others.

The Holsteins are hardy, and transmit their form, color and milking qualities in crossing with most other breeds so perfectly that their grades can hardly be distinguished from the real thoroughbreds. Their size is quite large, and they are always black and white in color. For beef purposes they compare quite favorably with other kinds.

Their cost is high at present, and will be, so long as it is necessary to import them, but they are increasing rapidly in numbers, and the time cannot be far distant when they will be within the means of farmers generally.

There can be no more beautiful sight than a large herd of Holsteins busily engaged in cropping the green herbage, as the contrast of the clear-cut black and white on a green landscape is so marked as to attract instant attention.

Leased Dairies.

Most of the butter and cheese dairies of California are now conducted by Swiss and Portuguese people. For many years they have been employed more than any other class as milkers, and from that position it was an easy step forward to renting and proprietorship. They are very industrious and economical, and, having had much experience in this industry in their native country, they naturally fell into the same business here.

Many of the larger ranch owners have found that they could lease their land and cows to these foreigners with more profit than to conduct the business themselves, and these ranches were divided into several farms with 100 to 200 cows on each, and leased, all told, at a fixed rate per cow, the number and value of stock to be kept good.

The improvements on these lots are generally a small, one-story living house, a milk and butter room, a small stable, and corral to milk in—at a total cost, perhaps, of \$500—while the general appearance is anything but cleanly or cheerful. Each man on the premises milks from 20 to 25 cows twice daily, and together they cultivate enough hay, and some roots perhaps, to keep their cattle in good condition through the year. One pair of work horses and a riding horse are generally all that is required in starting. The implements required are few and inexpensive, so that scarcely any capital is required by a renter.

Frequently two or three men join in a partnership, all being good workers, do most of the labor required themselves, and having a small expense account, make savings relatively much greater. One at a time may go out and start for himself, and thus each may in turn be provided for.

Sometimes several milkers employed in a large establishment co-operate by pooling their wages and intrusting one of their number with

the funds to operate in the dairy business for their general account.

But few of these dairymen have families or women about until they are fixed with homes of their own. They are almost invariably successful, however, in owning good farms within from 5 to 10 years after their arrival in the country, as the fruits of their industry, and they make fairly good citizens thereafter.

There are, however, many dairies conducted by Americans—dairies that compare in size and completeness with those of the Eastern States. On these dairies families are growing up surrounded with all the comforts and many of the luxuries of life, with still an increment of profit.

Such dairies are more scientifically handled and their produce has a higher value than the others. Labor is high, and therein the foreigner has the advantage, as he not only works hard himself, but employs his own countrymen, who on arrival in the country work at extremely low wages until fitted to go into other service.

Most of these arrivals are young men about of age, and physically able to do any labor. Their experience in the home country, however, except that of milking a cow, is of little value to them here, and not being able to speak English, they are perforce compelled frequently to work for their board and a very few dollars per month.

This is true not only of the Swiss but of all foreigners, and is the principal reason why foreigners that employ many laborers, especially in the dairy and vegetable line, have become wealthy in a few years. They have thus been able to crowd our own people to the wall in many industries where labor is the chief factor, and their presence in the country is looked upon by many unfavorably.

Most of the butter and cheese is made from February to July, or during the natural grass season, and by arranging to have the cows come in about the first of February they have a season of six months when but little feed is required beyond the pasturage obtained in the fields. At this season dairy produce is generally low in price, and most of the butter is packed in firkins, or made into rolls of about two pounds each, covered with light muslin wraps, and then pickled in salt brine in tight barrels for future use.

Cheese is also prepared to keep, and is frequently retained for a more favorable market. Many dairies are now in operation the whole year. To secure much milk, however, they must feed considerable hay and mill feed during the dry season. Nearly all the hay used is from land cultivated and seeded to wheat, oats or barley, which is cut and cured in the milk, and makes excellent fodder.

There are, however, in the mountains and valleys, many moist meadows that furnish an abundance of natural grasses, which make good hay and only require cutting and curing. In the mountain meadows timothy or red-top may not require seeding but once in many years. But those cultivated grasses will not survive the heat of the lower valleys. Hay-making is not a hazardous business in the matter of curing, as it seldom rains during the hay season, and it is quite frequently more profitable to turn the wheat-field into hay rather than have it ripen for the grain that is in it.

City Milk Supply.

Mr. Sneath passes next to the consideration of the milk supply of San Francisco and notes on feeding dairy cattle, subjects which we will take up at another time.

THE LUMBERMAN.

Increasing the Durability of Timber.

The following has just been issued as a bulletin of the Forestry Division of the U. S. Department of Agriculture:

Our people waste a large amount of timber and of labor, by lack of care for the timber after it is cut. Rotting of timbers and fence-posts necessitate not only the cutting of a larger quantity of wood but also the labor of replacing the same oftener, than if the wood could be made to last longer.

There are some rules in the handling of timber which are too often overlooked and which should be observed by everybody who uses wood in places where it cannot be kept dry or wholly submerged.

There is also much unintelligent use of paints and other coatings, applied in the hope of preserving timber, when it should have been well known, that by painting green or badly seasoned timber, decay is hastened rather than prevented.

While to many it may be impossible to apply the more complicated and expensive methods of wood preservation which recommend themselves to large consumers of wood material, knowledge of the following considerations, suggested by the Chief of the Forestry Division, will aid the small consumer to handle his material to better advantage, to utilize forest products more thoroughly and intelligently, and to make them last from two to three times as long as when not observed.

Decay of Wood.

Decay of wood is due to fermentation of the sap, induced probably by the growth of either bacteria or fungi. These organisms need for their development warmth and moisture, be-

sides the nitrogenous substances and salt tained in solution in the sap.

To prevent the growth of these ferments therefore, the sap in the wood must be dissolved (leached) or dried out, and moisture be prevented from entering again.

The Manner of Use Influences Durability of Timber.

Timber placed entirely under water or deep in soil (drain pipes) will practically not decay nor is it liable to rot, when kept absolutely dry, away from the influence of humid atmosphere.

Wood generally decays in proportion to the warmth of the temperature.

Hence on northern exposures, in cool valleys, on high elevations in northern countries, the duration of wood is longer than when placed under opposite influences.

If wood is used in contact with the ground, decay proceeds the more rapidly (beginning at the point of contact with the soil), the looser, moister, and warmer the soil, and especially the greater the liability of change from dry to wet; therefore timber will last longer in heavy, always moist clay, than in loose, alternately moist and dry sand or gravel, or in warm, comparatively dry lime soils.

Rooms without ventilation induce decay, producing the dry-rot (which first appears in white patches, changing into brown or gray). Ventilation, drying-out, and isolation from moisture will cure this defect.

Natural Factors Influencing Durability.

Sound mature trees yield more durable timber than either young or very old trees. Maturity is the time when trees have ceased to grow vigorously, which is indicated by a flattening of the crown, dying-out of branches in the crown, and by the change of color of the bark. Maturity may be reached, according to circumstances, by the same species, when the diameter is only a few inches or when it is as many feet. The small tree on the arid soil or overtopped by others from its birth may be as old and older than a tree of greater dimensions growing under more favorable conditions. Of two pieces of the same kind the heavier is the more durable, although absolute weight of two different kinds of timber does not determine their relative durability.

Heart-wood, as a rule, can resist deterioration longer than sap-wood, because it contains less sap; but when the sap-wood is well seasoned and heavier, this difference disappears.

The site has an influence on durability in so far as it influences the formation of heavy wood.

Quickly grown hard woods with wide annual rings, and slowly-grown conifers with narrow (yet not too narrow) rings and "tapped" pines (on the tapped side) yield, as a rule, the most durable wood, other conditions being equal.

Coniferous wood from comparatively poor soils, high altitude, and dense forest, hardwoods from rich deep warm soils and isolated position, are most durable.

The resinous substances in conifers form an element of protection against decay.

Time of Felling.

With proper after-treatment of the wood the time of felling seems not to affect its durability. Early winter felling (December) should have the preference, because less fermentable sap is then in the trees, and the timber will season with less care, more slowly and more evenly, and before the temperature is warm enough for fermentation to set in.

If the wood is cut "in the sap" it is more liable to fermentation and to the attacks of insects, and more care is necessary in seasoning, for the rapid seasoning due to the warm dry atmosphere produces an outer seasoned coat which envelopes an unseasoned interior liable to decay. When cut in the leaf it is advantageous to let the trees lie full length until the leaves are thoroughly withered (two or three weeks) before cutting to size. With conifers this is a good practice at any season, and, if it can be done, all winter-felled trees should be left lying to leaf out in spring, by which most of the sap is worked out and evaporated.

Coatings to Keep Out Moisture.

Never apply paint or any other coating to green or unseasoned timber. If the wood was not well dried or seasoned, the coat will only hasten decay.

Good coatings consist of oily or resinous substances which make a smooth coat, capable of being uniformly applied; they must cover every part, must not crack, and possess a certain amount of plasticity after drying.

Coal tar, with or without sand or plaster or pitch, especially if mixed with oil of turpentine and applied hot (thus penetrating more deeply), answers best. A mixture of three parts coal-tar and one part clean unsalted grease, to prevent the tar from drying until it has had time to fill the minute pores, is recommended. One barrel of coal-tar (\$3 to \$4 per barrel) will cover 300 posts. Wood-tar is not serviceable because it does not dry.

Oil prints are next in value. Boiled linseed oil or any other drying vegetable—not animal—oils, are used with lead or any other body (like pulverized charcoal) to give substance. Immersion in crude petroleum is also recommended.

Charring of those parts which come into contact with the ground can be considered only as an imperfect preservative, unless a considerable layer of charcoal is formed, and if it is not carefully done, the effect is often detrimental, as the process both weakens the timber and produces cracks, thus exposing the interior to ferments.

NORMAN J. COLMAN,

Commissioner of Agriculture.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

San Jose Grange.

Discussion on Prison Discipline and Prison Reform.

The question of "Prison Discipline and Prison Reform" was discussed at the open session of San Jose Grange on the 23d inst. The *Mercury* reports a good attendance, with Worthy Master Hiram Pomeroy in the chair.

The discussion was opened by Bro. Edward Webb, who spoke at length on the management of prisons in the 18th century, comparing it with the condition of affairs at the present day. He gave interesting data of the condition of the California prisons, with some comments on the Santa Clara county jail. In the latter place he said that one-half of the prisoners were tramps, drunks, vagrants, etc., who were confined but a few days. A portion of the prisoners were put to work in a quarry, being paid 50 cents per day for four days previous to their discharge. He remarked that during the four years from 1880 to 1884, two-thirds of those committed to San Quentin were either Chinese or men who spoke the Spanish language.

Bro. O. F. Alley thought that strenuous efforts should be made in the reformation of criminals, as well as in preventing the increase of the criminal element by reformatory schools. He read extracts showing how this theory had been developed in England, where institutions had been founded for the purpose of taking up children who were becoming criminals, and educating them. These schools had been successful, and by means of them hundreds of young boys who would have grown up the worst of lawbreakers were regained to society and became useful persons. Bro. Alley's remarks were, in the main, devoted to reform, but he also thought that the system of rewarding convicts for faithful service and labor by shortening their terms of sentence was a good one.

Bro. A. R. Woodhams thought that prisoners should receive compensation for their work, which should go to their families, or be saved for them after they are released from prison. Frequently a wife and children are left destitute and with no means for the support of life, while the criminal is taken off to jail. Could the time which he spends in the penitentiary, above his expense to the Government, be made to give some return to his family, there would at least be some good done.

Bro. Gillman of Minneapolis stated that there were associations there which made a specialty of looking after the interests of criminals and people who could not find work.

Bro. Coates cited the methods of European punishment, and thought that they were too severe and the laws cruel. The convicts were treated in a manner beyond the needs of justice and not in proportion to the nature of the crime. In Russia they were banished to a cold, inhospitable country, separated from friends, with no means of communication or assistance.

Sister M. A. Sheldon of Haywards thought that Siberia was not in all instances so bad as it was painted. The convict, to be sure, was banished to a far-away country, but, by proper behavior, he was there allowed to secure a hut of his own and to have some of his time at his own disposal. As an instance of progress toward the regaining of the convicts in society in this country, she cited the case of a San Francisco manufacturer who would take the criminals as they were discharged from San Quentin and give them decent work until they could secure employment.

Sister L. J. Watkins thought that the prisoners should not only be kept at hard work, but should be paid for their work its value exceeding the cost for their expense. This sum should either be applied to their own family or to that of the persons wronged, so that some reparation might be made to the victims of the malefactor.

Sister A. R. Woodhams made a few remarks in the general direction of reform.

Bro. Sanders, as well as most of those present, thought the laws in this direction should be modified so as to keep the prisoners constantly at work and have a tendency toward reformation.

ANTELOPE GRANGE.—Bro. P. Peterson, Secretary of Antelope Grange, writes that his Grange met on the 24th inst. and elected officers for the year. He adds: Our Grange has, and I think wisely, put all our youngest members in the lead this time. This is

a new departure, but unless I am much mistaken, you will find our Worthy Master, when you meet him in the next State Grange, both worthy and well qualified. Bro. Peterson reports a promising outlook for crops in Colusa county, and says there have been an unusual number of fruit trees set out this season.

From Danville Grange.

Poem Read Before the Grange at its Last Meeting.

EDITORS PRESS:—In the fall of the year 1886 a fire occurred upon the farm of Bro. Charles Wood, of Danville, Contra Costa county, Cal. It was a serious, not to say a disastrous one, burning as it did the whole of the ripening grain, and it was only with difficulty that the family residence was saved.

Bro. Wood was so touched by the way his friends (Patrons of Husbandry) manifested their sympathy under the trying circumstances, that he concluded to tender to those friends a friendly "picnic," to be held in front of the family residence at "Woodside." This affair was of such a pleasant nature that even at this late day it is fresh in the memories of us all. And as Bro. Wood intends making the "picnic" a yearly event, I have penned the accompanying lines entitled "Danville, September 23d," and don't think the date of the heading will ever be forgotten. The localisms mentioned in the text are familiar to us all. Yours fraternally,

WILLIAM ED. COOK.

Alamo, Contra Costa county, Cal., March 18, 1888.

Danville, September 23d.

Within the shadow of a mountain famed
For scenes of grandeur, and being after Satas named,

In secluded comfort and in peaceful calm,
Stands what is known as "Woodside" farm.
Beneath the shade of locusts in their pride,
The farm-house stands; the family reside,
Whose sunny natures, if nothing else, alone
Would serve to make them ever widely known.

Near by the running stream whose ram hydraulic
Forces water past the fishes in their frolic,
Who sometimes floated in the sunshine, sly,
Then upward sprang to catch the gamboling fly.

Hard by the lizard and the busy bee
In restless movements keep sweet harmony:
Now on this flower, now skimming o'er that plant,

They come in contact with the industrious ant,
Who jolts and jostles in his pathway small
The lazy ants who never work at all.
Though small his kingdom is, 'tis large enough for he

Who counts, among that kingdom, husbandry.
Here all is order, thrift and business tact—
Things which are done are done to be exact;
Or done as near perfection as can be,

Which, when done at all, it is a treat to see.
Here we may witness, rapid as a dream,
Butter made to order by the power of steam.
And we need not use a very powerful lens
To see young chickens hatched without the aid of hens.

There came a day of danger to this peaceful farm;
Fire, in all its horrors, was the dread alarm.
Oh! what a terror when we cry "Fire" in vain!
Oh! what disaster when it burns the golden grain!

The fire-king came, in awful splendor clad,
Bent on destruction, like a demon, mad.
No human power could stop his wild career
Till his tongue of venom had licked up each golden ear.

Then came that magic touch, the Patrons' spell,
Whose bond of friendship makes every bosom swell.

To make amends for this great loss by flame,
Like brothers all they to the rescue came.
How great this day each little thing appeared;
Each little token, how great it was revered;

For when the hearts of men to noble actions rise,
The smallest atom to a monster magnifies.

Mine host of "Woodside" said he would remember,
And fixed a day, the third week in September,

To meet his brother Patrons, one and all,
Who on that day made him a welcome call.
The royal welcome which he gave to each
Was quite as endless as the Imperial peach.

As Imperial peaches are sometimes very rare,
They, like royal welcomes, are not found everywhere.
The tables spread, replete with bounteous fare,
From luscious grape to sugary melting pear,
To tasty hams and broilers on a dish,
Was all the keenest appetite could safely wish.

The mazy waltz, the polka and quadrilles
Raised pleasure high as the surrounding hills.
Some played at quoits, while here and there
Sat a happy Patron in an easy-chair.

Then came a speech of heartfelt thanks sincere,
Whose warmth to many a cheek brought many a tear;
Whose simple pathos told its tale of truth,
And fired the hearts of old age and of youth.

The feasting over and the dancing done,
We turn our faces to the setting sun,
Hoping ever that the fire alarm
May never more be heard on Woodside farm.

Point of Timber Grange.

W. M. Overhiser personally writes: I was called to Point of Timber Grange on the 3d inst. to help them out of some trouble they were in. I left home at 5 o'clock in the morning and was met at Brentwood by the Worthy Master and taken to his house for breakfast. We talked over their troubles during the forenoon and at 2 P. M. repaired to the hall, not expecting to have a meeting, as the weather was very unfavorable. But we succeeded in getting a quorum and opened the Grange. After talking over matters, I advised them to call a special meeting on the 10th, at 10 o'clock, and notify all the members to be on hand promptly with their lunch-baskets. I promised to be there and spend the day with them and try and get them out of their dilemma. I left home again yesterday morning, and was on hand in time. The Grange was opened about half-past ten, and all seemed to be eager for the fray. We commenced by reading the minutes of the two previous meetings and adopting them with some corrections. We worked along until lunch-time without seeming to get at the real question, but after all had satisfied the inner man and began to feel good-natured, we called to order and went to work. I was called on to rule on several questions. But before the Grange closed we succeeded in settling all differences of opinion, and all seemed to be satisfied and well pleased with the result of the meeting. Yours fraternally, W. L. OVERHISER.

Next Week's Meetings.

All Lecturers and Deputies are requested to meet at the office of the Secretary of the State Grange, 220 Market street, San Francisco, at 10 A. M. Friday, April 6th, together with all officers and Past Masters of the State Grange, and also all other members—brothers and sisters—who feel an interest in the object of the meeting.

This meeting is for a conference concerning matters relating to the Good of the Order, and to devise plans for the future work and progress of the Grange.

The regular meeting of the Executive Committee of the California State Grange is hereby called to meet at the office of the Secretary, 220 Market street, San Francisco, at one P. M. on Friday, the 6th day of April, for the transaction of such business as may be brought before it relating to the interests of the Order.

Special meetings will also be held on the 4th and 5th, commencing at one P. M. on Wednesday the 4th.

Grange Elections.

NEW CASTLE.—S. A. Woods, M.; J. A. Robertson, O.; A. P. Hall, L.; Geo. P. Perkins, S.; F. B. Fitch, A. S.; Mrs. H. A. Blanchard, C.; Wm. Barter, T.; R. M. Nixon, Sec.; H. E. Parker, G. K.; Mrs. A. L. Robertson, P.; Miss Jennie Page, F.; Mrs. S. E. Woods, Ceres; Belle C. Boggs, L. A. S.; Wm. Barter, Trustee.

ANTELOPE.—John D. S. Taylor, M.; W. F. Sites, O.; Geo. F. Myrick, L.; H. A. Logan, S.; Geo. M. Sutton, A. S.; Sister S. A. Logan, C.; John Sites, T.; P. Peterson, Sec.; H. C. Stanton, G. K.; Sister S. M. Sites, P.; Sister M. Sites, F.; Sister T. J. Rosenberg, Ceres; Sister S. C. Clark, L. A. S.; W. F. Sites, Trustee.

NOTE.—The Secretaries of Granges are requested to forward reports of all election and other matters of interest relating to their Grange and the Order.

Commemoration of Judge Joel Russell.

The committee appointed by Temescal Grange for expressing their feelings of respect to our deceased brother Judge Joel Russell, and sympathy with his wife and sons, report the following for publication:

Officers and Members of Temescal Grange: Your committee appointed to express sympathy to the family of Bro. Joel Russell and members of Eden Grange, submit the following:

A warrior fallen. We realize in the death of Brother Joel Russell of Eden Grange that Temescal Grange has lost almost an individual member, so closely allied have been the interests of each since their organization. Those present at our last joint meeting at Oakland, on the anniversary of the birth of the P. of H., well remember his genial, kindly face, ringing words of wisdom for the cause of justice and right, which he so ably defended on every occasion, never losing an opportunity that presented itself to fearlessly express his honest convictions. Individually, and as a Grange, we extend to Sister Russell and family, and Eden Grange, our warmest sympathy. We have lost a true friend and brother, one who was ever ready with hearty grasp of hand, cheering words, and kindling eye to greet us. We shall miss him much!

May the Divine Master gently lead the sorrowing family fearlessly in the path of duty he

trod, may the sons eminently follow his noble example in the cause of temperance and justice, and all reach the same successful peaceful end as well prepared to receive the welcome plaudit "Well done, good and faithful servant," as was he.

S. H. DEWEY,
N. G. BABCOCK,
S. GOODENOUGH,
Committee.

Postal-Telegraph Legislation.

The S. F. *Call* of Sunday last remarks: The condition of the Postal Telegraph bills in Congress is not generally known. It is known that there is a bill pending in each house, and that their main features correspond. Reagan of Texas, the new member of the Senate Committee on Postoffices, is pushing a bill of his own with the perseverance which he showed in the House in pushing his Interstate Commerce bill. As there appears to be a pretty substantial agreement among all political parties in favor of some scheme of postal telegraphy, it is quite on the cards that his bill or some similar one may become a law at this session.

This coast is interested in a bill introduced by Anderson of Kansas relative to telegraphs on this shore. This bill provides that all railroad companies which received subsidies or land grants from the United States shall operate the telegraphs along their lines themselves, through their own officers and employees, instead of leasing them to other companies. They shall be bound to connect and exchange business on equal terms with any other telegraph companies which may extend their lines so as to intersect the lines of the subsidized companies. They shall report to the Interstate Commerce Commission all contracts and agreements of whatever description with other companies in reference to the ownership, control, maintenance or operation of telegraph lines upon their property or right of way. Neglect of these mandatory provisions is to be punished by fine and imprisonment of the officers of the negligent company, and the company itself shall be liable for all actual damage sustained. The object of the bill is to facilitate the extension of the telegraph system on this coast, and to place it out of the power of any existing company to check such extension by refusing to exchange business with new companies, or to allow them to put up poles on its land.

It seems obvious that it is a mere question of time when the bulk of the telegraph business must in some way or other pass into the hands of Government. But there is no good reason why it should become a Government monopoly.

* * * If the Postal Telegraph were in operation to-morrow, there is no reason for believing that the existing telegraph companies would be driven out of business. At such reduced rates as enlightened views of the interest would require, there would probably be business enough for all the existing lines, and the Postal Telegraph too. But the success and extension of new lines depend upon their power to compel existing lines to connect and exchange business with them. A refusal by existing lines to do so is simply an attempt to limit the diffusion of intelligence and to impose restraints on the development of commerce and industry. It does not comport with the public interest that such a refusal should be possible, and hence the Anderson bill which, it is said, is likely to become a law.

JUDGE A. E. HOWARD, father of Mrs. J. V. Webster, died at his home in East Oakland on the 21st inst., after a lingering illness of dropsy and heart trouble. He was a well-known and respected citizen and a prominent Odd Fellow. All Patrons will sympathize with Bro. and Sister Webster in their sore affliction. We believe the bereaved widow will take up her residence with Bro. Webster's family at Creston.

WALNUT CREEK GRANGE, we are informed by Bro. A. C. Loucks, conferred the third degree on three candidates last Saturday. Another has been elected and two more applied. The next meeting occurs on Saturday, April 7th. We are glad to hear good news from this old parent Grange, which is located in one of the most promising farming districts of the State.

WORTHY MASTER OVERHISER wishes us to state that all members of the Order—both brothers and sisters—are cordially invited to be present at the meeting of deputies April 6th. See the official notice in another column, which has been changed this week, and made to read as all would like to have it.

ELECTION OF SENATORS BY THE PEOPLE. The House Committee on Revision of the Laws on Thursday, March 22d, decided almost unanimously to report the joint resolution proposing an amendment to the Constitution for the election of United States Senators by the direct votes of the people.

BUTTE MOUNTAIN POMONA GRANGE has arranged to meet five times each year, on the fifth Saturday in March, June, September and December, and on the fourth Saturday in May.

BRO. D. A. OSTROM has been appointed Deputy Lecturer for Yuba county.

Oregon State Grange Lecturer at Turner Grange.

At an early hour on March 10th the members of Turner Grange began to arrive, and at 10 A. M. the Grange opened in fourth degree, W. M., J. Porter in the chair. A resolution against adulteration of food was adopted, which brought out considerable discussion. The passage of the Oleomargarine bill has doubled the price of dairy products. The Grange is interested in the protection of farm products and pure foods generally; and the subject of adulteration of edibles is being discussed throughout the Grange of America. A public opinion or sentiment is being formed in the minds of the people against frauds, and this same conservative element will yet, by its very aggregate strength, compel Congress to protect the people. It is the opinion of some speakers that many of the new diseases that baffle the efforts of physicians are caused by the adulterations used in the preparation and manufacture of foods.

There are 21 agricultural manufacturing establishments, 19 of which have formed a "trust." That means death to the interests of the farmer. Only by combined effort can he overcome this gigantic fraud, this "sea-devil."

After lunch, Lecturer Hayes took the stand and spoke for some time in the interest of the Grange. It behooves us to look out for our interest. Seemingly a few can do but little in the formulation of public sentiment, and oftentimes they become almost discouraged; yet, when we look abroad and compare the works of others, it is seen that the few have always wielded the great and lasting influence. The few are they who educate and form public sentiment and push to the front the whole. The power of the Grange is in molding public sentiment, for law, however good, cannot be enforced unless it meets the approbation of the masses. If it had not been for the organization of the Grange the Interstate Commerce bill would not be in existence to-day.

We stand as the conservative element of the country. The salvation of our country rests in the hands of those who carry the dinner basket. Of laborers and producers there are over 14,000,000, yet in the halls of Congress few if any among these are there to represent the interests of the laboring man. This vast array of force are lawyers, preying upon the credulity of the people and gathering in the shekels from the rings and corporations. That such is the case is an infamous shame. And so it will continue to be until the laboring and producing classes can use intelligently and independently the power that is theirs—the ballot.

Put Darden asks what is the matter that farming does not produce millionaires. [Here the Lecturer quoted largely from the address of the W. M. of the N. G.] The question has been asked: "Are farmers generally happy?" Yes, though not generally wealthy. The comparison of wealth of other lines of trade, profession and corporation causes restlessness. They reason among themselves and are seeking out the cause why a well-tilled farm can pay but three per cent. To the question what stock pays, the good man answered "watered stock."

Manufacturers of agricultural implements form "trusts" by reason of the war tariff put on as revenue. Put your revenue on the idle income, not on the production of your country.

Farmers must have a voice in the controlling of the currency of the country or assume the position of serfs. That the Grange has influence is manifest by the tons of memorials sent to farmers for their opinions, approval, etc., notwithstanding Pearson and a nameless Oregon defamer.

In the *Oregonian* of a late date there was an article entitled "The Rise and Fall" (or some kindred title) "of the Grange in Oregon." Some truths were told and some—mildly putting it—misrepresentations. At first, I thought to answer this fallen Granger, whom our people long ago saw fit to distrust and discard; then upon second thought I looked upon it as so much free advertisement. You have all heard of the great P. T. Barnum and his woolly horse; how the papers and people, right and left, abused the great showman for imposing his stupendous humbug on the people. Some friend told Mr. Barnum how the world's tongue was defaming his good name, and trying to make his show out a monster humbug, etc. The wise old showman patted his friend on the shoulder and said: "Never mind; it is just so much free advertisement. People will come and see the woolly horse and judge for themselves as to the humbug." And notwithstanding the assertion that "the Grange has never entered into

legislation" or "wielded political influence," and that "women run it," etc., etc., there is a great pulsating, reading, thinking and intelligent world, who know the works of the Grange and weigh aright the worth of the yeomanry of America.

Socially, the Grange pays for all it costs us in time and dues. If you would know its real value, compare the people, old and young, who attend the Grange with those in communities where the Grange does not exist. This constant meeting together is giving esse and grace of manner, polish, fluency and form to thought, and assurance and aggressive perseverance. The farmer must learn to think in more than one channel. He must not stop the flow of ideas, and see things solely from his partisan newspaper, but get at the truth of things in general from papers devoted to the cause of the Grange and agriculture. In these papers the people furnish the sentiment, unbiased, untrammelled, and not poisoned or perverted by the reviewer or editor.

The Grangers' Bank.

The Grangers' bank of San Francisco is about to secure an important extension and improvement of its facilities for doing business. So much has the business grown by the multiplication of both city and country patrons, that the counter, desk and vault space has been found far too small even when every available inch has been pressed into constant service. For this reason the directors have approved the plans drawn by Albert Montpelier, the well-known cashier and manager, and will immediately begin the actual work of enlargement. The adjoining store has been secured and the dividing wall will be removed. Taking in the new apartment will just about double the floor space of the bank. A new vault, larger than the old one, and similar to it in finish, will be erected. The counter will be lengthened and divisions made for each line of work. The furniture will be made from original designs by Mr. Montpelier and will be unique and beautiful. Desks will be increased in number and furnished with inclosing screens of frosted glass, so that the book-keepers may be free from distraction. A new room for the manager will be provided, and a room for the storage of grain samples and other property which accumulates so fast in a thriving business institution. A new doorway will give entrance to the bank from California street. All these and other improvements, which we hope to note at greater length when the work is complete, will give the bank new room for new growth, which is certainly promised by its past progress.

The Grangers' bank will complete its 14th year of existence next month. The last statement of the directors shows that the bank has a paid-up capital of \$600,000, with a surplus of \$40,000. It has paid dividends every year since its organization, and the dividends amount in the aggregate to over half a million dollars, equal to \$50 for each share of stock issued. By its policy it has been of great aid to the farmers of the State in spreading abroad a better idea of agricultural credit, in facilitating the work of the grain grower by loans on locally stored grain at much lower rates than formerly were exacted, and in many ways has aided California farmers to a better position in financial circles. It has been a practical embodiment of Grange principles and is a credit to all who have maintained it.

YUBA CITY GRANGE talks of building a hall this summer. A committee has the matter in charge. Several offers of lots, etc., have been tendered them. The *Farmer* says P. L. Bunce offers an acre of land and \$500 in cash if they will go to his place.

GRAIN ON CREDIT.—Suppose a farmer raises 1000 bushels of wheat, and one of his neighbors should come and buy a bushel, and the price being a small matter, should say: "I will hand you the amount in a few days." As the farmer does not want to be small about so small a matter, he says, "All right," and the man leaves with the bushel of wheat. Another comes in the same way, and still another, until the whole thousand bushels of wheat are trusted to 1000 different persons, and not one of the purchasers concerns himself about it, for it is a very small amount he owes the farmer and, of course, it doesn't help him any. He doesn't realize that he frittered away his large crop of wheat, and its value is due him in a thousand little tributes, and that he is seriously embarrassed in his business because his debtors treat it as a small matter. But if all would pay him promptly, it would enable him to carry on his business without difficulty. Just so in the case of a newspaper publisher. See?

AN ENORMOUS LEMON.—Sec'y Lelong has at the rooms of the State Board of Horticulture a monstrous lemon 18 inches around, the long way, 15½ inches around the center, 6½ inches high and 5 inches through its greatest diameter. It weighs 3½ pounds. The tree on which it and a dozen others grew in Los Angeles was only between four and five feet high, and the weight of the fruit bent the branches to the ground.

ENTOMOLOGICAL.

Summer Remedies for Insect Pests.

[Recommended by W. G. Klee, State Inspector.]

For Codlin Moth.

The most successful remedy last season proved to be the arsenical mixtures. Of the three, Paris green, London purple, white arsenic, wherever used in the coast counties, where more or less damp nights prevail, the two latter did some damage to the foliage, and for this reason and that its effect is most lasting, the Paris green seems to be preferable.

Strength to be Used.—Of five samples Paris green analyzed last year by the University of California, four had above 54 per cent arsenic, one going 38 per cent. In accordance with this we would recommend early ripening apples and pears to be sprayed once with one pound of Paris green to 180 gallons of water, when just out of bloom. For fall and winter apples it may be advisable to spray 10 days later with an application of one pound to 200 gallons, while the blossom end of the apples are still turned upward. This (two treatments), according to my own experience, seemed safe on White Winter Pearmain, Yellow Newtown pippin, while it proved unsafe on Bellflowers. Therefore, the behavior of other varieties should be noted.

We recommend to use Paris green without any additions, simply stirring the liquid continually; also straining it before using. Use a fine nozzle, Cyclone, Crofton, or Imperial.

Sulphide of Soda and Whale Oil Soap is worthy of further trial, and especially for a third spraying about a month after the last spraying (in case of winter varieties).

For manner of preparation, see under head of summer washes for scale insects.

We propose to test both London purple and white arsenic. Eastern growers contend that one pound of arsenic to 600 gallons of water is sufficient; at present we cannot recommend it.

We believe that in isolated places, probably one spraying of Paris green will suffice; however, when the orchard is surrounded with infested orchards not treated, the full course of spraying, first with Paris green twice, and followed with sulphide and soap, seems to be necessary.

Possible Danger of Using Arsenites.

While the greatest care should be taken in handling the arsenic mixture, avoiding getting any in cuts on the hands, also preventing either human beings or animals from eating the young fruit (stock should be excluded from the orchard for at least six weeks), we believe that if no application is made after the fruit has commenced to turn downward, there is really no danger to be apprehended. The fact seems to be that, in case of an overdose being used on a tree, the foliage is affected to such an extent that the leaves on the fruit trees will fall, and with them the fruit. This is the experience in the coast climate.

Band System.

As an additional help of decreasing the last broods of codlin moth, the banding system is certainly worth following; but, besides putting bur-lap bands around the tree, say one foot from the ground, on larger trees it will be necessary to put rags in the crotches of the trees, and examine these, as well as the band, once a week.

For Plum Aphids and Woolly Aphids, Above Ground.

Four pounds of resin, three pounds sal-soda; water to make 4½ gallons. Dissolve the sal-soda in a few pints of water; when thoroughly dissolved, add the resin. Heat until dissolved, and add water finally. Use 1½ pints of solution to the gallon of water. Use at a temperature of about 100° Fahrenheit.

For Red Spider.

Experience has taught us that the eggs of this insect are almost impossible to destroy without damaging the trees, while liberal applications of sulphur washes, applied during the summer, will keep down the pest. Where the insect is plentiful and the weather favorable (hot and dry being especially so), one application will not be enough.

We have used, with fair success, the sulphide of soda wash mentioned, against scale insects. We will recommend this for further trial; also, the sal-soda and resin solution mentioned.

To the above-given solution of 4½ gallons, add 50 gallons of water; to this add sulphide of soda (1½ pounds of sulphur dissolved in one pound of lye).

Let a person follow the sprayers with a large size sulphur bellows, such as is used in vineyards, dusting the trees, while wet, all over. Calm weather should be chosen, if possible. The sulphur will adhere to the tree for a long time, if no rain falls, and acts on the spider in addition to the sulphide.

For the Twelve-Spotted Diabrotica (Diabrotica Soror).

This pest is especially extremely troublesome in sandy, gravelly lands. Spraying with the kerosene emulsion, recommended by Prof. Riley, will, if the insect appears early, before fruit is large, be useful, but spraying must be done early in the morning, while the insects are sluggish.

Kerosene, 2 gallons = 67 per cent.

For further information see report of the Santa Rosa convention, which will be forwarded by the secretary (B. M. Lelong, 220 Sutter street, S. F.), on receipt of two cents.

Common or whale-oil soap, one half pound; water, one gallon = 33 per cent.

Heat the solution of soap, and add it hot to the kerosene. Churn the mixture with means of a force pump and spray nozzle for five or ten minutes. The emulsion, if perfect, forms a cream, which thickens on cooling, and should adhere without oiliness to the surface of glass. Dilute before using one part of the emulsion with nine parts of hot water. The above formula gives three gallons of emulsion, and makes, when diluted, 30 gallons of wash.

Later on, fumigation seems to be the only practical way of driving them from the orchard. On the San Joaquin river the striped squash bug (also a diabrotica) is kept at bay by lighting smudge fires, on which a little wood tar is placed. This method will probably prove as efficacious against the spotted diabrotica.

Striped Squash Bug (Diabrotica Vittata).

Recommended by Dr. Lintner of New York: One tablespoon of saltpeter dissolved in a pail of water; sprinkle a pint on and around each hill of squashes, pumpkins, or melons. This may likewise prove efficacious against the spotted diabrotica.

Summer Washes for Scale Insects.

Infesting deciduous trees.—Solutions are applied with best result when the majority of the insects are hatched, and persons should watch for this time; the first brood of the Aspidiotus perniciosus appears generally when the cherries are turning color.

As a general useful wash, the sulphide of soda or sulphide of potash with whale oil has proved very satisfactory: 1½ pounds of sulphur; 1 pound of concentrated lye or powdered caustic soda, four-fifths of a pound, or caustic potash, 1 pound; 14 pounds of best whale-oil soap (80 per cent soap); 55 gallons of water. Dissolve the lye in one gallon of water, and boil the sulphur until dissolved. Dissolve the soap in the water; mix the two and boil them a short time; use at 130° in vessel.

This wash is useful not alone against young scale, but against the scab disease of pears and apples, also against leaf-eating insects, as saw-fly larva and pear slug. It will, however, be found that whenever Paris green has been used, these insects have been killed.

The above wash is applicable to stone fruits as well as to pears and apples.

Resin Soap.

Recommended by Sol. Runyon, Courtland, to be Sprayed on Fruit.—Ingredients for one barrel of 50 (measure) gallons: Weight, about 450 to 500 pounds; 10 pounds caustic soda, 98 per cent; 10 pounds potash, 40 pounds tallow, 40 pounds resin.

First—Dissolve the potash and soda in 10 gallons of water. When dissolved, place the whole amount in the barrel to be used.

Second—Dissolve the tallow and resin together. When dissolved, add the same to the potash and soda in the barrel, and stir well for five minutes or so. Leave standing for about two hours; then fill up with water, stirring well as every bucket of water goes in. Use the following day, one pound to the gallon of water; apply warm. This remedy is best adapted to pears and apples. W. G. KLEE.

March 26, 1888.

Mr. Klee will receive his mail henceforth at the office of the Board of Horticulture, 220 Sutter St., S. F.

Scale Insects in the Fiji Islands.

EDITORS PRESS:—Wishing to obtain further information concerning the geographical distribution of our *Icerya*, I some time ago sent letters of inquiry, accompanied by specimens both of the *Icerya* and of the red scale (*Aspidiotus aurantii*) to several of our foreign Consuls, and in reply to one of these have recently received the appended letter from the Consul for the Fiji islands, Mr. Andrew St. John. This letter was accompanied by specimens of the genuine *Icerya purchasi*, and Mr. St. John's statement that it is believed to have been originally introduced from Ceylon is interesting, since this pest has not been reported as occurring upon this latter island, so far as I am aware. He also states that our red scale occurs in the Fiji islands, but as he sent no specimens I am unable to verify his assertion. —D. W. COQUILLETT, Los Angeles.

Mr. St. John's Letter.

DEAR SIR:—I have the honor to acknowledge the receipt of yours of Oct. 14, 1887, together with inclosures. In reply would say that I have made inquiry of all whom I thought could give me information, and find that the cottony cushion scale was first known here about eight or ten years ago, and is said to be native of Ceylon. It has proved very destructive not only to orange trees and citrus fruits generally, but also to several kinds of ornamental shrubs, etc. Several remedies for its extermination have been tried by the fruit growers here with a degree of success. Among those which have proven the most effectual are:

1st. One pint of kerosene thoroughly mixed with one pound of soft soap, and added to a pailful of water; applied with a syringe.

2d. Carbolic acid diluted with water and placed under or hung on the limbs in open-mouthed bottles.

There is no insect known here that preys upon these insects. The red scale is also known here, but it is not as destructive as the cottony cushion scale. Inclosed find specimens as per request. I am, sir, your obedient servant,

ANDREW ST. JOHN.



In Memory of Fannie H. Avery.

[Written for the RURAL PRESS by D. R.]

It seemed like summer, for the sky was fair,
And o'er its breast the white-winged cloud-ships
drifted,
And all the air was tremulous with joy;
Sweet songs of birds in happy chorus lifted,
And rainbow rays of color gemmed the lawn.
It seemed like summer, but the summer's gone.
It seemed like summer, for the trees were green,
And blossoms crowned them with their regal
splendor;
And twining ivies clasped the wayside rocks,
And brooks wooed sedgy banks with murmurings
tender,
And over all the golden sunlight shone.
It seemed like summer, but the summer's gone.
It "seemed"? Ay, "seemed," for lo! the song is
stilled—
The sweetest song, sung by the fairest singer.
The flower is dead that made the wayside bright,
What matter though the others sad y linger?
And though the streamlet dances gaily on,
It is not summer, for the summer's gone.
It is not summer? Mayhap not to us
Who see through eyes grown dim with bitter
weeping—
Whose hearts are heavy with their weight of woe,
While far away the fairest singer's sleeping.
Ah, well! We bend us 'neath the chastening rod;
'Tis always summer in the smiles of God.

An Easter Card.

[Written for the RURAL PRESS by I. H.]

"Just the prettiest card you can find for a
dollar, Aunt Annie; I want to give it to Miss
Ellen at Easter, and if you knew how lovely
she is, and how much good she does me all the
time, you would not wonder that I can find
nothing nice enough for her here."

So ran the letter which Aunt Annie in the
city had just received from her niece, Ethel
Gray. She smiled a little as she read it. "Al-
ways in raptures over somebody," she said to
herself. "It is safe enough so long as she con-
fines them to her teachers. But I know the
child will be in a fidget till she has my answer,
so I had better go and execute her commission
at once."

It was not an easy task to choose among the
beautiful designs with which the shops were
filled—crosses and flowers of every imaginable
hue, surrounded by appropriate texts of Scrip-
ture or verses of Easter hymns. She turned
them over, finding them all suitable and yet
not quite satisfactory. She fancied Ethel
would like something a little out of the common
run.

"Is there nothing there that you like?"
asked the clerk who was waiting upon her.

"Yes, oh, yes; but you see this is a commis-
sion, and it is so much harder to choose for
another person. My niece, who lives in a little
country town, thinks there must be always
something new and original to be had in the
city."

"We have some hand-painted cards brought
in to-day," said the young man. "They are
different from these, at any rate." He brought
a small portfolio and opened it.

Aunt Annie looked at the first one which lay
before her, then she turned and brought for-
ward a chair, seated herself, and gazed and
gazed without a word for fully ten minutes.
People were coming and going all the time, and
the clerk had plenty to do without waiting for
her reverie to end. He was a little sur-
prised, however, when he returned, to find
her in the same position. She drew a long
sigh as she lifted her eyes.

"Whose work is it?" she asked.

"A lady brought them here this morning and
asked us to sell them if we could. I don't know
her name, but I think she is poor and needs the
money. She marked the price, but said she
would take anything we can get rather than not
sell them. That one is marked two dollars, but
if you think it is too much you can have it for
less."

"It would be a sin to take it for less," said
Aunt Annie. She took from her purse Ethel's
dollar and laid another beside it. "Please
pack it carefully; it is to go through the mail,
and I would not have it injured for twice the
sum it has cost. One moment," and she took
it from him and looked at it again as if loth to
part with it.

In the upper right-hand corner, touched in
with delicate tints as though seen from a dis-
tance, was a little country church. Over the
dim outline of the hills behind it the first rays
of the rising sun were stealing. They gilded
the slender spire and fell with a pale golden
gleam across a low mound marked with a snow-
white cross, while around it all else lay in
shadow.

In the foreground, as though held between
you and this quiet scene, was the branch of an
apple tree with its clustering blossoms of pink
and white. From one tiny twig there hung a
pierced oocoon, and just above a brilliant but-

terfly, escaped from its dreary prison, was
spreading its radiant wings for flight. Below,
in silver letters, were the words:

"Why should it be thought a thing incred-
ible with you that God shall raise the dead?"

Impressed by his customer's profound admira-
tion, the young man packed the card with the
greatest care, and having it addressed to her
niece, Aunt Annie mailed it herself on her way
home, pleased to think of Ethel's delight when
she should see it. What would have been her
disappointment if she could have known that
after all her pains and trouble it was never to
be delivered to the hands for which it was in-
tended.

Very primitive were the arrangements of the
delivery of the mail in the town where Ethel
Gray resided. Till within a few years every
one had gone to the postoffice for his own
letter. Now the town had grown so much
larger that this was no longer convenient; and
pending the time when they should have a free
delivery, like the places of more importance in
the eyes of the postoffice department, the in-
habitants were fain to accept of a substitute.
Two postmen divided the town between them,
charging a small sum for delivering the mail to
those who cared to avail themselves of their
services.

The one who came to Ethel's neighborhood
was a young man whose health was too delicate
to permit him to engage in any laborious oc-
cupation. It was a great boon to him to be able
to earn a little money by driving about in his
light cart, and if he was not altogether as care-
ful as might have been desirable, people over-
looked it from their sympathy with his misfor-
tune.

On Thursday he brought to Ethel a letter
from her aunt in which she said: "I have sent
the card which I am sure you will like; it is
quite unlike any I have seen before. Did you
ever see anything more life-like than that lovely
butterfly? I was afraid he would spread his
wings and fly while I looked at him."

But the days went on and there was no pack-
age for Ethel. Saturday must bring it; of that
she felt confident. She was at the gate when
the postman came, and held out her hand for the
expected packet. Nothing but newspapers.
"Oh, surely, there is some mistake!" she ex-
claimed. "Is there nothing for me? I expected
a letter."

"Nothing to-day," was the cheerful reply.
"It will probably come on Monday."

Ethel walked slowly back to the house, her
eyes filling with tears. What if it should come
on Monday? that would be too late. For an
instant she felt that Easter was utterly spoiled
for her by her disappointment. Then came a
swift repentance. "How can I be so wicked?
What would Miss Ellen think of me?" For
Miss Ellen had been indeed a good influence in
the young girl's life, and it was through her
that Ethel had learned her first lesson in con-
trolling her own impetuous temper. "I will
try to bear it patiently," she said, and she
went in to tell her mother of her loss, sure of
her ready sympathy.

Mrs. Gray condoled with her so heartily
that once more the ready tears sprang forth.

"But never mind, dear," she said at last.
"I will tell you what you can do instead. You
shall have all the hyacinths from the garden,
and I am sure Miss Ellen will appreciate
them, she is so fond of flowers."

Meanwhile what had become of the Easter
card? The large envelope which contained it
had slipped in between the folds of a bundle of
newspapers as the postman tossed the mail into
his cart. There it lay hidden and unseen;
there it was when passing the house where the
papers were to be delivered. He threw the
bundle over the hedge into the garden-path.
But the card did not go so far; it fell at the
edge of the sidewalk just where a careless boy
passing an hour earlier had splashed from an
open bucket a quantity of red paint. Later in
the day another boy sauntering by chanced to
catch sight of the large white envelope. He
stooped to pick it up, and saw at once that it
had not been opened.

"Hi!" he exclaimed; "if this ain't a valen-
tine! Wonder who it was for? Bless if she ever
gets it now, for no feller could make out that
writin'."

And indeed the paint had entirely effaced the
inscription, one word only being visible—Miss.
The boy wiped off the paint as well as he
could, daubing his fingers and his clothes in
the process.

"I'll take it home to mother," he said to
himself; "she can cut it open without hurtin'
the picture; and if it's a pretty one I guess I'll
give it to Miss Parsons—poor thing, lyin' there
sick all the time, she might like to have it to
look at."

Easter Sunday dawned bright and beautiful.
Very early in the morning Ethel was up, her
heart so full of the sweet and sacred associa-
tions of the day that she forgot her disappoint-
ment about the card. She was to go immedi-
ately after breakfast to help Miss Ellen to ar-
range the flowers in the church. Her mother's
beautiful hyacinths, the pride of the garden,
were packed and tied together with a white
ribbon, and she set off with a very happy
heart. At the church door she met Miss Ellen
and made her little offering.

"Oh, how lovely," her friend exclaimed;
"they are far too beautiful to keep for myself,
Ethel; we will put them in the church, and
afterward I shall have them. Let me ask you
now, dear, if you can come home to lunch with
me to-day, and go to see Alice Parsons in the
afternoon. She enjoyed your singing so much

when you went before that I thought we might
try to give her a little Easter gladness."

Ethel was only too glad to assent. She had
felt deeply interested in the sick girl whom
she had visited with her friend, and whose pa-
tience and resignation had given her a lesson
not to be forgotten.

Just before the hour for service the clergy-
man came in. He said a few words to Miss
Ellen in a low tone, and Ethel noticed that she
started, as though surprised, and presently
turned away and wiped the tears from her eyes.
What could be the matter?

She did not learn until she had gone home
with Miss Ellen and had taken lunch with the
family; then the explanation was given.

"Dear, I did not tell you sooner because I
was afraid it would sadden a day which is
otherwise so bright; but Alice Parsons will not
need our songs of praise this afternoon; she is
keeping Easter day in heaven."

"Oh, Miss Ellen!" Ethel could say no more,
she was so deeply shocked.

"It is not sad for her, Ethel. She was ready
and glad to go; but her father—I wonder how
he will bear it; she was his idol, and the faith
and hope that have been her comfort he does
not share."

"Is it not very sudden?" Ethel asked.

"Yes, though we have known she might go
at any time. I have not heard the particulars.
I will walk over toward evening and see her
aunt, and we might take your hyacinths, Ethel,
if you will go with me."

Dr. Parsons lived in the finest house in the
town; all that wealth could give lay at his com-
mand, but neither riches nor the medical skill
which had so often averted calamity from others
had been able to keep the shadow of death
from his own threshold. His wife had died a
year after their marriage, leaving him a baby
girl who was thenceforth his idol. Now the
same insidious disease which had taken away
the mother had claimed the daughter in the
very morning of her life. Lovely in person
and in character, Alice had been the darling of
her little circle, but only her father knew how
his very life seemed bound up in hers.
What was there for him now but desolation
and despair? For Dr. Parsons was one of those
men whose scientific attainments have over-
thrown their Christian faith. To him there
was no hereafter, no hope of a better life be-
yond. Science and revelation seemed to him
irreconcilable. He had taken the former for
his guide and must abide by the consequences.
Yet he had never interfered with his daugh-
ter's religious training; he had loved her all the
better for developing the same character which
had been her mother's, and although he had
not sympathized with either of them in their
deepest and highest aspirations, he had gloried
in the result, the lovely spirit that had beauti-
fied both their lives.

Miss Ellen and Ethel Gray stood beside the
quiet sleeper in the waning light of the Sunday
afternoon.

"The rapture of repose," said Miss Ellen,
softly, as they turned away, and nothing else
could have described the expression of the fair
young face. In the folded hands they had left
Ethel's beautiful hyacinths. The aunt who
had been to Alice a second mother drew their
attention to an Easter card that lay on a
little table close beside her, and after they left
the room she said: "She was so wonderfully
well yesterday, able to sit up and talking more
than she had done for a week. Johnnie Carter
came over about noon and brought her what he
called a valentine—it was that Easter card.
She was so delighted with it she made me put
it where she could look at it all the time.
Once she said to me: 'Auntie, when I am
gone give it to dear papa; tell him it is a mes-
sage from Alice.' Just at midnight she awoke
suddenly, a bloodvessel had given way; after
a little time of suffering and struggle she lay
quite still, her head on her father's breast, and
when the first rays of the eastern sun shone
through the open window she looked up with a
smile, and then she was gone."

Three years afterward Ethel, with her Aunt
Annie, was again in Dr. Parsons' home. They
were spending the day with Miss Ellen, who
was "Miss Ellen" no longer, but the doctor's
wife.

Aunt Annie uttered an exclamation of sur-
prise as she stood gazing at a picture over the
mantel-piece in the bedroom. She could not
mistake it; it was the Easter card she had
bought for Ethel; there could not have been
another like it.

"Would you mind telling me the history of
that card?" she asked with such earnestness
that Mrs. Parsons was startled.

"Not in the least," she said; "it was given
to my husband's dear daughter on the last day
of her sweet young life by a little boy who had
found it in the street."

"Ethel!" said her aunt, and Ethel looked up
with her eyes full of tears and her cheeks glow-
ing. "I have never told her, Aunt Annie; I
will now."

Mrs. Parsons heard the story of the lost card,
then drew Ethel to her and kissed her fondly.
"The blessed sequel you have yet to learn,
dear child. It was that question always before
the eyes of a desolate and heart-broken man,
'Why should it be thought a thing incredible
with you that God should raise the dead?' that
has brought him out of darkness into light; that
has made Dr. Parsons the Christian man he is
to-day; and me," she added with tears in her
eyes and voice, "and me his happy wife."

Danville, Cal.

"It Isn't Loaded."

The lesson of the following, from *Sunshine*,
has yet to be learned by a multitude of people,
trite as it may be to many:

Never handle firearms carelessly. I used to
do it, but of late years it makes me boil to have
anybody point a gun or pistol toward me. Two
events in my life have done more to inspire
within me a wholesome respect for firearms
than anything else that ever happened to me.

When I was about 15 years old I borrowed a
shotgun of a chum.

"Is it loaded?" was the first question I
asked.

"No," was the reply, and I, like a goose, be-
lieved what he said.

On the way home with it I met another boy,
who began dodging behind the shade trees as I
approached, Indian fashion. I, of course, must
do my part of the tragedy, so, cocking the gun,
I began to skulk [too, until, when we finally
met, to show that he was plainly in my power,
I put the muzzle of the gun up close to his nose
and pulled the trigger.

I thought no more of the circumstance until
evening, when I began cleaning the gun, and
found that it was clogged up so I could not
blow through it. Procuring a cap, I placed it
on the nipple, and, going to the front door,
pulled the trigger, and away she went, with a
report that awoke the neighbors for blocks
around and filled the leaves of a cherry tree
near by as full of holes as a skimmer.

Then I thought of Tom, unto whose face I
had snapped the gun. The fact that the cap
had become damp alone prevented the gun from
being discharged and blowing Tom's head into
smithereens.

Though his after life was a fizzle, and he
filled a drunkard's grave at an early age, yet
how my life would have been blighted if,
through my boyish carelessness, he had been
killed. I vowed a vow at that time never to
be careless with firearms.

One more circumstance occurred after I had
grown to manhood. I was standing on a pile
of lumber, busily engaged in measuring lum-
ber, when, hearing a "click" behind me, I
turned, and there stood a boatman pointing an
army musket squarely at my head, and sighting
along the barrel. The muzzle of the gun was
only six feet from my head, and he had just
snapped it at me. He was a man 50 years
old, and under the first angry impulse that
came over me, I said:

"You old fool, you ought to know better
than to snap a gun at a fellow's head in that
careless way."

"Aw, pshaw!" said he, "it isn't loaded."

"How do you know that?"

"Because it has been lying around my boat
for more than six months, and I know it isn't."

"That's just the reason you don't know any-
thing about it," said I.

"Well, now, you're making such a fuss
about it, I'm going to get a cap and show you.
Here, hold the gun till I come back."

While he was gone I ran the ramrod down
the barrel and found that it was loaded.

When he returned with a cap I removed the
old one and replaced it with a new one. Point-
ing the gun upward I pulled the trigger, and a
report followed, the recoil from which nearly
knocked me off the lumber-pile and raised the
boatman's hair on end.

"What do you think now?" I asked.

"Well," said he, "that's the last time I
shall point a gun at anybody if I live 100
years."

A damp cap alone saved me that time, and
though I should not have been to blame, yet
this event would have blighted my life still
more effectually than the first one, for it would
undoubtedly have blown my head off my
shoulders, and a man who finds himself in that
condition can but acknowledge that his life is,
in a measure, blighted, and his future plans and
prospects somewhat interfered with.

Don't fool with firearms. If a gun is loaded,
and everybody knows it is loaded, there is lit-
tle danger. It is the gun and the revolver
which is not loaded that goes off and kills
folks or maims them for life. So the only safe
way is to handle them at all times as though
they were loaded.

Get into the habit of so doing, then it will
become natural and easy to you, and you may
be spared the agony of gazing upon the mangled
form of some friend through whom you have
let daylight.

Always keep behind a gun yourself, and
point the muzzle away from other people.

SABBATH OBSERVANCE.—We have received
from G. P. Lord of Chicago, secretary of the
Sabbath Association of Illinois, a number of
circular petitions, which are now being sent to
the pastor of each church of all denominations
in the United States, as far as their names and
addresses can be obtained. The object is to
create such an overwhelming tide of public
opinion against Sabbath desecration as will in-
duce the Government and our great corpora-
tions to discontinue all secular business on the
Sabbath. These petitions are to be signed by
those who desire to see all business stop on Sun-
day. The petitions are addressed to the fol-
lowing as Sabbath breakers: the railways, the
telegraph companies, and the publishers of
Sunday papers. Other petitions are to be sent
to the Senate and House of Representatives.
Any one desiring to advance this movement
should correspond with Mr. Lord.

License and Law.

EDITORS PRESS:—I notice that while some of our laws are against acts that are in their nature certainly and invariably harmful, we have other laws against acts that, though not always harmful, are generally dangerous. These last mentioned seem to be precautionary rather than retributive in design, and enter largely into municipal regulations. Possibly we may have a surplus in some departments while there is lack in others. In no case is a lack more evident than in the matter of dram-drinking. The practice has no substantial benefits to offer in justification, while, on the contrary, it is more prolific of crime, poverty, and misery than any other source. Yet its advocates, with more vehemence than reason, remonstrate against any curtailment of its privilege, and cry out "personal liberty" whenever the subject is mentioned. They seem for the time oblivious of the fact that all effective law—all Government—is an abridgment of liberty; that under our Government no right or interest, not even life itself, is above legislative control. Dram-drinking and dram-selling are an exercise of personal liberty. So are theft, murder, and all other crimes. Our dram-rights advocates say: "If a man gets drunk and breaks the law, hold him responsible, but you have no right to say he shall not drink." Now, considering that besides the blight that drink casts on the interest of the living, it causes 100,000 deaths annually and three-fourths of the crime of the country, should we not question why it is not prohibited as our other dangers? Occupation of a business street of a city for a race-course or target-shooting would be prohibited as dangerous. If a man arrested on the street for "furious driving" should plead that he had not hurt anybody yet, would he be told to drive on until he did, and then call around and settle, or that he might continue by paying a license? Start a powder-mill in a town and would the authorities wait for injury to be done before ousting it?

It is just as necessary to legislate against danger as to punish crime. Prevention saves. Punishment cannot restore. Suppose a husband and father drinks himself crazy and kills his wife. The dram is a licensed article of trade. The drinking is voluntary act under rational accountable condition of mind; an act legally provided for and protected as lawful. Intoxication follows by effect of the drink on the brain through functions not controllable by the will. Involuntary conditions and acts are not in other cases treated as accountable in law. Now between the legal innocence of the drinking and the irrational condition resulting, how shall we attach responsibility or crime to drunken action?

But a murder has been committed and something must be done about it. Well, don't stop to trace the relation of cause and effect between that mother's death and the liquor-dealer's license, nor ask how his business has affected the interests of those orphaned children. Wrap the robe of legal dignity around the liquor law and over it write: "Let justice be done though the heavens fall." Human life must be protected. Proceed to hang the murderer until he is dead, and may God have mercy on his soul." Take a drink and pass on to the next case.

Thus does legal murder follow drunken murder as drunken murder follows licensed drink, and all in protection of the liquor traffic. "How long, O Lord, how long?"

March 2, 1888. THOUGHTOGRAPH.

THE CATTLE KING.—A king, a cattle king, was what they called him, this man who came loaded with diamonds and free with money, to spend the winter in a mild Southern city. A king, and yet no royal blood in his veins! A self-made monarch—and his subjects? Only the lowing herds in the far-off West. His kingdom, the frozen plains where his cattle are dying. For it is cheaper to lose half his subjects than to feed and protect the whole! He has left his ice-bound home, has closed his ears to the suffering beasts; he wraps his greatcoat close about him and seeks pleasure! Can he shut out the cries that are piercing the winter nights beyond that mountain chain out toward the setting sun? Do not dreams of the cattle—his subjects—suffering, starving, freezing and dead, haunt the pillow of this king? Murder!—surely this king did no murder. There is no blood on his hands. He only let his dumbbeasts starve or freeze to death—that is all! But there is another King!—a King whose kingdom is the universe—"And the cattle upon a thousand hills are His!" How will the cattle king stand on the day when deeds stand witness for and against us, and balanced against his gold will be the cattle—God's cattle—which he left on the plains without food or shelter, to die of slow starvation, that he might have more gold.—*Supplement to Our Dumb Animals.*

MATERIALS FOR SOAP BUBBLES.—The following recipe will make a very superior soap-bubble mixture, such as are used in scientific experiments: Take shavings of pure white castile soap, place them in a bottle, and fill with warm water. Shake occasionally for a few hours, and allow to stand over night. In the morning pour off the clear liquid and add to it nearly an equal quantity of glycerine. The bubbles blown from this mixture will be of surprising size and beauty.

YOUNG FOLKS' COLUMN.

Little Songs of Spring.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

"Rough and tumble down the hill,
Cutting capers as I go!
Thro' the orchard with a will,
Blaster, bluster, bluster, blow!
Scaring all the blossoms pale,"
Said the little gale.

"I will tell a joke or two
On the snow I've left behind,
Just to keep a merry mind,
Giggle-gurgle, gurgle-goo!
Dimpling every time you look,"
Said the little brook.

"Father's wings are strong and fleet,
Birding, too, must learn to fly.
Let your mother see you try,
Twenty-twenty, twenty-tweet!
Sweeter song was never heard,"
Said the little bird.

"Dainty dress and ribbons new,
Such a lovely Easter bonnet!
Buttercups and daisies on it,
Tirra-lirra, lifra-loo!
Face in smiles and hair in curl,"
Said the little girl.

An April Fool.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

The boys came tumbling out of school, one upon the heels of another, so glad to exchange the restraint of the close schoolroom for the freedom of the fields and an unlimited supply of fresh air. All day long they had been laboring under a sense of suppressed excitement—not altogether suppressed either. Three times had Tom Nugent fastened a pin, point uppermost, in the chair of gentle, absent-minded Richard Everett Sampson, and three times had innocent Dick uttered a loud "Oh," and three times had Master Nugent been severely reprimanded by Miss Johnson, and three black marks had he received against his name. Then Harry Hopper, nicknamed the Grasshopper, had offered the unsuspecting Dick "a good piece of drawing paper," the under side of which was thick with mucilage, and Dick in accepting it gratefully had covered his hands with the glue. Miss Johnson saw the whole proceeding and Hopper was made the subject of a lengthy lecture.

That was the worst of Miss Johnson; she saw and heard everything. It was a hard matter if a fellow could not have a little fun on April Fool's day without being obliged to pay for it in black marks.

And then Richard Everett was such a "sissy boy." He was the teacher's favorite, just because he had the face of a girl and always knew his lessons. There was Harry Hopper, who rode the wildest horse in town, and could climb the tallest tree, and was number one in every fight, and did a dozen things in fact that Richard Everett never dreamed of attempting, and yet Miss Johnson perfectly detested him, and had just called him a young ruffian, before the assembled school. Peculiar Miss Johnson!

Richard Everett was indeed a beautiful boy. He had the pale face, the high forehead and the deep eyes indicative of genius. He wrote a fairer hand than Miss Johnson did herself, and he could draw wonderfully well. He was always drawing when he was not studying or thinking.

Dick's mother was a poor widow. She had three girls younger than he, and she found it a difficult matter to feed and clothe them all and keep her boy at school. Some practical people used to say to her:

"Why don't you put the boy to work? He will be good for nothing by-and-by at his trade if you have him forever studying now. There is as much sense in it as there was in giving him a double name—Richard Everett. Dick does well enough for a lad who has his own way to make in the world."

But the mother knew her boy would never follow in the footsteps of his father.

"He will be a great artist," she said, "God willing, and his mind must control his brush. He shall be educated."

So she saved a little here and denied herself something there, and contrived to keep him at school.

Mrs. Sampson had been born to wealth and a high social station. She married her husband, a young carpenter, against the wishes of her family, and they had discarded her—all but one dear cousin, who argued that she was right. This relative died soon after her boy was born and she named the boy for him—Richard Everett. Such a bright, generous young fellow as the first Richard Everett had been. Mrs. Sampson often thought of his rich, eccentric old mother who lost in him her only child. She did not know where her aunt lived, or if she still lived, for Mrs. Everett had been one of the first to ignore the carpenter's wife.

Well, as I said, the boys came running out of school, and Tom, being in a great state of indignation over his black marks, immediately proposed to his comrades that they should play a good joke on "Miss Johnson's pretty pet."

"Let's put a placard on him," suggested one mischievous spirit. "He'll wear it all over town and never know the difference."

A large piece of pasteboard was accordingly

procured, and on it were printed with a pen these words in huge letters:

"RICHARD EVERETT,
MISS JOHNSON'S PET,
IS AN APRIL FOOL, YOU BET."

"Wait till he goes on Main street," said Tom, "to sell them pins and things for his mother; then we'll pin it on him. My! won't folks stare? And he'll never guess what's up—the little stupid!"

An hour later Dick was standing on a corner of the principal thoroughfare of the little town, a case containing needles, pins, and other small articles, fastened round his neck with a strap. I am afraid he was a poor salesman, to-day particularly. He was thinking of some descriptive verses he had read, and he made a beautiful picture from them in his mind. He wondered if he would ever be able to draw what he saw. So absorbed was he in his own thoughts, he had no idea that any of the boys were near him, when Tom crept up behind him and pinned the pasteboard to his jacket by means of bits of string passed through each end of the placard. He was only roused from his reverie by the approach of a spry little old lady, who accosted him thus:

"Have you any needles, child?"

"Yes, ma'am," answered Dick, as he straightened himself, "very fine needles—warranted neither to bend nor break."

"Why, what on earth have you on your back, child? Are you a walking advertisement?" exclaimed the little old lady, as she ran around to look.

Dick put out his hand instinctively and pulled the thing off with a jerk. "Richard Ever-ett, etc.," he read. He was somewhat crestfallen at first, but his sense of humor soon overcame his blushes.

"Oh, it's only the boys, ma'am," he said apologetically, "it's April fool's day, you see, and they like to play jokes," and he laughed.

But the spry little old lady seemed shocked. "The name! How came it there?" she gasped.

"That's my name," said the boy, "but if you don't like it, you can call me Dick. The boys do—Dick Sampson."

"Sampson? Yes, it must be so; he is Alice Patterson's child. Beautiful Alice Patterson's son peddling pins in the street! That comes of her foolishness. But after all the child is not to blame, and he has Richard's name. I'll buy all your knick-knacks," she said; "don't stand here any longer to-day. Go home and tell your mother you've seen your Aunt Amelia," and without waiting to collect her numerous purchases she pushed some money in his hand and moved rapidly away.

But it was not the last of her. Betimes the next morning she bounced through the door of Mrs. Sampson's humble home.

"I did not suppose, Alice," she said when she had greeted her astonished niece, rather stiffly, "that I should find you in this town when I came here to spend a quiet summer. Your husband is dead, I hear, and you are poor. Let me have the boy. He is like my dear son. I can't endure that a Richard Everett should peddle pins. I will make a gentleman of the child."

"Mamma," said the boy, as the poor woman hesitated, divided between her love for Dick and her desire to do what was best for him, "let me answer. I am not ashamed of my father, ma'am, and I cannot leave my mother, thanking you all the same for the offer."

"Nonsense," said Aunt Amelia, with a frown. "Well, then, I see I shall have to adopt the whole family. The man's dead at any rate—that's one consolation. Alice," she continued, addressing her niece, "you and I have both seen trouble since we last met. I am a lonely old woman, and you and your children can brighten the few remaining years of my life. Will you refuse to do so?" and Mrs. Sampson yielded.

Richard Everett is a man now, and an artist. Every year adds something to his fame, and he often says it was the most fortunate thing in the world for him that he should once have been "an April fool."

Youngsters' Notions.

Baby Will was taken to church (Episcopalian) for the first time, and seemed greatly impressed with all that he saw and heard. A few days afterward he asked suddenly, "Mamma, what are those white things we see on peaches?" "I don't know," said mamma, wondering; "where do they grow?" "Oh! not the kind of peaches that grow on trees, but the kind that *peach* in churches." He meant the surplice.

The same boy shut himself in the closet one morning, and, coming out with a very grave face, asked his mother if she had heard anything. "No," said she. "What was it?" "I said naughty words in the closet" (great contrition). "God heard them," said mamma, gravely, "whether I did or not." "Why?" asked Will, in all seriousness. "Has God got a telephone? Where does He keep it?"

The children who live in districts of deep snow enjoy a walk on the crisp crust in early spring mornings. Little Emma wanted to go out one very cold morning; but mamma said: "No, it is too cold. You shall by and by, when it gets warmer." "But the crust will all be melted then," objected an older child. "Oh, no!" cried Emma, joyfully, as a bright thought struck her; "the crust will be lovely by and by. It will be baked by the sun."—*Selected.*

DOMESTIC ECONOMY.

MINCED HAM WITH POACHED EGG.—Ham is so cut up that it can no longer be served sliced, trim off the meat from the bone and cut it very fine. Add to it half the quantity of raw potato cut into small dice. Put in a frying-pan an ounce of butter; toss the ham and the potato in it a few minutes; then add a gill of hot water or soup stock. Cover and simmer 15 minutes. Try the potatoes, and if done add a little pepper and a little chopped parsley. Turn out on a hot dish, place a poached egg on top and serve.

POLISH FOR PIANOS.—Polish or varnish suitable for polishing pianos is made as follows: Take 700 parts of alcohol, 15 parts of copal, seven parts of gum-arabic, and 30 parts of shellac. The resins are first pulverized and bolted through a piece of muslin; the powder is placed in a flask, the alcohol poured over it, and the flask corked. By putting the flask in a moderately warm place, the solution will be accomplished in two or three days. It is then strained through muslin and kept in hermetically sealed bottles.

HOW TO CLEAN BUCKSKIN.—If it is not too much saturated with grease and dirt, buckskin can be cleaned with pipe clay. If it requires further cleaning, use the best of soap and water made into a lather. Apply with a stiff brush, but do not ring or stretch the garment. When the dirt is all removed, work the skin in the hands until perfectly dry. The Indians use a mixture of brains and water beaten into a stiff paste to clean buckskin, and then it is worked by hand until dry, when the skin becomes as soft and pliable as velvet.

SWEET POTATOES SAUTE.—This is a very nice way to utilize left-over sweet potatoes. Fry a slice of onion in a pan; then remove it. Cut up two boiled sweet potatoes into slices, then into dice, and then fry them lightly in the pan. Shape them as you would an omelet and salt and pepper and a little chopped parsley and turn out on a hot dish. The onion flavor removes the peculiar flavor of the cold potatoes without its own flavor being recognized. If the onion is not objected to it can remain and be mixed with the potato.

PANCAKES.—Whisk the yolks of five eggs thoroughly and add to them four ounces of flour, half a teaspoonful of salt and a teaspoonful of sugar; stir in half a pint of lukewarm milk and the whites of the eggs well beaten. Grease a small pan slightly and fry the cakes very thin, shake the pan to prevent burning, and when they are a delicate brown on the under side turn them as artistically as possible. When done put them on a hot plate with butter and a dash of cinnamon on each and strew over the top one a quantity of fine sugar. Hold over it a shovelful of live coals to melt the sugar.

KIDNEY BEANS IN GRAVY.—The red kidney bean, which is called the French bean by some dealers, is a very nutritious and wholesome vegetable and may be cooked as our ordinary white bean, but with a gravy it is more desirable, as it may be served at almost any meal. Put into the frying-pan an ounce of butter, half a teaspoonful of dry flour and a teaspoonful of minced onion; brown slightly and add half a pint of beef gravy or rich soup stock; add the necessary salt and pepper. Now add a quart of cold boiled beans; simmer long enough to heat them thoroughly, add a squeeze of lemon juice, and they are ready for the table. If the beans are very dry, they should be soaked and boiled before using them.

APPLES WITH RICE.—Wash a pint of rice thoroughly, scald it with hot water, drain and cool; add to the rice a quart of rich milk, a quarter of a pound of sugar and a saltspoonful of salt; simmer gently an hour. When done, beat it with a wooden spoon. Wet an oval mold with water, press the rice in it and keep on ice until wanted. Peel, quarter and core five fine apples; put them in a stew-pan with three half-pints of water, three cloves, two slices of lemon and half a pound of sugar (dissolve the sugar in the water); simmer until the apples are tender, but will not break when removed from the pan. When done, strain carefully and boil down the syrup until quite thick. Now turn out the rice on a glass dish, add the apples as a border and pour the syrup over all.

NEW ENGLAND CODFISH BALLS.—Shred the codfish the night before and soak it over night; drain quite dry on a towel next day. Mash fine one pound of hot boiled potatoes. Take an equal amount of codfish and divide it very fine. Mix both together and add the beaten yolks of two eggs, two ounces of melted butter and a saltspoonful of white peppers. Now beat the mixture until it is very light, for upon this process depends the success or failure of the dish. In shaping them together, do not press them any more than is absolutely necessary. Most cooks press them into cakes so hard that it is next to an impossibility to eat them. Dredge them lightly with a little flour, and fry them like doughnuts in smoking hot fat. When properly prepared and cooked, they should fairly melt in the mouth, which they will do if thoroughly beaten and lightly handled.



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Hay Presses—Price Hay Press Co., San Leandro.
Harnes—W. Davis.
Orange Trees—R. D. Fox, San Jose, Cal.
Commission Merchants—Wm. Angus & Co.
See Advertising Columns.

The Week.

Farmers have been looking this week for the rain which has not come except in the form of a local downpour in Southern California. The north wind has been holding forth quite strongly and has used up not a little moisture. Grain-growers are somewhat apprehensive, but a good shower, which is quite likely to come, will right their affairs and faces. Orchard work has progressed rapidly during the clear weather, but has been on the whole rather backward this year. The fruit is advancing well in the early regions, especially apricots, which we saw of the size of pigeon's eggs in the Vacaville district last week. Cherries are also coming on apace, though the blossoms are suffering severely from the plucking of English sparrows, which are very expert in nipping out the young fruit and dropping the corolla. Linnets are also at the same work. Such birds must go—if they will. The newly-planted area of trees and vines is quite changing the landscape as seen from the car windows in the upper Sacramento valley especially. A wonderful amount of work has been done in that district this year. Other districts also show the result of the enlivening which results from the general popularity of our agricultural arts. It will be a year of great growth for California.

Fruit-Growers' Troubles.

One would think that the fruit-grower had trouble enough in fighting bugs and weeds, dodging assessors, arguing with railroad managers and the like, without being called upon at intervals to face difficulties which no prophetic eye could possibly foresee. Such things, however, happen along, and are most aggravating because they generally attack the gathered fruit after all the time and money has been expended upon it. Fruit-growers sometimes bear these evils in silence, but once in awhile the grievance is so great that an appeal to the courts is irresistible. Sometimes relief is gained in this way, as was secured by Robert Howe of Edendale farm, Sonoma, who was awarded a verdict on March 17th for the full amount sued for, \$2047 50, in his suit against the Schammel Packing Company of San Francisco. The case was tried in this city before Judge Levy and a jury, and was brought to recover the value of Bartlett pears sold and delivered to defendants last season. The Schammel Packing Company early in the season contracted with Mr. Howe for a large number of pears at \$1.50 per box. Later on they discovered that the fruit was selling for \$1 per box and was a glut in the market, and when the first consignment arrived from Edendale the company sought to break the contract by notifying Mr. Howe that the pears were of poor quality and they would not pay for them. As the pears were in every respect sound and excellent, Mr. Howe shipped the number of boxes contracted for, and then presented his bill. The company refused to pay and hence the suit. It is rather an old dodge to claim fruit unmerchantable when the contractor becomes tired of his bargain, and we are glad to see that the claim is not holding well. It is impossible to conduct business if men will not live up to their contracts. Fruit-buyers do not yield much when the contract proves against the grower's interests. Mr. Hall's experience will prove useful to all growers.

Another trouble which the grower labors under is the untrustworthiness of the telegraph. The whole theory of the usefulness of the expensive wire is its reliability, and unless this can be maintained it is many times worse than useless. So thinks Mr. Gilbert Tompkins of San Leandro, who has begun suit for \$575 against the Western Union Telegraph Company. The cause of action set up in the complaint is as follows: On August 9th last Tompkins sent a dispatch from Berkeley to his agent in Sacramento, ordering him to attach a car loaded with his fruit to a fast freight train going out the following day. The dispatch, though sent in the evening, was not delivered until 5 o'clock the next afternoon, too late to obey the order. In consequence of this delay it was necessary to attach the car to a passenger train which started next day, thereby causing an additional expense of \$225. The delay damaged the fruit and lowered its selling price an additional \$350, for all of which the sum of \$575 is claimed.

Here, too, is a chance to teach a good lesson, and we hope the courts will enforce it. The Telegraph Company must pay for its mistakes or else not make them. It seems to us Mr. Tompkins' claim is very reasonable and the company should be willing to pay it without suit.

MORE WOOLEN-MILLS NEEDED.—There are about 3,000,000 people this side of the Rocky mountains who are consumers of woolen goods, and these people produce wool enough to clothe nearly 20,000,000; yet we have to import from the East and abroad about nine-tenths of all the woolen goods we consume. Moreover, while we so signally fail to furnish our home supplies, we have been annually shipping to the East many thousands of dollars worth of woolen goods for over 20 years. The goods thus shipped are mostly superior qualities of army cloth and flannels. This may be set down as one of the anomalies of trade. But it furnishes the best of reasons that we should increase our woolen goods product many fold. We have the capital and every desirable means at hand for doing so. Why is it not done?

KEEPING RABBITS FROM VINES.—Ex-Congressman Luttrell tells the owners of vineyards how he has saved his from being devastated by rabbits. For several years he has planted beans among his vines. The rabbits eat the beans but do not molest the vines.

The Santa Barbara Convention.

The convention of fruit-growers, under the auspices of the State Board of Horticulture, will open in Santa Barbara on April 9th, as has already been announced. It will be a most interesting meeting, in a most interesting locality, and one which will give the visiting horticulturist the sight of more interesting exotic growths than any other single locality in the State. The horticulturists of Santa Barbara and vicinity have for years maintained a flourishing local society, and one may be sure that all the preparations for the meeting will be perfect, and the greeting as cordial as could be dreamed. The cheapest route, and a most delightful one for those who like old Neptune, will be by steamer from San Francisco. The steamer Santa Rosa will leave San Francisco April 5th, and give passengers a little time in Santa Barbara before the convention opens. The fare by steamer is \$10 each way. We understand that President Ellwood Cooper has secured rates of \$2 per day at the Santa Barbara hotels for attendants upon the convention.

For reaching Santa Barbara by rail, no definite arrangement has yet been made. Mr. Lelong has been notified by the Southern Pacific Company that if 25 or more desire to go from any point to Santa Barbara and return, they can secure the round trip for two-thirds of ordinary rates. Full fare must be paid in going, and return tickets will be furnished in Santa Barbara for one-third usual rates. It will be well for those who desire this concession to write to Secretary Lelong (220 Sutter street, S. F.), at once, to see if the required 25 persons can be secured. Otherwise full fare will have to be paid by those who attend.

The convention will be full of interest inside and out. A full line of talent, in the way of essayists, was shown by the announcement in the RURAL of Feb. 25th, and no doubt most interesting and instructive discussions will follow. Outside of meeting hours there will be excursions to adjacent points of horticultural, historic and esthetic importance. It will be a good chance for our fruitmen to unbend a little before the heavy work of another season commences. Be sure also to take the ladies along. They will be brighter all summer for the spring outing.

The Experiment Stations.

We give on another page an account from a local exchange to show what the enterprising people of Amador county are doing toward the installation of the University Experiment Station in their midst. It will be seen that they propose to turn over to the University authorities a very well equipped station, and work has already been commenced, as the necessary funds have all been subscribed. We print the account from Amador merely to show residents of other districts which may come within Prof. Hilgard's divisions of the State, that if they desire stations they should not lose time. Already there have been placed on file at the University propositions from other points very much like that from Amador, but they are held under consideration until other localities may have a little time to enter the lists, so that selections can be made which will be of the widest public benefit and advantage. For this reason, the people in all regions, who are considering the matter, should hasten their canvasses to see if the necessary lands and funds can be had. Unless this be done, it is, of course, possible that some point of great desirability for experimental work may fail of consideration, because the residents did not declare their intentions speedily or definitely enough. We speak thus plainly, because the RURAL has urged the establishment of these stations from the first, and we do not desire the claims of any locality to pass unnoticed because of lack of information of requirements. It is not likely that all stations will be definitely selected at once, but applications, with some guarantee that the conditions will be complied with, should not be postponed.

NOT SOLD.—The report that Anteeo, the noted trotter, had been sold to a Kentuckian for \$20,000 has been denied by the owners. The above amount was offered, but arrangements regarding his removal could not be agreed upon.

CHIEF JUSTICE WAITE of the U. S. Supreme Court died March 23d.

Death of the Originator of Proper Wheat.

Edward Proper, from whom the well known Proper wheat gets its name, died quite suddenly Friday evening, March 16th, at his home near Gaither Corners, Sutter county.

Mr. Proper was born in Fulton county, New York, in 1830, and consequently was 58 years of age. On coming to California, he first resided at West Butte, and in 1852 purchased from the Anderson Bros. the farm upon which he has ever since resided, about ten miles southwest of Yuba City.

A score of years ago, while he and a Mr. Anderson were harvesting on his farm, some barley, the seed of which had come from Chili, they found a single head of extraordinary wheat. This he saved, sowed the following year, and continued until he had a field of it, and again until it went in every direction. All this time the quality and original features of the wheat maintained themselves, and thus was established the "Proper wheat," one of the best if not the best milling wheat in existence.

Mr. Proper is spoken of by his neighbors as a man whose sterling integrity and industrial worth were exemplified in every-day life, a loving husband, a kind parent, a steadfast friend and an upright citizen, highly respected by all who knew him. During his funeral business was generally suspended, and there was a large attendance. Such was evidence of the esteem in which Mr. Proper was held at home. His enterprising act in caring for and developing the variety of wheat which bears his name has given him fame in the great markets of the world and assured him a permanent place in the agricultural history of California.

The Coming Bench-Show.

Entries for the bench-show, which is to be held in this city next week, closed nominally on the evening of the 27th with over 200 dogs booked; but the list is actually kept open a few days longer, to accommodate a number of ladies who have pets to show, and it is probable that nearly 300 animals will be on exhibition.

The officers and members of the Pacific Kennel Club have exerted themselves to good purpose in working up and preparing for the approaching display. Pointers and setters are most numerously represented, and next to them the greyhounds. Then come the Great Danes—an enormous variety of bloodhounds—St. Bernards, fox-hounds, spaniels, terriers, etc., in great variety.

Mr. Davidson, judge of the sporting classes, arrived from Monroe, Mich., last Sunday, and Mr. Watson, who is to judge the non-sporting classes, is expected here from Philadelphia on Saturday.

The show opens in the Mechanics' Pavilion, Wednesday, April 4th, and continues until Saturday, 7th, inclusive. It promises to be very interesting and brilliant.

A RETURN THRUST AT THE CONTINENTAL HOG. We recently alluded to the indignities heaped upon the American hog abroad, and lamented the fact that he could not be officially shown at the coming Paris exposition. It is encouraging to see that these wrongs are not forgotten, for President Cleveland has sent to Congress a message recommending legislation to prohibit the importation of swine from France and Germany. It is accompanied by communications from Minister Pendleton and the Consul at Marseilles. The communications are in the nature of statistics showing the prevalence of contagious and infectious swine diseases in both countries. It is on account of these diseases that the President recommends the prohibition of importations. It is high time that the outrageous, diseased continental hog was ordered to be eaten at home.

OREGON LIVE-STOCK.—Grant Mays, a stockman who lives at Antelope, Wasco county, has lately told the *Oregonian* that the past winter was one of the best for stock experienced in Eastern Oregon for several years. The loss of sheep was very light, while cattle did not suffer at all. Stockmen generally had plenty of hay, but were not required to feed their stock for a longer period than two weeks. In Harney and Malheur counties the loss was heaviest, reaching about 30 per cent for both sheep and cattle.



A FORDING SCENE ON THE FEATHER RIVER, AT RIO BONITO.

Los Angeles Flower Festival.

The Los Angeles Flower Festival Society has done beautiful and blessed work the past three years in holding floral fairs each successive spring, and with the proceeds founding and endowing the Woman's Home. It is now announced that their fourth annual festival will be formally opened at Hazard's pavilion, corner of Fifth and Olive streets, Los Angeles, on Tuesday, April 17, 1888, at 8 P. M., and will continue two weeks.

The Los Angeles Orphans' Home is to be made the beneficiary this year, after paying a little debt which was incurred in fitting up the restaurant and reserving a small emergency fund. We append extracts from the circular lately issued by the managers:

Even in our city in the full tide of its prosperity, the throng of the homeless little ones has long outgrown the meager accommodations of our present Orphans' Home. Realizing the wisdom of building not only for the present but the future, the management of the Orphans' Home has already begun the erection of a commodious and substantial brick structure at an estimated cost of \$50,000. This will enable them to give additional comfort and care to the 80 little ones now in the home, and to open its doors to many more helpless children. In the name of these little ones, your aid and influence is asked for the fourth annual flower festival.

Mrs. M. A. Bates, professional decorator, has furnished an original design, wholly different from any former arrangement. She will superintend the construction of an exhibit which, with the experience of the society, it hopes to make most beautiful and unique. The plan and framework of all booths will be provided without expense to exhibitors.

Every town in Los Angeles county is cordially invited to make an exhibit, but no application will be considered after March 31, 1888. No charge is made for space. Florists and other large growers who desire to enter exhibits should apply immediately.

Four prizes are offered by the F. F. S., two of \$200 and \$150 respectively, for the best exhibit and second best exhibit of flowers made by any town other than Los Angeles. In awarding these the quality of flowers as well as the taste and neatness of the booth will be considered. Two prizes of \$100 and \$75 are offered for the handsomest original floral designs. These to be kept in perfect order during the festival.

The ladies of the society will provide entertainment for two representatives from each section.

Places and persons who cannot send an exhibit are invited to contribute flowers, food, or fruit, and those who undertake to collect and forward such donations are requested to notify the secretary. The S. P. and the A., T. & Santa Fe railroad companies have kindly agreed to transport free of charge all such donations shipped over their lines. All such should be marked plainly, "Flower Festival, Hazard's pavilion, Los Angeles."

Any one desiring to become a member of the society, the Orphans' Home or Woman's Exchange, can

do so by applying to the financial secretary, Mrs. W. B. Abernethy. Applications for space should be made to the president, Mrs. R. M. Widney, 310 South Olive St., Los Angeles.

We wish and anticipate for these benevolent ladies a success even surpassing those they have before achieved both in loveliness of the display and in winning means of humane beneficence.

California Scenes.

The upper engraving on this page gives a scene which in its main features is characteristic of many river crossings in California. Outside of the hilly portions of the State, our rivers flow in wide, shallow beds, as might be expected of rivers which sometimes carry large and sometimes very small volumes of water. The shoaling has been greatly aggravated by deposit of mining debris, which is happily a thing of the past, though its effects remain. The scene is a ford of Feather river, near the colony of Rio Benito, in Butte county, and the photographer happily chanced upon it just as a large band of horses was being driven over. The stream, which is easily crossed, as shown when low, becomes a wide and treacherous flow during times of high water.

The lower engraving is also a typical California scene, showing how our gently rolling lands

are being brought to great value by plantations of fruit. The scene shows the homestead and vineyard of Hon. E. B. Smith, president of the Contra Costa Board of Trade, situated near Martinez. Mr. Smith has a large area of the best wine grapes and a winery of his own, the product of which is securing an excellent name. His home is delightfully situated, being well protected by the surrounding hills, from some of which a charming view is obtained of Mt. Diablo and some of its adjacent hills and valleys, which form a picturesque view to the southward. This is a very charming section of Contra Costa county, and one of the most delightful home-building places in the State.

THE CHICO FORESTRY STATION.—Gen. Bidwell's tract of land, which he recently donated to the State, is soon to be used as an experimental station by the State Board of Forestry. It is about 42 acres in area, and it is said to be very well located. It is bounded on the north by a fine stream of water, and is situated near Chico. H. S. Davidson, the engineer for the California State Board of Forestry, and H. R. Lee, the forester in charge, went to Chico on Monday for the new plantation, and a force of men have already been engaged for the work.

THE fruit-growers at Lincoln, Placer Co., have organized a fruit-shipping company.

QUERIES AND REPLIES.

The Soapberry Tree.

EDITORS PRESS:—I am a new subscriber to your paper and a new-comer to your State, and am in quest of any information relating to horticulture, climate and health. The RURAL has been very interesting to me so far.

You will find herewith inclosed a few seeds which I wish you to identify. I found the tree from which they were taken in Southern Texas last fall. It at once impressed me as a most desirable shade and ornamental tree for a dry, hot climate, as the spot where it grew indicated. I thought on first sight that it was a species of China tree, but I am doubtful of that now. Here is a description as it appeared in January: A dense round head as broad as its height; the limbs and twigs bowed with their load of seed; slender limbs and twigs. The seeds were more like large bunches of golden yellow grapes. On examination you will see that they are transparent, and that when the skin and pulp are broken the seed can be taken out clean. The bark of the trunk was a little corky or scaly, resembling an ash or coffeenut tree.

I was told by the owner that it was magnificent in bloom, and in foliage a very dense shade. He bought the place recently and knew nothing of the origin of this tree.—W. T. KIRKMAN, Perkins, Sacramento Co.

The tree is the soapberry, probably *Sapindus marginotus*. It is certainly worth a trial as an ornamental tree, and we hope Mr. Kirkman will get some plants from his seed. Has any reader other information to give concerning it?

Clearing Land.

EDITORS PRESS:—When some weeks ago I raised the subject of killing brush in your paper, the subject appeared to me to be one of general interest; but issue after issue came out without its evoking any correspondence until your publication of the 10th of March, containing Mr. Scranton's interesting letter, which I may remark has been copied into the *Clear Lake Press*. My own experience in clearing is small, but last fall, October and November, I cut down and afterward burned on the ground, chemical, which I see is already sending out shoots from the old roots, my experience thus differing from Mr. Scranton's. In regard to live oak I cannot speak, as mine have been grubbed. I am now cutting some and shall do so throughout the seasons, hoping to come to some definite conclusion. A neighbor of mine tells me that he has succeeded best by cutting all kinds of brush about June when full of sap, and says that even live oak treated in this way will often die.—P. S. M. ARBUTHNOT, Lower Lake.

From Another Correspondent.

EDITORS PRESS:—To the one that asks for information how to subdue the growth of undesirable scrub trees and shrubbery, I will give my experience. It is to cut them just under the surface of the ground in the month of August, or when the sap is in the roots; this method will effectually kill them, root and branch.—MRS. A. L. A., Fresno Co.

What Hurt the Trees.

EDITORS PRESS:—I have four six year-old apple trees that the bark has loosened from the tree and pulled off. What is the cause; was it freezing?—W. P. C., Mariposa Co.



THE HOME OF HON. E. B. SMITH, NEAR MARTINEZ.

State Agricultural Society.

Speed Program for the State Fair.

The State Board of Agriculture met March 22d, at the Secretary's office in Sacramento, for the purpose of arranging the premium list, speed program, and preparing in general the necessary preliminaries for the State Fair of 1888. The *Record-Union* reports as follows:

President Shippee presented the following official report of the experts upon the affairs of the Secretary:

STOCKTON, Jan. 13, 1888.

Hon. L. U. Shippee, President State Agricultural Society—SIR: The undersigned, having been requested by you to fully and carefully examine the books and accounts of the Secretary of the State Agricultural Society, beg leave to submit the following report:

Our work began with the fiscal year commencing February 1, 1881, and our study and examination of the books, accounts, and all financial transactions of the Society extending from that date up to and including December 31, 1887.

We had full access to all the books and accounts of the Society, and to any and all memoranda desired or asked for, and we believe made a complete and thorough examination.

The source of receipts of the Society was a matter that received our closest attention, and it was found that everything was accounted for with the exception of the sum of 40 cents—\$3037.75 on September 16, 1882, being entered up as \$3037.35.

All disbursements are represented by correct vouchers, produced by the Secretary and thoroughly examined by us, but we found that voucher No. 156, of 1883, showed the following amount paid and receipted, \$17.26, and charged up as \$13.56, leaving a balance in favor of the Secretary of \$3.70.

The system of keeping the accounts adopted in August, 1881, and pursued to the date of the termination of our work, is as nearly complete as may be, especially considering the fact of the volume of business necessary to be transacted, and the handling of large and small sums of money, during the limited space of time permitted by the State Fair.

The system used for the receipts and disbursements of moneys that pertained to speed contests is particularly creditable to the officer responsible, no error being found that was detrimental to the society, and only one that could be to its patrons, and that was corrected immediately after its discovery, and the proper voucher shown for it.

We find the following amount, \$388, of premiums unpaid and unchanged for the interim between 1881 and 1887.

All other claims and accounts appearing against the society, exclusive of those shown in the profit and loss account and balance-sheet for 1887, are paid, and vouchers on file.

We append herewith a full statement of the receipts and disbursements, together with profit and loss accounts for each year, showing in the latter account a loss of \$5285.69 on Dec. 31, 1887, being the net loss for the years 1881 to 1887, inclusive.

We find that the amounts of the appropriations received from the State of California are, from 1881 to date, \$77,500; that the amount paid for premiums was \$77,995.36, and further, that the disbursements on account of permanent improvements made by the society, exclusive of the appropriations made by the citizens of Sacramento and of the State of California for the building of the pavilion, to have been \$57,382.87.

We inclose herewith the balance-sheets for the several years named in this report, with our signatures attached to each, which have been in our possession since proof. Respectfully submitted.

ARTHUR W. BELL,
J. M. LA RUE,
Accountants.

Speed Program.

The following speed program for the State Fair, 1888, was adopted:

First Day—Thursday, Sept. 6th—Trotting.

- No. 1—The Occident stake; \$400 added.
No. 2—Trotting; 2:23 class; purse, \$1200.
No. 3—Pacing; 2:30 class; purse, \$600.

Second Day—Friday, Sept. 7th—Running.

No. 4—The Introduction Stake, for two-year-olds; \$25 entrance; \$10 forfeit; \$250 added, of which \$50 to second; third to save stake. Winner of any two-year-old race this year to carry three pounds; of two, or more, five pounds extra. Three-quarters of a mile.

No. 5—The California Breeders' Stake, closed in 1887 with 11 nominations; 1½ miles; \$300 added.

No. 6—The Capital City Stake; a sweepstakes for three-year-olds and over, in which only non-winners in any event this year will be eligible to start. Winners of any race, entered herein, may be withdrawn without incurring a forfeit. Entrance, \$50 h. f., with \$400 added, of which \$100 to second; third to save stake. One mile and one-eighth.

No. 7—Free for all ages; purse, \$250, of which \$50 to second; winners of any race this year to carry five pounds; maidens, if three years old, allowed five pounds; if four years old, or upward, 15 pounds. Mile heats.

Third Day—Saturday, Sept. 8th—Trotting.
No. 8—Two-year-old Stake, closed March 15th with 16 nominations; \$300 added.

No. 9—The grand Stallion Stake, closed

March 1st with six nominations; \$500 added for each starter up to four.

No. 10—Trotting; 2:30 class; purse, \$1000.

Fourth Day—Monday, Sept. 10th—Running.

No. 11—The Premium Stake, for all ages; \$50 entrance, h. f. or only \$15 if declared on or before Sept. 1st, with \$350 added, of which \$100 to second; third to save stake. Horses that have started and not won this year, allowed five pounds. Maidens, if three years old, allowed five pounds; if four years old, or over, 7 pounds. Three-quarters of a mile.

No. 12—The California Annual Stake, for two-year-olds, closed in 1887 with 32 nominations; \$250 added. One mile.

No. 13—The LaRue Stake—A handicap, for all ages; \$100 entrance; \$50 forfeit, with \$500 added, of which \$150 to second; \$100 to third. Weights announced September 1st. Declaration \$20, to be made with the secretary by 8 o'clock p. m. September 3d. In no event will declaration be received unless accompanied with the amount fixed. Two and one-quarter miles.

No. 14—Selling purse, \$300, of which \$50 to second; for all ages. Horses entered to be sold for \$1500 to carry rule weights; two pounds allowed for each \$100 less, down to \$1000, then one pound for each \$100 less, down to \$500. Valuation to be placed on starters only, by 6 o'clock p. m. the day preceding the race. One mile and a sixteenth.

Fifth Day—Tuesday, Sept. 11th—Trotting.

No. 15—Three-year-old stake, closed March 15th, with 19 nominations; \$400 added.

No. 16—2:20 class, purse \$1200.
No. 17—3:00 class, purse \$1000.

Sixth Day—Wednesday, Sept. 12th—Running.

No. 18—The Sunny Slope stake, for two-year-old fillies; \$25 entrance; \$15 forfeit, or only \$10 if declared on or before September 1st; \$200 added, of which \$25 to second. Those that have started and not run first or second in any race this year, allowed five pounds. Five-eighths of a mile.

No. 19—The Shafter stake, for three-year-olds; \$50 entrance; \$25 forfeit, or only \$15 if declared on or before September 1st; with \$400 added, of which \$100 to second, third to save stake. Winner of any race this year to carry five pounds extra; of two or more, ten pounds; maidens allowed five pounds. One mile and a quarter.

No. 20—The Del Paso stake, for all ages; \$50 entrance; \$25 forfeit, or only \$15 if declared on or before September 1st; with \$300 added, of which \$100 to second, third to save stake. Three-year-olds to carry 100 pounds; four-year-olds, 110 pounds; five-year-olds and upward, 112 pounds; sex, but not heat allowances. Three-quarter mile heats.

No. 21—Free purse, \$300, of which \$50 to second; for all ages. Horses that have started and not won at this meeting allowed ten pounds, winners of any race at this meeting, when carrying rule weights, or more, to carry five pounds extra. One mile.

Seventh Day—Thursday, Sept. 13th—Trotting.

No. 22—2:25 class, purse \$1000.

No. 23—The four-year-old stake, closed on March 15th, with 12 nominations; \$400 added.

No. 24—Pacing, free for all; purse \$800.

Eighth Day—Friday, Sept. 14th—Running.

No. 25—The California Derby stake for foals of 1885, closed in 1886 with 29 nominations, \$300 added. One and one-half miles.

No. 26—The Palo Alto stake, a handicap for two-year-olds; \$50 entrance, \$25 forfeit, \$10 declaration, \$400 added, of which \$100 to second, third to save stake. Weights announced 10 o'clock a. m., Thursday, Sept. 13th; declarations due at 6 o'clock p. m. same day. One mile.

No. 27—The Golden Gate stake for three-year-olds; \$50 entrance, \$25 forfeit, or only \$15 if declared on or before Sept. 1st, with \$400 added, of which \$100 to second, third to save stake. Winner of any three-year-old race at this meeting to carry five pounds extra; colts not one, two, three, in No. 19, allowed ten pounds. One mile and three-quarters.

No. 28—Nighthawk stake, for all ages; \$50 entrance; \$15 forfeit; \$300 added, of which \$100 to second; third to save stake; \$200 additional if 1:41½ is beaten. Stake to be named after the winner if Nighthawk's time (1:42½) is beaten. One mile.

No. 29—Free purse \$250, of which \$50 to second; for non-winners at this meeting. Horses that have started and not run second allowed ten pounds; winners of any race entered herein may be withdrawn without penalty. One mile and one-sixteenth and repeat.

Ninth Day—Saturday, Sept. 15th—Trotting.

No. 30—Great free-for-all trot; purse, \$1500.

No. 31—2:40 class; purse, \$1000.

No. 32—Pacing; three-year-old class; \$300.

Entries for the following running events for 1889-90 were ordered to be closed at the same time as the races on the regular program:

No. 1—California Breeders' stake for foals of 1886, to be run at the State Fair of 1889; \$50 entrance; \$25 forfeit, or only \$10 if declared January 1, 1890; \$300 added, of which \$100 to second and \$50 to third. One mile and one-quarter.

No. 2—California Annual stake, for foals of 1887, to be run at the State Fair of 1889; \$100 entrance; \$25 forfeit, or only \$10 if declared

January 1, 1889; \$250 added; second colt, \$100; third, \$50. One mile.

No. 3—California Derby stake, for foals of 1887, to be run at the State Fair of 1890; \$100 entrance; \$50 forfeit, or only \$10 if declared January 1, 1889; \$15 if declared January 1, 1890; \$25 if declared May 1, 1890; \$300 added; second horse, \$100; third horse, \$50. One mile and one-half.

Remarks and Conditions.

All trotting and pacing races are the best three in five, except the two year-old, unless otherwise specified; five to enter and three to start. But the board reserves the right to hold a less number than five to fill, by the withdrawal of a proportionate amount of the purse. Entrance fee 10 per cent on purse, to accompany nomination. Trotting and pacing purses divided at the rate of 50 per cent to first horse, 25 per cent to second, 15 per cent to third, and 10 per cent to fourth.

The National Association Rules to govern trotting, but the board reserves the right to trot heats of any two classes alternately, if necessary to finish any day's racing, or to trot a special race between heats. A horse making a walk-over shall be entitled only to the entrance money paid in. When less than the required number of starters appear, they may contest for the entrance money, to be divided as follows: 66⅔ to first and 33⅓ to the second. In all the foregoing stakes the declarations are void unless accompanied by the money.

Please observe that in the above stakes declarations are permitted for a small forfeit.

In all races entries not declared out by 6 p. m. of the day preceding the race shall be required to start.

Where there is more than one entry by one person, or in one interest, the particular horse they are to start must be named by 6 p. m. of the day preceding the race. No added money paid for a walk-over.

Rules of the State Agricultural Society to govern running races, except when conditions named are otherwise.

Non-starters in running races will be held for entrance under Rule 3.

Racing colors to be named in entries.

In trotting races drivers will be required to wear jackets and caps of distinct colors, which must be named in their entries.

Entry blanks and racing rules will be furnished upon application to the secretary. Entries in all, except otherwise stated, to close with the secretary Wednesday, August 1, 1888.

L. U. SHIPPEE, President.

EDWIN F. SMITH, Secretary.

Improvements at the Park.

The board has decided to raise the grand and special stands at the Park and improve them in general. Plans and specifications will be ready in a few days for contractors to figure upon.

The following resolution respecting the importation of live-stock for exhibition from other States was adopted:

WHEREAS, In the absence of any State quarantine laws in this State, it is deemed proper to use every precaution to prevent the importation of any animal afflicted with contagious disease; therefore

Resolved, That all live-stock be prohibited from exhibiting or competing for premiums at the State Fair of California that is not in the State on or before July 1st of each year. This does not apply to horses entered in races.

The pooling privilege for the current year was let to Jasper N. Killip of San Francisco for the sum of 65 per cent of the commissions.

Superintendent Hancock was directed to have a line of shade trees planted in front of the cattle-stalls at the Park.

Premium List.

The premium list was next considered, and the following are the most material changes made:

In the Live-Stock department the following rule was adopted: "In this department animals may be entered in their respective classes, and as a sire or dam, or junior member of a family, and in sweepstakes, any sire or dam competing in a race will be allowed to enter for a premium as one of or at the head of a family."

Stallions six years old and over, and jacks four years old and over, must show two colts to entitle them to compete for premiums.

Carriage horses must not be less than 16 hands high, nor weighing under 1200 pounds; must match in style, action and symmetry of form, but not necessarily in color; must be shown to carriage.

Roadsters must not be used as track horses. In the cattle classes the general sweepstakes were stricken out and a sweepstake substituted in each class.

In the Sheep department lambs were designated as those dropped on or after January 1st of each year. Those dropped prior were to be designated as yearlings.

The Pavilion departments, other than acted upon, were referred to a committee consisting of Green, LaRue and Hancock.

Special Premiums.

The following special premiums were offered in the ladies' department by the gentlemen named:

President Shippee—For best display of embroidery, \$20.

Director Chase—For best painting on porcelain, \$20.

Director Cox—For best display of decorative painting, \$20.

Department Superintendents.

The following department superintendents

were named: First department—thorough-breds—Shafter and Boggs; horses of all work, Singletary and Perkins; draft horses, Singletary and Perkins; roadsters, Green and Singletary; carriage horses, Green and Singletary; standard trotters, Hancock and Chase; saddle horses, Singletary and Perkins; sweepstakes, Shippee, Singletary and Cox; cattle, Carr and Cox; sheep, Hancock and Green; goats, Chase and Hancock; swine, Chase and Hancock; poultry, Chase and Hancock; pavilion departments, LaRue.

The ladies' tournament was ordered to be given same as last year.

After considering other matters concerning details of the coming fair, the board adjourned.

THE STOCK YARD.

Nevada Live-Stock Association.

The Nevada Live-Stock Association was organized at Winnemucca February 12, 1884, for the purpose of encouraging and promoting the live-stock industry and protecting it as far as possible from the depredations of cattle and horse thieves. Forty-four persons, among whom were the wealthiest and most extensive live-stock owners on the coast, signed the roll of membership at the first meeting.

The *Silver State* avers that the objects of the organization have to a great extent been accomplished. Horse-stealing is a thing of the past in Nevada, and complaints of cattle being stolen are seldom heard. The association has prosecuted several alleged cases of cattle-stealing, and, though failing to secure convictions for lack of evidence or other causes, the moral effect of the prosecution has been noticeable, and the poor man, as well as the rich man, no longer feels that a cow or a steer which strays from its accustomed range is stolen. They have not prosecuted any one, nor sought to control courts or juries by disreputable means, and in every instance where an alleged offender has been prosecuted a grand jury, not dominated or controlled by the Live-Stock Association, found an indictment, the evidence being sufficient, unexplained, to warrant the assumption that the defendant was guilty.

The annual meeting was held at Winnemucca, in the courthouse, March 20th, President George Russell of Elko in the chair. In consequence of the non-arrival of passenger trains from the west, the attendance from that part of the State was limited to a few who arrived on Monday.

The secretary and treasurer submitted their annual reports, which were accepted, and officers for the ensuing year were elected as follows: President, N. H. A. Mason of Lyon county; vice president, O. North; secretary, Geo. S. Nixon; and treasurer, F. D. Sweetser of Humboldt county.

The following Executive Committee was selected: N. H. A. Mason of Malheur county, Oregon; George Watt of Lander and Nye counties, Nev.; A. C. Cleveland, White Pine and Lincoln; J. D. Bradley, Geo. Russell, J. B. Moore and J. B. Garratt of Elko; J. D. Ford of Eureka; O. North, Joseph Marzen, F. D. Sweetser, B. F. McCurdy and J. H. Thies of Humboldt; T. B. Ricey, Douglas and Ormsby; Lewis Dean and A. C. Bragg, Washoe; C. H. E. Hardin, Lyon and Esmeralda; Isaac Foster, Grant county, Oregon; W. S. Bailey, Churchill county, Nevada.

The Secretary's report showed that the total receipts for the year were \$6409.94, and the disbursements \$6138.54, leaving a balance of \$271.40 in the treasury at date of meeting. There are 100 members in good standing, representing 149,271 cattle, 12,244 horses and 50,000 sheep, the value of which is estimated at over \$3,000,000.

The officers in their reports say: "In the way of prosecutions, several cases have been handled, and a good deal of money expended to bring the guilty to justice, and although no convictions have been made, we feel that indirectly a great deal of good has been accomplished, as the simple knowledge that the association will assist in the putting down of thievery has a quieting effect on certain parties that otherwise would consider it a small matter to get away with everything in reach; but as it is now, the cost of getting clear, with the association on their heels, is too great for the gain to be made by stealing. The one reward paid by the association in the past year was for horse stealing, and the party got three years in the Oregon State prison."

The next annual meeting will be held at Elko on the third Tuesday in March, 1889.

BADLY COW-BITTEN.—An Italian rancher at Dayton, Nevada, who lately found a cow choking with a potato, thrust his hand into her mouth and pushed the potato down her throat. When he attempted to withdraw his arm the beast closed her jaws upon it with the grip of a vise. The arm was finally extricated by prying the cow's jaws open with an iron bar. The bones of the forearm and the flesh were so crushed that amputation was thought necessary to save the man's life.

WATER REGULATOR.—Some time ago a reader of the *RURAL* sent us a little sketch of a device which he had used for regulating the flow of water in hillside ditches. We made an engraving but have lost the manuscript describing the device, and have forgotten the name of the writer. Will he kindly write us about it?

THE LOUISIANA TRACT!

SITUATE ONE MILE FROM THE FLOURISHING

City of Sacramento,

With a Population of 30,000, and

$\frac{1}{4}$ MILE from Terminus of an ELECTRIC RAILWAY, now in course of construction.

SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. 5 ACRES IN FRUIT, well attended to, will make a handsome income. One Acre in Strawberries will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$80, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

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EDWIN K. ALSIP & CO., - REAL ESTATE AGENTS,
SACRAMENTO, CAL.

Catalogue of Lands issued monthly. Send for one.

HOMES and RANCHES!

E. TUCKER,

Real Estate Agent,

MYERS ST., OROVILLE, BUTTE CO., CAL.

Improved and unimproved lands to any extent from 5 to 5000 acres with good, comfortable homes and all necessary conveniences, for sale on desirable terms. These lands require no irrigation, Railways convenient, ample supply of water, and the climate cannot be surpassed. Apply as above.

PALERMO LAND & WATER CO.

DIRECTORS.

GEORGE C. PERKINS. HENRY WISE. D. K. PERKINS
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Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES

At \$75 per Acre.

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. One hundred and seventy-five acres at Palermo are now being set out in the choicest varieties of Florida Orange Trees. Maps and further particulars of

McAFEE BROTHERS, Agents, 10 Montgomery St., San Francisco.

T. B. LUDLUM & CO., Agents, Oroville, Cal

SANTA YNEZ,

Santa Barbara County, California.

THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil. TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for home or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

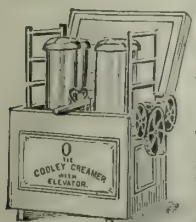
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SIDNEY LACEY, Agent, Los Angeles.

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The Largest Creamery in the United States

The Big Foot, Ill., Creamery is claimed to be the largest Creamery in this country or the world. THE PRODUCT OF 1887 WILL REACH

\$200,000.00.

The patrons are Paid 27 Cents for cream equal to a pound of butter. It is run on the Cooley System of Cream Gathering.

The Largest Creamery in New England is run by D. WHITING & SON, Wilton, N. H. Patrons receive 29 CENTS for Cooley Cream equal to a pound of butter

The Largest Creamery in Penn., patrons are now paid 28 CENTS Per Pound.

A full line of Butter Factory Supplies, including ENGINES, BOILERS, CREAM VATS, CHURNS, WORKERS &c. Send for illustrated circulars. Plans and Estimates furnished free to purchasers.

VERMONT FARM MACHINE CO., Bellows Falls, Vermont.

DEWEY & CO. { 220 MARKET ST. S. F. } PATENT AGENTS.
Elevator 12 Front.

FREE EXCURSION MERCED

COMPLETION OF THE

CROCKER AND HUFFMAN CANAL

Twenty-Seven Miles in Length; Capable of Irrigating 1000 Square Miles

GRAND CREDIT SALE AT AUCTION

3,000 CHOICE BUSINESS AND RESIDENCE LOTS 3,000

Sale without Reserve in the Fountain City of Merced

BY ORDER OF THE

PACIFIC IMPROVEMENT COMPANY

UNDER THE MANAGEMENT OF

BRIGGS, FERCUSSON & CO.

DAYS OF SALE

Tuesday, Apr. 10th, Wednesday, Apr. 11th, Thursday, Apr. 12th 1888

Sale Begins on Tuesday, at 1 o'clock P. M., and on Wednesday and Thursday at 10 o'clock A. M.

TERMS OF SALE

One-fourth cash; balance in three equal payments, due in six, twelve, and eighteen months, with interest at the low rate of 8 per cent. per annum. A deposit of ten per cent. will be required on the fall of the hammer; balance of cash payment to be made at the El Capitan Hotel, Merced, at the close of each day's sale, when contracts will be issued.

TITLE PERFECT. Deeds at Purchaser's Expense.

Special arrangements have been made by the Merced Board of Trade, for the Accommodation of all Excursionists, Regardless of Number.

LAKE YOSEMITE

Only 5 miles from Merced, is a square mile of water 30 feet deep, to be stocked with Fish, Steam Yachts, Sailing Yachts, Gondolas, Row Boats, Floating Islands for Music, Refreshments, etc., etc.

UNEQUALED WATER SUPPLY. The Crocker and Huffman Canal, costing \$1,500,000, with abundance of pure water, supplies the City of Merced.

Water from the YOSEMITE FALLS with ninety feet pressure at MERCED

The Future Manufacturing City. **FOUNTAINS SEVENTY FEET HIGH**

POWER AT NOMINAL COST. Flour Mills, Woolen Mills, Sash Factories, Machine Shops, and other

MANUFACTURING ESTABLISHMENTS are in immediate contemplation.

BUILDINGS TO BE ERECTED with large rooms supplied with power for all purposes.

POWERFUL TURBINES for manufacturing purposes. All waste water from Fountains and Turbines conducted into Irrigation Canals.

ELECTRIC RAILWAYS, Lights, Motor Power all produced by this economical and powerful Water Pressure.

TEN MAGNIFICENT COLONIES surround the future Fountain and Manufacturing City

IN THE THERMAL BELT only five miles distant.

FLOWING ARTESIAN WELLS at a depth of 160 feet.

NATURAL GAS only 400 feet from the surface.

RAISIN VINEYARDS, ORCHARDS, from 5 to 20 acres on installments.

ORANGE GROVES from 1 to 10 acres on installments, all adjacent to the CROCKER & HUFFMAN CANAL.

FREE EXCURSION

TO AND FROM **MERCED** TO PURCHASERS

EXCURSION TICKETS are sold good on all Regular Trains as follows

APRIL 9th and 10th, Limited to April 15th for return trip

All Tickets paid; one coupon will be received from each purchaser as a credit on FIRST PAYMENT

Excursion Rates made known upon application at the Southern Pacific Company's Depot Office

For Maps, Catalogues and Full Particulars, Call upon or Address

BRIGGS, FERCUSSON & CO.

REAL ESTATE AUCTIONEERS

314 CALIFORNIA ST. SAN FRANCISCO, CAL.

MISSION ROCK DOCK

AND

GRAIN WAREHOUSE,

SAN FRANCISCO, CAL.

75,000 TONS CAPACITY. 75,000

Storage at Lowest Rates.

OHAS. H. SINCLAIR, Supt.

Cal. Dry Dock Co., props. Office, 308 Cal. St. room 18

LOOK AT THIS.

Parties willing to invest in an Improved Grape Picking Implement, as well as some other improvements in Horticultural and Garden Tools, efficient and cheaply made, will do well to address **R. F. TALMADGE,** SANTA ROSA, CAL.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

PROMISE OF APRICOTS.—Haywards Journal, March 24: The coming apricot crop will be very light. A buyer for a well-known fruit-house was visiting our orchardists last week. He attempted to make many believe that there was going to be lots of 'oots, and in talking with Judge Blackwood tried a little bluff, by offering to sell him 150 tons at 1½ cents. Now Judge Blackwood is the wrong man to run such a barefaced bluff on, and he made the smart young man show his hand by at once accepting the offer, and requesting him to step inside while he drew up the contract. The buyer wilted and drove off.

Amador.

CROP OUTLOOK.—Jackson Ledger, March 24: Both grass and grain are backward. Many stockmen are still obliged to feed their cattle, the grass being too short to sustain them. It is hardly possible to have more than an average crop, and unless the spring rains are unusually abundant and timely, the crops will fall considerably below the average. After this date last year 5.15 inches of rain fell in Jackson. We need at least twice that amount to insure fair average crops this season. Fruit trees are beginning to bloom, but it is too early to form any estimate of the probable yield.

Contra Costa.

AUGMENTING ORCHARDS.—Walnut Creek Cor. Gazette, March 15: A. Hemme is adding to his already extensive orchards 4000 prunes, 2000 apricots and 1500 peaches. S. H. Long is putting out on lands purchased of Hemme, 250 cherries, 250 apricots and 250 peaches. J. D. Smith has disposed of his interest in the B. I. Linger ranch near Alamo to A. T. Hatch, and is planting 160 acres of fruit trees on contract for Hatch. There will be 2000 cherry, 1000 French prune, 5000 peach and 4000 almond trees. The trees are put 25 feet apart, and upon 31 acres they have planted three rows of almonds and peaches for nursery in each space between the trees. The young orchards in the San Ramon valley have made an extraordinary growth and look healthy.

El Dorado.

FROM TREES TO VINES.—Coloma Cor. Mountain Democrat: The Rasmussen brothers, of Lotus, have been busily engaged the past week setting out in the neighborhood of a thousand grape cuttings of the Flame Tokay variety. The land upon which they have set these out was for merly an apple orchard, but it had got so old that it was past bearing; so they took out the trees, plowed up the ground, and now have it in the above variety of grapes. They say they will do the balance of the orchard in the same way, and will, by next year at this time, have five or six thousand more vines.

Fresno.

EDITORS PRESS:—It is just impossible to delay offering our mite to your columns any longer, our silence being continually repaid with unstinted measures of good things in the RURAL and a remonstrance from our conscience can no longer suffice. But we also miss many familiar friends of the RURAL, and their welcome signatures appear not so frequently. Perhaps they too have become seemingly indifferent. But arouse ye, good contributors, and treat us with an account of your absence and the good news of your locality. Our best word is the glorious rain that insures a good crop of the late-sown grain, and bids fair to be a prosperous year. The fruit and grape interests are also promising well, as the orchardists are controlling the insect pests satisfactorily. General good health and prosperity is the reward of our watchfulness, and the well-filled RURAL affords the knowledge we seek.—MRS. A. L. A., Temperance.

BIG BUTCHERY OF BUNNIES.—C. A. P. dispatch, Fresno, March 26: The grand rabbit-drive at the New England colony was participated in by 4000 people. The drive extended over an area of five square miles, and nearly 20,000 rabbits were corralled before the slaughter commenced. A thousand live rabbits were caught for use at the coursing match at Merced. Then the crowd killed with clubs between 12,000 and 14,000. The balance escaped through the line of beaters. At the other drive held over the same ground 3000 were killed. About 10,000 were shipped to-day to parties in S. F. Kern.

EDITORS PRESS:—We think we have a fine outlook in the near future. People are coming in to settle. Circumstances which have retarded the growth of Kern county are changing; improvements are being made at Bakersfield and Sumner, our railroad station. The new hotel will soon be under way, and a dummy road is likely to be constructed from a point near the courthouse to the promised new depot in Sumner. The movement of both towns is southward; there is no reason why they should not come together; their interests should be in harmony. Sumner is a dry town, having at present no facilities for irrigation. There is a feasible survey for a ditch taking water out of Kern river above all present systems. This enterprise only waits for capital and push to develop a fertile tract of many acres and add much in beauty and comfort to the burg. The new line on the east side comes here for terminal facilities, and insures the per-

manency of the roundhouse and shops which it has been thought would be removed to Tulare. We do not anticipate a boom, but hope for a natural and healthy growth.—W., Bakersfield, March 23d.

Lassen.

MADRELINE PLAINS.—Susanville Mail, March 21: J. A. Smith, residing at Little Tule lake, near Madeline Plains, has been in Susanville for a few days. He owns 780 acres of land, 100 acres of which is cultivated, the remaining portion being used as pasture land for horses and cattle. On this ranch are raised all kinds of vegetables, fruits, grain, etc. Mr. Smith's ranch is nearly 200 feet higher than Madeline. He raises 50 bushels of barley to the acre and an average of three tons of potatoes to the acre.

Mendocino.

EDITORS PRESS:—Everything is growing nicely here in our valley, but the hops are catching it this spring; farmers are plowing up a great many, as they have not paid the past few years.... I wrote you some months ago that I did not believe there was any Government land in Mendocino county that a man could take up and make a good living on. I may have been a little mistaken in that, at least one would think so to look in our town paper and see how land is being taken up on timber claims; but a man cannot make a living on a timber claim, and those who have taken such claims have done so in order to sell them again. I still say, if there is any land to take up that a man could make a living on, I do not know where it is.... Our town and valley are improving very fast. We have quite a number of new houses to be put up as soon as they can get material to build with, and we have another great enterprise going on in the valley. There is a man here with a machine boring artesian wells. Mr. McClure has one only 134 feet deep. I am told it is nice and cold. I understand they are boring one for Mr. Howell. Now, if we get plenty of water in this valley, we can have one of the best in the State in proportion to the size of it. It is true, we can raise good crops here without irrigation, but we cannot raise garden vegetables without water and we cannot raise alfalfa so well.... My time for the RURAL is nearly out, so I will send you the money in this. I don't want ever to miss a number.—J. F. TODD, Ukiah, March 19th.

STALLION EXHIBIT.—At the horse-show last Saturday afternoon, on the Ukiah Park Association grounds, there were a number of good stallions—Starlight and Revenue representing the Norman blood, and Copperhead, Tommy T., Mendocino Chief, Gen. McClellan and Sampson the trotting and running blood.

Modoc.

ARTESIAN WELLS.—Modoc Independent: On Friday of last week two six-horse teams from Cedarville passed through Alturas en route for Big valley after the well-boring machine which was recently purchased by a joint stock company in Surprise valley. Mr. Johnstone of Cedarville informs us that the company is composed of the solid men of Cedarville and vicinity, and among the stockholders are such men as Wm. Hudspeth, Jake Bitner, C. T. Sharp, Smalls Bros. and others, and it is the intention of the company to continue boring until the matter of obtaining artesian water in Surprise valley is fully determined. The machine which has been at work in Surprise valley was inadequate to the purpose, notwithstanding the fact that flowing water was obtained at a depth of 150 feet. The well referred to is on Smalls Bros.' ranch, half a mile east of Cedarville. It flows only a small stream, but it is the general belief that by going deeper a good supply of water can be obtained, hence the purchase of improved machinery.

Nevada.

O'BRIEN'S NEW DITCH.—Nevada City Transcript, March 22: James O'Brien was in town yesterday, ordering lumber for his new irrigating ditch between Dry creek and Bear river. Work on this system has been in progress for a year, and within the next 30 days it will be completed. It follows the line of the old Camp Far West mining ditch for some distance. The right begins on Wolf creek about six miles southwest of Grass Valley. The water is carried down the creek six miles, then taken by ditch and flume due west a distance of 20 miles, counting the bends and turns, through the magnificent six-mile belt of farming and fruit lands lying between Bear river and Dry creek. The lower end of the ditch is two miles north of McCourtney's crossing on Bear river.... Work on Mr. O'Brien's other irrigating ditch, leading into Yuba county, is progressing satisfactorily, and he will by next May have the water down to his ranch if no accident occurs.

Placer.

HORTICULTURAL ACTIVITY.—Newcastle News, March 21: A. T. Hatch, who has already 2000 acres of fruit trees in various tracts, Washington Porter, of the well-known firm of Porter Bros., and J. K. Armsby of Chicago, have each purchased large tracts between here and Rocklin from J. P. Whitney, and will put out 30 acres this spring in oranges exclusively. These orange groves are intended to be models, and will be put out under the personal supervision of Mr. Hatch.... Wm. Shillingsburg of Gold Hill has now between 40 and 50 acres in olive trees, and intends putting in many more. He has just constructed a large hothouse, where he is propagating thousands of plants. He has also put in a large area of strawberries, and in doing so has adopted the system of

under-drainage and sub-irrigation, as practiced with such satisfactory results in the State of New York.

IRRIGATION.—F. Birdsall, the proprietor of Placer county's already extensive irrigation system, will begin next week the construction of a canal at the head of Clover valley down Clover Valley Hill to Rocklin, and some distance below. Besides this, J. P. Whitney and P. W. Butler will commence building a reservoir for the storage of water, of 7,000,000 to 10,000,000 gallons capacity, on Douglass Hill, one mile east of Penryn and two miles west of Newcastle. Mr. Whitney is also engaged with teams and a force of 30 to 40 men in building a large water reservoir on his estate above his magnificent raisin vineyard which will have a capacity of 30,000,000 to 40,000,000 gallons.... The iron pipe to be used on the new branch of the Bear River ditch that is to carry water from Geo. Threlkel's down by the Sherman and Hector tracts, is arriving at Newcastle and is being hauled to the locality where needed. There will be 9000 feet of pipe used on this ditch. In a word, the foothills of Placer county are being fairly gridironed with irrigation ditches, so that in a very short time the whole arable area of our immense fruit district will be "under the ditch."

"PLACER CO. FRUIT ASSOCIATION" is a success so far as selling stock is concerned. Over \$15,000 worth of stock already taken, says the Herald, and more wanted.

San Diego.

EDITORS PRESS:—The weather now is all the farmer and fruit-raiser could wish, the late copious rains having insured one of the best crops of grain and fruit that San Diego has raised for many years. In this section we have had 14 inches of rain and in gentle showers—no hard wind either during the storm or since, and the absence of hot sun has left the water thus bountifully showered upon us to do its good work. The barley is a dark green, rank and tall; some of the earliest sown will go down if nothing unforeseen checks its rapid growth. A much larger acreage has been put in than last year; new farms are being opened on all sides; fruit trees and vines are being planted; settlers coming in and houses springing up in a day, where but a few suns ago the festive jackrabbit ruled the roost. One cannot help liking California now, especially San Diego county.—A. W. OSBURN, Sweetwater, March 21st.

San Luis Obispo.

ESTRELLA NOTES.—Cor. San Luis Obispo Tribune, March 23: Grass and grain grow very fast. Crops look very promising, fruit trees are all in full bloom and look beautiful.... There are quite a number of fine draft horses raised on the Plains. Among the number is Mr. Reynolds' strawberry roan, three years old this spring, weight 1400 pounds or more; F. M. Stovall's coal black, four years old, weight 1450; T. A. Rude's four year old, weight 1400, dark brown. These horses are all of good action and fine appearance.

OATS AND BARLEY.—Tribune: Levi Smith brought to our office this week from his ranch on the Osos, a bundle of barley four feet high and heading out splendidly which was sown 12 November. He brought in also samples of wild oats of about the same length.

Santa Clara.

FLORAL FAIR.—San Jose Times, March 25: The Ludica Conservatory of Music Association held a meeting yesterday to further the interests of the coming floral fair. Mrs. T. Kirk presided, with Miss Percy Harris, secretary. It was decided, if the condition of the flowers will permit, to give the fair the first week in May, possibly beginning on May Day. Among the ladies who have agreed to take special charge of a table and contribute some special floral designs were the following named: Mesdames Snow, McBride, Gay, Watkins, Abels, Ayer, Combs, Miles, Baker, Martin, Aram, Conant, Misses May Mabury, Heinlen, Nelson, Detreich, Gessie and Rosalie Younger, Iskip and others. For evergreen, Mrs. T. O. Smith and Miss Mattie Fowler were named, and Miss Farwell to represent Saratoga. It is the desire to have Santa Clara, Los Gatos, Gilroy and Mountain View also represented.

Solano.

WHITE LABORERS COME.—Vacaville Reporter, March 15: Monday there arrived here 26 men from Mercer, Penn., who come to secure work, principally in fruit orchards, and we are glad to say that all of them have secured good places. The party is composed of young men well dressed, well behaved, well recommended—a sterling lot of fellows, sober and upright, and we hope they will become part and parcel of our permanent population. There are others where they came from, ready to follow in their footsteps, if, after spying out the land, they think it advisable to say "come." D. B. Derby has been indefatigable in the work of getting these men here, and deserves great praise for it.

Sonoma.

ENGLISH SPARROWS COMPLAINED OF.—Petrolina Courier: A gentleman living near this city says the English sparrows are destroying all the buds and flowers on his plum trees. He has watched them, and they don't appear to eat the flower or buds, but cut and pick them off either for the pleasure of seeing them fall to the ground or for "pure cussedness." Last year these pests destroyed all his plums while in flower, and they are doing the same this

season. They have multiplied so rapidly that he thinks there are at least 1000 getting their living around his house and barn. Only a few years since there were but 16 English sparrows in this city. The writer and others encountered them frequently. Now it is believed that a million would not be near the mark. They are everywhere and are doing much damage; they are quarrelsome little rascals and will not live in peace with any other species of the feathered family. They promise in the near future to be a curse to this country, and every means possible should be used for their extermination.

STOCK AND DAIRY.—Santa Rosa Democrat, March 24: The stock outlook in the western part of the county, according to many and confirmatory reports, is not as propitious as could be wished for. The recent heavy rain and hard storm resulted in considerable damage, both to feed and to newly plowed hillside soil, the latter being washed by the ton down into the valleys and ravines. The growth of the feed was greatly retarded, and at the utmost, there only being about seven weeks more of feed growing weather, the outlook for stock-raisers and dairymen is not altogether encouraging. One of the leading dairymen of the county said the other day that from the milk of 68 cows he was manufacturing only three boxes, or about 300 pounds of butter a week. From that number of cows he has generally averaged a little over 600 pounds per week. His neighbor, he states, is milking 125 cows and makes less than five boxes a week. The past year has been unfavorable for stock-raisers, and the profits derived from the business were not such as to greatly enrich those engaged therein. Feed has been scarce and many valuable cattle have died. It has not been a losing game, however, is asserted by some who are in a position to know that the high prices of dairy products have been sufficiently compensatory.

Stanislaus.

CROP OUTLOOK.—Modesto News, March 23: Reliable reports from all parts of the county state that the crop prospects, except in light, sandy places, where the grain has blown out, are excellent. The sandy section between the Tuolumne and the San Joaquin rivers, west of the railroad track, is the worst sufferer.

Sutter.

GRAIN PROMISING.—Farmer, March 23: Senator A. L. Chandler of South Sutter was in town last Tuesday and graced our sanctum with his presence. He reports crop prospects very good in his section and on the way hither. Wheat on fallow is large and thrifty everywhere, and later sown, though backward, is looking well and giving promise for a good yield.

SUTTER HORTICULTURAL SOCIETY.—Appeal, March 23: The attendance at the meeting of the Horticultural Society yesterday was not large, but the meeting was enthusiastic, and much valuable information on fruit culture was disseminated. Several new names have been added to the roll. The society decided to petition the State Board of Horticulture to hold their fall meeting and Fruit-Growers' Convention at Marysville. The discussion was confined to pruning the grapevine, and was participated in by all the members present.

Tulare.

RABBIT DRIVES.—Visalia Times, March 22: In the rabbit-drive south of the Bliss lane on Sunday last, 1893 rabbits were corralled. More than 1000, it is estimated, were killed before reaching the corral. Three hundred people were present. The drive at the Eaton ranch, under the management of Richard Chatten and others, was attended by from 1500 to 2000 men, women and children. For days previous to the drive every available team in this city had been engaged for the occasion. The drive was not so successful as was expected, only 1047 rabbits being corralled, though it is estimated that 400 or 500 were killed before reaching the corral.... A drive is announced for Sunday next at the Cottonwoods, 2½ miles west of the ranch of D. V. Robinson.

TWO MILES OF WHEAT.—A beautiful sight in the vicinity of Goshen, these days, is the 1200-acre wheat-field of S. Z. Curtis, which attracts the attention of all passers-by. The grain is about 12 inches high and its dark green color is evidence of its thrifty condition. The Times remembers when all that country was considered a worthless alkali tract; but the enterprise of Mr. Curtis has demonstrated that as a grain-producing section it cannot be excelled. He purchased the land in 1878, the consideration being \$10 an acre. He farmed it that season, and after paying for the land out of the proceeds of the crop had \$5000 and enough seed wheat for two seasons left.

Yuba.

MARYSVILLE DOTS.—Appeal, March 24: Several wagon-loads of willow four-foot wood are daily hauled into town from the bottom lands south of the city.... William Klein is setting out a few orange trees around his property on F street, between Fourth and Fifth.... The 20-acre orchard in the Bance tract, set out by Messrs. Cutts, Terstegge, Swain and Elder, in peach, almond and cherry trees, gives promise of a rapid growth. The ground and the young trees are receiving the best of attention.... Coyote scalps are received every few days at the court-house, and the demand made on the treasurer for the reward. Some foothill men seem to have gone into coyote killing as a business.

ALILA!

The Arcadia

—OF THE—

SAN JOAQUIN VALLEY!

THERE DOES NOT EXIST IN THIS VAST extent of country a section so manifestly destined for the site of

A PROSPEROUS TOWN,

Supported by the demands of a rapidly and steadily increasing population, as Alila, THE ENCOURAGING NUCLEUS is already there, for Alila now possesses a well-conducted and

LIBERALLY FURNISHED HOTEL,

Several well appointed stores, and, in addition to these, that most important feature and best evidence of progress, a

Handsome and Spacious Schoolhouse,

Which stands nearly, if not precisely, in the center of the town-site. Alila is envied by

A MOST FERTILE COUNTRY,

A soil of surpassing richness, with the capacity of sustaining, in comfort and prosperity,

Thousands of Industrious Settlers.

The resources of this land are illimitable. At this season, in the surroundings of Alila, the plow is busy in every direction.

MILES OF GRAIN,

Soon to wave in luxuriant beauty above the sod now decked with wild flowers, will be a most substantial ornament to

ITS BROAD ACRES.

This scene of agricultural activity and brisk and intelligent cultivation is

A GRAND ASSURANCE

Of what the future must bring forth. The Southern Pacific Railroad

PASSES THROUGH ALILA,

And the stations and sidings there are about the best on the line.

ALILA

Is in Tulare County, 22 miles south of the city of Tulare, on the main line of the Southern Pacific Railroad.

Bovee, Toy & Co.,

19 MONTGOMERY ST.,

Are now offering a limited number of lots at private sale in ALILA, and intending purchasers should not delay in making their selections, as a

SERIES OF IMPROVEMENTS

Have already been inaugurated, consisting of grading streets, planting them with shade trees, increasing the irrigating facilities, and shipping material for the

ERECTION OF BRICK STORES

Upon the main street of Alila. This is a

Superb Opportunity for Investment,

Because the time is close at hand when

Wave after Wave of Eastern Immigration

Will fill up the great San Joaquin Valley, and every dollar placed in real property there will yield a four-fold return.

There are a few facts in connection with this property to which we desire to call particular attention:

First, the extreme richness of the soil has attracted a superior class of population, who are farming the land in an intelligent and progressive manner.

Every section in the vicinity of Alila and for miles around contains from two to four houses, presenting a prosperous and comparatively well-settled country, owing to the fact that the land is held in small holdings, and not in those immense tracts of single ownership which characterize other portions of the valley.

There is no other locality so well adapted for successful fruit and raisin culture.

Again, Alila lies in the direct line of Walker's Pass, the lowest point in the Sierras through which other overland roads coming into the valley will in all probability lead.

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EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land? DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost? DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10 acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

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There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

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Special Fertilizers for all Crops.

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Supplies A Want never before SUCCESSFULLY met by invention. The calf SUCKS its food SLOWLY, in a natural way, thriving as well as when fed on its mother. Now used in every State and Territory in the Union. Worth many times its cost. Satisfaction guaranteed or money refunded. Try it.

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GREAT ARTESIAN BELT, KERN COUNTY.

This tract comprises 2640 acres, all level land and ready for the plow.

In this colony is the

Greatest Artesian Well in the World,

And a perpetual water-right goes with the land bought. Tracts of 20 acres will be sold for \$500—only one-third cash; balance, one-third in two years, and one-third in three years, with ordinary interest.

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THE VETERINARIAN.

Black-Leg.

A reader of the RURAL writes asking that information concerning black-leg and the treatment for it be given in our columns. We have previously stated the general belief concerning the cause of the disease and remedies for it, but in case a restatement may be of use to some, we repeat that black-leg or black-quarter is often the result of a sudden transition from a poor to a rich food. In the cases of calves, for instance, if the owner will provide oilcake meal, and administer it from the earliest period that they begin to feed, and thus keep them always in condition, there will generally be no black-quarter. If this cannot be provided, niter will act as a preventive; one drachm or two-drachm doses may be given, according to the age of the animal. Again, hyposulphite of soda may be used with advantage. But the great thing used in a hot climate is salicylic acid, 20 grains daily, given either in the food or dissolved in the water. Another remedy which is extremely useful is the seton. This plethoric condition is due to the fact that the blood is rich in nutritive constituents, and if a seton is put in the dewlap there will be a discharge of matter. That discharge of matter lessens the nutritive condition of the blood, which produces plethoria, and therefore prevents black-quarter and splenic apoplexy. When the tape is passed by means of a packing-needle through the dewlap, the custom is to tie the ends together and move it occasionally. It is better to tie knots in both ends and avoid the risk of a ring of string, which might catch and be torn out.

The same theory of the disease, but a different remedy, is given in the following letter on the subject from S. Woodrum, Jr., a stock-raiser of Wilkins county, Minnesota, in a work on "Contagious Diseases in Domesticated Animals," lately issued by the Department of Agriculture at Washington. "The cause of this disease, I am convinced by experience and observation, is overfeeding. For instance, cows that were milked all winter, and were fed eight quarts per day of cornmeal, linseed meal, oatmeal and wheat bran, went through the winter without getting sick, but cows that came to the barn fat and dry, and were not fed anything but hay until after dropping their calf, when they were put on the same feed as those who were milked all winter, were taken sick in every instance. Again, cows that came to the barn fat and dry, and received a daily ration of feed of the same quality as the other cows, but after dropping, and then increased in quantity to the same amount as the others, got through without being sick. My experience has been about the same with calves as it has been with cows. A calf that has been allowed to run with its dam all summer, being very fat, was turned into a field where grain had been harvested, and a very luxuriant growth of grain had sprung up, and it was soon taken sick. When Dr. Hearn of the Signal Service was here, some seven or eight years ago, I described the post-mortem appearance of an animal that had died of black-leg. He advised me to try drenching with strong salt brine, and I am happy to say that I accepted his advice, and have not since lost a cow or a calf. Put one-half pint of salt into a quart-bottle, fill with water, shake well and give about half as the first dose; in about an hour give the remainder, and one hour later repeat. The following day the operation should be repeated. I have used this remedy in the case of sick horses with satisfactory results."

The report of the Bureau of Animal Industry for 1884 also contains the following in the report of J. H. Fullinwider of Arkansas, one of the Inspectors of the Bureau:

It is quite astonishing to observe the general extent of this disease among the young cattle of the Northern United States. Reports from all the States and Territories have not been received, but Minnesota, Montana, Kansas, Nebraska, Idaho and Dakota have all reported it as existing among the young cattle of their respective localities. All concur in the statement that the loss upon individual owners is small, and yet when the general prevalence of this disease is taken into consideration, the total is no small matter. It attacks young cattle almost exclusively, and frequently has advanced so far before its presence is discovered as to be beyond successful treatment. It is claimed by a large number of our correspondents that by giving plenty of salt, saltpeter and sulphur to animals suffering with black-leg, from 25 to 30 per cent can be saved. Among the remedies used for the treatment of this disease, the use of salt, saltpeter and copperas has been found beneficial, as has also a mixture of salt and air-slacked lime. Others recommend salt and saltpeter without either sulphur or copperas. A mixture of pitch-tar and lard will be found beneficial in many cases. Roweling is a method resorted to by many, and the vaccination of young stock is followed to some extent. I think I am justified in saying that the timely use of salt, saltpeter and sulphur is the most effectual mode of treating this disease at present known to our stockmen.

ANTI-TOBACCO.—The Santa Cruz city council has just passed an ordinance prohibiting the use of tobacco in any form by any person under 18 years of age. The penalty is a fine not exceeding \$50 or 20 days in jail.

"Bamboo" or Arundinaceæ Fence-Making.

EDITORS PRESS:—The fences of the United States are valued at \$4,500,000,000, a sum greater than the cost of all the buildings in all of the towns and cities. A good fence is a permanent improvement. The question is, which is the cheapest and best fence? Farmers are beginning to learn that to build the ordinary rail or plank fence requires ten-fold as much material as is required to build the woven wire picket fence, which is equally serviceable, durable, and far more ornamental than any other practicable farm fence; it is not dangerous like barb wire. Many an animal has been injured with the barb-wire fence that with the wire-picket fence would have been uninjured. And here I must tell a little story: A friend of



ARUNDINACEÆ FOR FENCING.

mine engaged in stock-raising, who reads the RURAL PRESS, bought two of the machines advertised in its columns, and procured a carload of laths and set about fencing his place according to the latest improved methods. As the beautiful lines of fence were extended 40 rods or more per day by each machine, run by two men, costing less than half what any other good fence would cost, he was, indeed, proud, as well he might be. But his joy was of short duration. His stock left all other kinds of feed and gave their whole time to eating up the laths composing the fence. He looked at them

the eating up of the lath fence above narrated. I send you an average sized cane for inspection of callers who read the RURAL
Sanders, Cal. W. A. SANDERS.

Watermelons.

The subject of varieties of watermelons best suited to this coast should be discussed by our growers. Novelties are frequently brought out in this as in other fruits, and they are sometimes good, sometimes not. We give on this



MAMMOTH IRONCLAD WATERMELON.

more in astonishment than anger. Finally he got off of his horse and thought he, too, would try the edible qualities of one of his laths. It was of a delicious saltiness. The explanation was simple: The laths were made from logs that were rafted in the salt water of Puget sound, and had become saturated with salt. Whether by giving his stock an extra amount of salt he can save the balance of his fence or not, remains to be seen. Had he used (instead of laths) pickets made from arundinaceæ canes, as shown in the picture, he would have escaped losing his fence, and the scarcely less annoyance of having his fence imperfect from knotty or cross-grained laths. I claim that this is the only plant of the bamboo, or of any allied species, that has proven of any value in California. The canes grow in dense forests to the height of 30 feet, with the diameter of from three-fourths of an inch to two inches, and are coated with such a hard coating of silic that not even a jack-rabbit will attempt to gnaw them. I estimate that an acre will produce enough four-foot pickets yearly to make six miles of fence. The fence is as easily made as

page an engraving of the Mammoth Ironclad watermelon introduced in 1884 by W. Atlee Burpee, the well-known seedsman of Philadelphia. In 1885 it won their prize for the largest melon, with a specimen weighing 110 pounds 7 ounces, grown in Georgia. It has no doubt been tried before this in California, and we would like to hear the decision of growers upon it.

DECAY IN TEETH.—Russian observations have shown that teeth decay in a quite regular order, the lower third molar being the first attacked, then the upper, then the lower fourth molar, and so on, the lower incisors and canine teeth being the last affected. Upper teeth as a rule are more durable than lower, right than left, those of dark persons than those of blondes, those of short persons than those of tall.

"STRAP" OR BELT.—In the nomenclature of mechanics nothing strikes an American mechanic as being more odd than the English use of the word "strap" for what we call a belt.

AGRICULTURAL SCIENCE.

The Amador Experiment Station.

As our readers in different parts of the State are considering the establishment of Experiment Stations to be carried on by the College of Agriculture of the University of California, no doubt the following account of what the people of Amador are doing in providing for this work will be of interest. We condense the facts from the Jackson Sentinel of March 21:

On last Friday E. W. Hilgard, Professor of Agriculture of the University of California, came up to Jackson in company with Senator Caminetti and remained until Monday morning. Sunday night he stated that the Board of Regents had definitely decided to accept the offer of Jackson and had located the Agricultural Experimental Station four miles east of town on what is known as the Harwood place, now owned by Senator Boggs of Colusa county, taking in, however, small pieces of land belonging to D. McKay and G. Oneta, the donation of all of which has been promised. Jackson's offer is as follows: To donate the required amount of land (20 acres or more) to fence, clear and plow it, provide water, erect the necessary buildings and to turn over the station completely equipped to the University. The land selected contains three distinct soils—the slate, granite and gravel—thus making it representative of the foothill section extending from Fresno to Tehama. The Amador Canal Co. has guaranteed free water, and as the land lies above the canal it will be necessary to put in a wheel for the purpose of furnishing power to raise the water into a storage reservoir. The elevation of the station will be about 1900 feet, and from the observatory which will be placed on top of the building the entire valley portion of the State can be seen, which fact is of importance, as the station will also be a U. S. Signal Service one. This land is absolutely free from local weather

influences, having no contiguous gulches or canyons through which a cold blast could come shivering down the backs of the tender nurslings. These facts induced the choice of this location in preference to a large number of others that were offered.

The desirability of the selection of Amador county cannot be questioned. It is centrally located so far as the section it is taken as representative of is concerned, is easy of access, and what it has already produced shows the great possibilities of the future. Prof. Hilgard was enthusiastic in praise of our wines and dried fruits, and by way of parenthesis, his judgment is that our land is best suited for grapes that will make port and sherry wines. He could hardly believe that our native wines were not fortified.

The prime mover in the effort to secure for our county this desirable adjunct to its prosperity is Senator Caminetti, and it is not at all probable without his energetic and persistent pushing of our interests in this regard that success could have been achieved. He is therefore entitled to the earnest thanks of the people of the county.

At one time it was feared that the distance of a few miles from a railroad would have interfered, but this objection was not raised at the Board. Had it been, however, Regent Crocker had promised that he "would settle that objection," and in conversation that gentleman remarked that this agricultural station business would prove a most important aid to secure the extension of the railroad from Ione.

The work of preparing the ground will be commenced at once, and a number of vines and cuttings are already here, which have been put in the nursery at the French gardens.

"EVERYTHING FOR THE GARDEN."—Peter Henderson & Co. of 35 Cortlandt street, New York, have sent us their manual for 1888, which is quite a remarkable pamphlet in its line. It contains 140 quarto pages, profusely illustrated, describing the vegetables, grasses, flowers, etc., whose tested seeds they have to sell, plants, books and implements, and brilliant full-page chromos of their "Green & Gold" watermelon, "Mammoth" verbena, "Zebra" zinnias and "Imperial" chrysanthemums. The covers, too, are handsomely pictured. As the catalogue is costly to the publishers, persons sending for it must inclose 25 cents—unless they are customers.

SHEEP LICENSE IN PLUMAS.—The supervisors of Plumas county on the 8th instant passed an ordinance fixing a license tax on sheep kept or pastured in the county, similar in its provisions to that recently adopted in Lassen county (of which the substance was given in the RURAL PRESS of March 10th, page 202), except that the rates are generally 150 per cent higher—\$250, for instance, being the amount of the license tax on the first 5000 sheep, and \$50 for each additional thousand—and that no license is issued for less than \$12 50 per annum.

NEGRO LABORERS are none too plenty in South Carolina, and agents who would induce them to leave that State for California have met with opposition on the part of the planters,

HORTICULTURE.

What to Plant.

Following is the essay by J. J. Pratt, superintendent of the cannery, read at the meeting of the Sutter County Horticultural Society, March 14th:

This, Mr. President, is a subject that is foremost in the mind of the writer at all times. Our people are planting trees for the gain therefrom, and not merely to ornament their places and enable them to sell out to boomers. We are here to stay, and wish to reap the fruit from the trees we plant. Then what shall the harvest be? According to the kind planted, so shall be the fruit thereof. If we plant Early Crawford we must expect to gather Early Crawford, and if buyers do not want Early Crawford, we might as well cultivate willows or some ornamental trees.

Mr. President, I do not presume by my own individuality that I am to say what to plant to a class of people who have spent years in the study of horticulture, and most of whom are now constant students of the subject; but it is from the fact that for the past four years the writer has been at that end of the fruit business where the final results are obtained. Have marked the principal varieties of stone fruits in most of the large cities of the United States, and have heard the results both pro and con, and if what has been learned is of value to any one the writer is glad to impart it.

The staple varieties of fruit are four in number: Peaches, pears, apricots and plums. Other varieties, such as cherries, nectarines, etc., and all small fruits have only a limited demand, and that particularly in home markets. Of the staple varieties four years ago the demand for apricots was estimated as seven times greater than that for peaches, then the next in demand; but each succeeding year has brought the demand for California peaches nearer that of apricots, not that the call for apricots is getting less, but that the peach is growing in favor each year, and this season that splendid fruit not only gained the front rank, but passed the demand for apricots.

The peach seems to be the one particularly adapted to our locality. The writer has made repeated tests and examinations of the canned fruits of other parts of the State, and finds that while we are able to produce a No. 1 article of pears, apricots and plums, there are other sections that produce equally good. In Alameda county the Moorpark apricot matures to perfection, but it is fully a month later in ripening than it is in our locality, which brings it in with peaches and pears, and makes them difficult to handle. But we have a specialty—one that we can and do excel in. Nowhere in the world can the peach be grown to such perfection as here. Why, in talking to men interested in canning fruit, and telling them of the Sutter Canning Co. having one, two or three thousand cases or more of just such fruit as they had sampled, they seemed to disbelieve it and would possibly remark that a cannery might assort out a few hundred cases in a season's run, but when it comes to thousands of cases they could not see how they could all be so nice. And when such buyers would buy a quantity of our peaches they would not expect to get fruit equal to the samples. And on arrival of the shipment they would likely select a bottom box and take the last can in the case, and on opening find it the same as the sample. These results have not only given dealers in canned fruit confidence in the products of the Sutter Canning & Packing Company, especially these peaches, but it has attracted the attention of our competitors, even to the extent that the most noted canneries in the State for extra fruit—J. M. Dawson Packing Co. and the Golden Gate of San Jose—have come to our locality to build a cannery and pack their extras. While we will perhaps not lose much by these people labeling their fruit San Jose, Santa Clara county will gain a great deal which naturally belongs to us. The above facts are conclusive, to my mind, that we have the best section in the State for fruit and a specialty in the peach.

Now the question is, what is the best peach to plant? First, peaches are divided into four general classes: White Free, White Cling, Yellow Free and Yellow Cling. The White Free is of no account for any purpose. Some of the White Cling, especially the White Heath, are very nice, and a good many fruit-growers are planting them, but they make a mistake, for white peaches are very hard to sell. Yellow peaches, that are not half so large and fine, outsell them two to one. The Yellow Free has always been considered the best until canners overcome the difficulty of handling the cling. There is quite a list of yellow freestone peaches, each having some particular advantage over another. To speak of them separately would consume more time than is possible to spare at present. The Muir seems to have more excellences combined than any other freestone, but even that could not be distinguished by an untrained eye from some other leading varieties when canned, such as the Foster, Susquehanna, Picquet's Late, etc. But of all peaches, and of all fruits, there is nothing to equal the Yellow Cling. It sells on the market where nothing else will, and always brings the best price; will bear more handling and will stand longer when ripe. When they are canned they retain their shape

and color. The syrup always looks clear. In fact, they possess all the excellences, and it seems strange that planters will continue to plant freestones. Of the Yellow Cling there are also many excellent varieties, each having some peculiarity that makes it better than any other. Under this head come the Tuscan, the Orange (several kinds), Crawford Cling, Lemon Cling (the large kind, the regular Lemon Cling being too small), the California Cling and others.

How to Eat an Orange.

J. D. Mitchell, in a late number of the *Florida Dispatch*, gives his views on the proper way to eat an orange. In the first place, he thinks, the peel should never be removed. "Why did the Creator take the trouble to place in the rind of the orange that exquisitely pungent oil that is by odds the most emphatic flavor—the accent, as it were—of this peculiar fruit, if it was His intention to have it peeled off and thrown away?" His simple process is as follows: Cut the orange into eighths, longitudinally. Take the ends of a section between the thumb and forefinger of each hand, pulp side toward you; then with teeth and lips go for the juice with such skill and dispatch as you can muster for the contest. You cannot get the juice of the pulp without getting also just enough of that of the rind to give you revised and enlarged views of the Divine conception when the orange was created.

And now I suppose I may as well die for a full grown sheep as a lamb; so in spite of the *anathema maranatha* that I know I shall deserve (and get), I am going to confess that if there is one thing more than another that I love and cherish, it is to "suck an orange." But then to be "too glorious for anything" it must be gone at right end foremost. With a long, narrow knife-blade cut a core exactly three-eighths of an inch in diameter from the blossom end, deep enough to cut all the partitions without making a hole in the stem end. Subsequent proceedings I leave to your imagination. No further instruction is needed by the dullest pupil. The conclusion of the whole matter is, that without the flavor of the oil in the rind the essential glory of this incomparable fruit is altogether missed.

PERSONAL.—We are pleased to see the announcement that H. G. Tinsley has purchased a half interest in the *Pomona Progress*, published in Pomona, Los Angeles county, and will have general editorial charge of the paper. We have known Mr. Tinsley for years and knew of his work in our old home in Western New York, where he was connected with the *Lyons Republican*, which was considered to be one of the best local papers in the Empire State. We expect that Mr. Tinsley's work will prove very acceptable to the thriving and prosperous community in which he casts his lot.

"Nasal Voices, Catarrh and False Teeth."

A prominent English woman says the American women all have high, shrill, nasal voices and false teeth.

Americans don't like the constant twitting they get about this nasal twang, and yet it is a fact caused by our dry stimulating atmosphere, and the universal presence of catarrhal difficulties.

But why should so many of our women have false teeth?

That is more of a poser to the English. It is quite impossible to account for it except on the theory of deranged stomach action, caused by imprudence in eating and by want of regular exercise. Both conditions are unnatural.

Catarrh troubles everywhere prevail and end in cough and consumption, which are promoted by mal-nutrition induced by deranged stomach action. The condition is a modern one, one unknown to our ancestors who prevented the catarrh, cold, cough and consumption by abundant and regular use of what is now known as Warner's Log Cabin Cough and Consumption Remedy and Log Cabin Sarsaparilla, two old-fashioned standard remedies handed down from our ancestors, and now exclusively put forth under the strongest guarantees of purity and efficacy by the world-famed makers of Warner's safe cure. These two remedies plentifully used as the spring and summer seasons advance give a positive assurance of freedom, both from catarrh and those dreadful and neglected, inevitable consequences, pneumonia, lung troubles and consumption, which so generally and fatally prevail among our people.

Comrade Eli Fisher, of Salem, Henry Co., Iowa, served four years in the late war and contracted a disease called consumption by the doctors. He had frequent hemorrhages. After using Warner's Log Cabin Cough and Consumption Remedy, he says, under date of Jan. 19th, 1888: "I do not bleed at the lungs any more, my cough does not bother me, and I do not have any more smothering spells." Warner's Log Cabin Rose Cream cured his wife of catarrh, and she is "sound and well."

Of course we do not like to have our women called nose talkers and false teeth owners, but these conditions can be readily overcome in the manner indicated.

We have on our tables several numbers of the *PACIFIC RURAL PRESS*, published at San Francisco, California, containing interesting contributions from the ready pen of E. H. Schaffle, who years ago had charge of the extensive drug store of W. R. Kutzner & Co., in this place. For a number of years he has been engaged in horticulture at Murphys, Calaveras Co., Cal., but for the past several months has been traveling extensively throughout his adopted State, and, with eyes wide open, a ready pen and a loving interest in the development of the State, he has compressed much of interest in his short articles which are crowded with facts.—*Shamokin, Pa., Herald.*

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IMPROVED Butter Color.

EXCELS IN STRENGTH PURITY BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color. Three sizes, 25c, 50c, \$1.00. For sale everywhere. WELLS, RICHARDSON & CO. Burlington, Vt.

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BLACK DIAMOND BRAND PREPARED ROOFING CHEAPEST & BEST ROOF YOU CAN PUT IT ON YOURSELF. FIRE AND WATER PROOF FOR ANY ROOF AND ANY CLIMATE.

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R. Hall's Pulmonary Balsam

A superior remedy for Coughs, Colds, Incipient Consumption and all Throat and Lung Troubles. Sold by all Druggists for 50 cents. J. R. GATES & CO., Proprietors, 417 Sansome St., San Francisco.



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Good Old Songs we used to Sing, \$1—the favorite songs of a half century.

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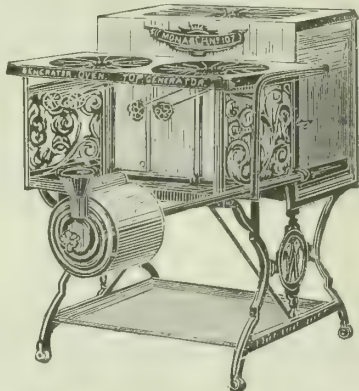
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Any book mailed for retail price.

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ARE THE BEST.

Gasoline Stoves, \$5 to \$35. Gas Stoves, 75 cents to \$35. Oil Stoves, 75 cents to \$30.

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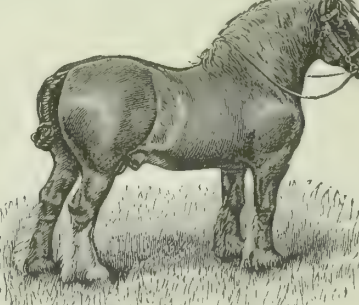
\$16. No. 7, \$20. Pacific No. 6, \$18. No. 7, \$25.

Lamps, 20c. to \$10. Hanging Lamps, \$2 to \$20.

Agate Ware, Tin Ware, and Kitchen Ware at low prices.

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And their grades. Young stock for sale on reasonable terms. Call on or address,

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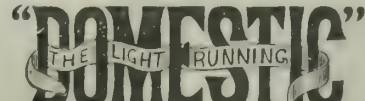
Building Roads, Making Ditches, Levees, Etc.

Is strong and durable, of light draft and of great strength. Just the thing for farmers in opening ditches through their grain fields. Sold by

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IT STANDS AT THE HEAD!



DO NOT FAIL to SEE THE "DOMESTIC"

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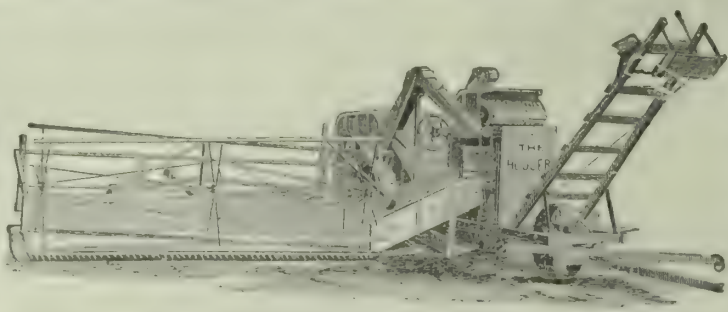
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Received First Premium, State Fair, September 24, 1887.

400 IN FIELD USE.



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No Failures. None Ever Returned. Beware of Experiments.

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They Have a Larger Sale than all Other Harvesters Combined.

THE SMALL HOUSER

Is adapted for Small Farms—few animals; rolling or foothill land. In weight, one-half of the Large Houser. Both the Large and Small Houser have our

Improved Double Shoe Cleaner,

Which received the Premium over all competitors at both State and County Fairs and Field Contests in 1887.

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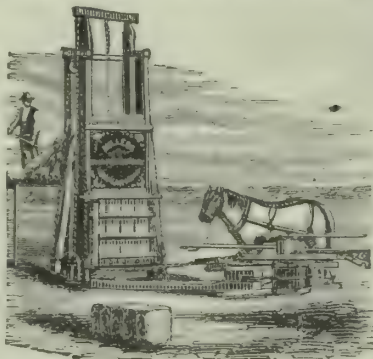
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Or with Unskilled Labor from

16 TO 20 TONS.

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B. & M. STOCKTON, CAL.

PARSONS' FRUIT EVAPORATOR.

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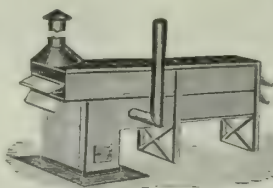
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ENTIRELY NEW.



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FUN CARDS. Set of scrap pictures, one checker board, and large sample book of hidden name cards and agents' outfit. All only 2c. CAPITAL CARD Co., Columbus, Ohio.



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FOR MAN OR BEAST.
P.O.T. REG.
THE H. H. H. Horse Liniment puts new life into the Antiquated Horse! For the last 14 years the H. H. H. Horse Liniment has been the leading remedy among Farmers and Stockmen for the cure of Sprains, Bruises, Stiff Joints, Spavins, Windgalls, Sore Shoulders, etc., and for Family Use is without an equal for Rheumatism, Neuralgia, Aches, Pains, Bruises, Cuts and Sprains of all characters. The H. H. H. Liniment has many imitations, and we caution the Public to see that the Trade Mark "H. H. H." is on every Bottle before purchasing. For sale everywhere for 50 cents and \$1.00 per Bottle.

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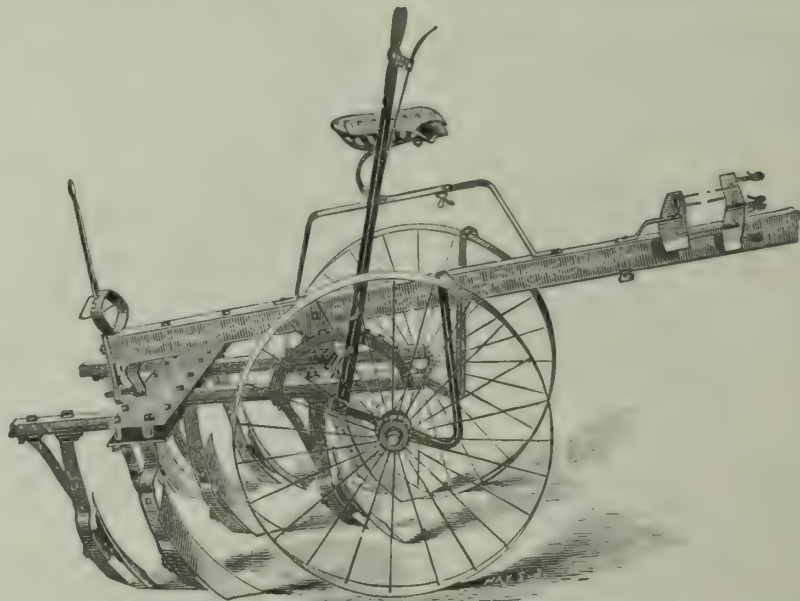
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THE SAN JOSE Orchard & Vineyard Cultivator.



The most complete and the easiest handled machine in existence. Made entirely of Iron and Steel, with the exception of the poles. Weight, 335 pounds. This is the only machine that can be handled on the sidehill. By means of the shifting pole and the adjustable teeth the machine works to perfection. These can be used to advantage on level ground also and the machine made to work fully a foot and one half nearer the trees.

All our machines are 7-tooth, 4-foot cut, but can be increased to 9-tooth, 5-foot cut by the addition of two extra arms, secured in a grooved casting, in the ends of the frame, by means of a set screw. This is an improvement not to be found in any other Cultivator, and Farmers having both Orchard and Vineyard will readily see its value, for when cultivating in the Vineyard the 7-tooth is as large as can be used, and when cultivating in the Orchard, by the addition of the two extra arms, the machine is increased to 9-tooth and an extra foot of work accomplished with the same amount of team and without undue strain or exertion.

On the 7-tooth machine the outside teeth extend 8 inches outside the wheels, and on the 9-tooth 16 inches. These Cultivators are perfectly balanced by means of a lifting seat.

All our Cultivators have the PATENT STEEL SHOVEL BACK. This is one of the greatest improvements on cultivating tools ever introduced. The Shovel Back Sleeve is fastened to the Standard by a bolt in the lower hole, while in the upper hole we use a hard wood pin, which in case the Shovels catch a root or strike an obstruction, it breaks off and lets the Shovel fly back, so as to pass over. Nothing is broken but the wooden pin, which can be replaced in a minute's time.

We have Agents for these machines in nearly every town in the Fruit-growing districts of the State. Every machine guaranteed to give satisfaction. Write to us for circulars and we will refer you to our nearest Agent.

Address:

SAN JOSE AGRICULTURAL WORKS.
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NURSERY FOREMAN WANTED.

Must have a knowledge of the general nursery business. State terms and references. Write to

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GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, H. MEYRICK, Box 5, Santa Cruz, Cal.

Bidwell's Peaches.

On our first page may be seen engravings of two Florida peaches and allusions thereto. The following are the descriptions as given by the *Florida Dispatch*:

Bidwell's Early.—General appearance good, size medium, skin smooth, shape round, slightly oblong, with moderate suture and short, recurved point; color pale yellow washed with carmine, deepest round the stem; half cling, with small, short, thick seed, having a sharp, slightly curved point; flesh white, fine grain, melting and juicy; sweet, sprightly, with a slight noyau or bitter almond flavor; quality good. The flavor suggests the parent *peen-to*. It is a sweeter peach than the latter, and, although it has marked almond flavor, it is an agreeable noyau rather than the objectionable bitter so often present in the *peen-to*, until it reaches the point of perfect ripeness.

The two original trees, for there are two Bidwell's Early trees among the nine seedlings identical in every respect, are now but little over five years old; they measure five inches in diameter, are 13 feet high, with spread of about 15 feet. The trees each held at least four bushels of fruit this season. The first ripe Bidwell's Early were gathered on May 7th, the same day the first *peen-to* ripened in the adjoining orchard. On the 25th all the Bidwell's were ready for market. The young orchard of this variety, planted the spring of 1886, bore a few peaches last year.

Bidwell's Late.—One tree. At the time the foregoing descriptions were made (May 25th), the largest specimens of this variety were about half grown. It ripened its first peaches last year, July 5th, and is said to resemble the Bidwell's Early in everything save that it is not as highly colored. This tree has a different habit of growth from the Early, being an upright compact grower with round symmetrical head, quite different from the usual straggling habit of the peach.

In addition to the foregoing Mr. Mott states that a peculiarity of the peach is that it hangs a long time on the tree so that its season of gathering may be prolonged to twice that of ordinary peaches, and is a remarkably good shipper.

A SERIOUS LOSS.—We saw a sad sight last Saturday at the ranch of E. R. Thurber, one of the oldest and most highly esteemed fruit-growers in Pleasant's valley, Solano county. About nine o'clock the previous evening his large barn was seen to be ablaze, and before help could reach the doors all his horses were beyond escape. Nine horses, a large amount of barley and hay, valuable implements and most of the accumulation of years in the way of tools and appliances, were burned up. The real loss is large and the depression from such a catastrophe greater still. The neighbors showed their sympathy for Mr. Thurber and his family by their neighborly words and services, and we trust time will quickly wear away the sharpness of the experience.

FIVE YEARS AT ONTARIO.—The people of Ontario, San Bernardino county, have just had a grand celebration of the fifth anniversary of the inception of the colony enterprise and the founding of the College of Agriculture at that place. The growth of Ontario is another proof of the wisdom and success of the colony plan in the development of California. It was started with great promises and prophecies, but the verdict of the celebrants is that the realization in improvement and success is far greater than was foretold when the enterprise began. We are always glad to see enterprising efforts like that at Ontario succeed.

FREE TRADE IN WOOL.—A California wool-grower has said through the public press that he wants free trade in wool because wool brought a higher price in 1859 than it does now, whereupon a contemporary calls his attention to a recent publication of the Bureau of Statistics containing tables of prices for the period of 1855 up to 1886, where he will find that the prices of 1859 average fully 15 per cent higher all round than they do to-day. If the people who advocate free trade would throw away their free-trade primers and consult reliable statistics they will find that their leaders are demagogues of the first water, who pay no attention to facts.

A NEW ORANGE.—"Mediterranean Ruby" is the name given a variety of Florida orange, of which the *Riverside Press* has lately received specimens. They are spoken of as very fine in texture, juicy, and well flavored, with a thin rind. The variety is not a common one in Florida, and has not, to our knowledge, been seen before in California. Mr. Holt considers it very promising and purposes trying it to a small extent.

COLUSA HORTICULTURISTS.—At a meeting of the Colusa County Horticulturists, a committee composed of L. F. Moulton, R. A. Gray, A. M. Armstrong, J. B. deJarnett and F. W. Willis reported a group of strong resolutions, calling upon Congress to maintain the tariff on fruit and fruit products. The resolutions were unanimously adopted.

News in Brief.

SANTA CRUZ will build a new waterworks system. A fine drive will also be built along the river.

SAN RAFAEL is now lighted by electricity, and a petition has been presented asking for an electric road franchise.

AN immense amount of snow fell in Wyoming Saturday. Travel was interrupted, but the stockmen consider the snowfall as highly beneficial.

The trustees of the Lick free baths will endeavor to have the baths built as soon as possible. James Lick left \$150,000 to build these baths.

ANDERSON, Placer county, from a mining town is becoming the center of a wonderfully developed district, filled with orchards and vineyards.

The Oregon Agricultural College building near Corvallis will be completed May 1st, accepted by the Governor and turned over to the Board of Regents.

The gross exchanges of the country for the week ending March 24th were \$908,050,762, an increase of 5.9 per cent over the corresponding period of last year.

The floods in Germany and Austro-Hungary, it is estimated, cover 200 square miles of territory, and alarming rumors of the extent of the damage done are circulated.

The old British war-ship in which Mr. Darwin circumnavigated the world, and began those speculations which have revolutionized science, is now a Japanese training-ship.

SEVERAL buildings on Alcatraz island, San Francisco bay, were destroyed by fire this week. The loss is not over \$2000. None of the more valuable buildings caught fire.

STOCKTON held a mass meeting Saturday to institute measures to thoroughly advertise San Joaquin county. Irrigation, less area in wheat and small tracts devoted to fruit were urged.

The weather-crop bulletin from Washington says: The freezing weather in the Southern States has doubtless injured small grains, fruits and vegetables in the northern portion of the Gulf States.

A BILL has been favorably reported in the U. S. Senate appropriating the following sums for Pacific Coast quarantine stations: San Diego, \$55,500; San Francisco, \$103,000; Port Townsend, \$55,000.

The late Kaiser William left by will the greater portion of his fortune to the Crown Treasury or General fund, and the remainder will be divided between Empress Augusta, Emperor Frederick and the Duchess of Baden.

A BILL to amend the naturalization law so as to require would-be citizens to make oath that they are not polygamists, anarchists or communists has been introduced in the House by Representative Stewart of Georgia.

The New York Times estimates that the losses to the Government from redwood timber frauds and the operations of the surveyors' ring in California exceed those that were caused by the jobs of the Star Route conspirators.

The members of the Veterans' Home Association held a meeting on Saturday evening, at which W. J. Ruddick, George Walsh and W. H. Hart were chosen directors. Walsh will hold for two years and the others for one. The directors were chosen to fill vacancies.

AUBURN is rapidly changing from a mining town to the center of a wilderness of orchards and vineyards, and the change is brought about not by a decrease of mining, but by the development of the horticultural resources of the region which have so long lain unimproved.

JOSE JESUS VALENCIA, who was one of the founders of the city of San Jose, was run over and killed by a runaway team on Monday last. The deceased was well known all over the State, and at one time owned a great deal of real estate in the city when it was known as Yerba Buena. Valencia street was named after him.

VIRGINIA CITY is intensely excited over the concealment of cases of smallpox by a physician of that city. Seven cases have been hidden from the public. The physician stated that he was not positive of the character of the disease, and the convalescent children were permitted to associate with children of the neighborhood.

ONE of the Oakland ferry steamers is now lighted by electric lights, and the system is to be adopted on the other steamers. The Piedmont now has 140 electric lights of 20-candle power each. The relative cost of the light is said to be no greater for the 140 electric lights than was the expense of the 60 coal-oil lamps formerly used.

THE San Joaquin county assessor, who last year assessed the vines in bearing vineyards in good condition at \$50 per acre, is this year assessing on the following average basis: Vines planted one year, \$5 an acre; two years, \$25 an acre; three years and upward, from \$50 to \$75 an acre, according to the condition of the stock. Fruit trees planted one year, \$10 an acre; two years, \$20 to \$50 an acre; three years, \$75 to \$100 an acre.

In the River and Harbor bill this year California is specially fortunate. The committee recommends for Oakland harbor \$175,000; Redwood Creek, \$7400; Wilmington, \$90,000; San Diego, \$1000; San Luis Obispo, \$25,000; Humboldt, \$150,000; Mokelumne River, \$2000; Sacramento, \$20,000; San Joaquin, \$25,000; Petaluma Creek, \$2000; Napa Creek, \$7,500. About \$150,000 has also been appropriated for deep moorings in the roadsteads on the coast line north of San Francisco.

Dairy Improvements in Oregon.

Messrs. G. G. Wickson & Co. of San Francisco, who are the leading, and in fact only, firm on the Pacific Coast making a specialty of dairy improvement, have just taken a long lease of the premises No. 141 Front street, at the southwest corner of Alder street, Portland, which they are fitting up anew and especially to accommodate this, their Northwestern branch, and will carry in stock and on hand, to exhibit and sell, on the ground and not to order, as this trade has been compelled to buy heretofore, a full and most complete assortment of all the latest improved and most popular Eastern dairy machinery, apparatus and supplies.

The matter of putting creamery butter before the public in its proper light, and taking steps to prevent fraud and deception in its sale in the city, has received special attention by Messrs. Wickson & Co., and to enable them to bring this product up to the highest possible market value, and keep it pure and free from adulteration and contamination with inferior articles, the firm have built a fine cold storage in their store, and will act as city agents for the various creameries established and to be established in this section, and using their improved machinery; none other than creamery butter being handled by the firm, and to the elevation of this product alone all their attention will be devoted. The firm are now filling large contracts from several new creamery enterprises just starting up.—*Northwestern Farmer and Dairyman, Portland.*

Hog Cholera.

EDITORS PRESS:—I received four numbers of your valuable paper from a friend in California, and on page 23, of January 14, 1888, I noticed a piece entitled "Swine Pest." I wish to inform your readers that from the explanation given the disease is the genuine hog cholera. We of this section have had our hands full of it for years, and the only cure is to kill every hog as fast as you find one sick and bury them deep in the ground. Burn all old nests and put the well hogs on clean, fresh ground. There is no cure for the disease.—*DANIEL GUSEBERT, McClure, Henry Co., Ohio.*

MINDFUL AND HONORABLE.—About 30 years ago, says the *Haywards Journal* of the 24th, R. H. Blackwood farmed a tract of land adjoining that of the late Alex. Allen at San Lorenzo. He did not meet with success and at last gave up farming and moved away, owing considerable money. After an absence of 30 years he returned Tuesday, hunted up those he owed and paid them dollar for dollar. In inquiring around he found two of his old friends, whom he desired to pay, gone—J. B. Marlin and Alex. Allen. He paid the money to them all—Otis Hill \$600; Mrs. J. B. Marlin, \$240; Mrs. Alex. Allen, \$143. Two of the bills were for threshing and the last for groceries. Such an instance of honesty is well worth being recorded.

THE LOMB PRIZE ESSAYS.—We acknowledge the receipt of the Lomb Prize Essays, from the American Health Association of Concord, N. H. No. 1 is entitled *Healthy Homes and Foods for the Working Classes*; by Victor C. Vaughan, M. D., Ph. D. No. 2—*The Sanitary Condition and Necessities of School-Houses and School Life*; by D. F. Lincoln, M. D. No. 3—*Disinfection and Individual Prophylaxis against Infectious Diseases*; by Geo. M. Sternberg, M. D., U. S. Army. No. 4—*The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them*; by George Ireland.

Sweet Morsels.

"We like the *RURAL PRESS* very much, as the subscription in advance indicates."—*Mrs. J. M. B., San Jose.*

"I don't want it stopped so long as I can afford any paper at all."—*J. R. S.*

Who Is It?

Who sent us a postal note from Middletown, Lake county, without sending his name?

Who did the same thing from Selma, Fresno county, some time ago?

It is impossible to give proper credits unless people will send their names with the remittance. Let all subscribers take notice.

P. S.—If people wonder why their letters are not answered or the paper stopped when they omit the postage stamp on their letters, or misdirect them, or give them to parties who never mail them, whose fault is it?

AGRICULTURAL DIRECTORS.—The Governor has appointed agricultural directors as follows for District No. 3: William Hawkins of Butte, vice E. T. Reynolds, resigned; William M. Billups of Colusa, vice Frank Freeman, removed from the district.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., Room 3.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING MARCH 20, 1888.

379,758.—ELECTRIC ANNUNCIATOR—B. N. Botts, Paso Robles, Cal.

379,676.—DRAFT ATTACHMENT FOR PLOWS—H. E. Bradbury, Banning, Cal.

379,855.—GLOVE—F. H. Busby, S. F.

379,856.—SHINGLE-SAWING MACHINE—W. A. Campbell, Portland, Ogn.

379,641.—AUTOMATIC WHISTLE ATTACHMENT—M. Gage, Galt, Cal.

379,710.—WELL-DRILLING MACHINE—W. Manson, Colton, Cal.

379,874.—BINDING BOOKS—Meston & Dygert, Portland, Ogn.

379,747.—STIRRUP ATTACHMENT—J. C. Welcome, Ft. Bidwell, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

The Armour Packing Company.

In the Eastern States and in the great Mississippi valley the name of the Armour Packing Co. of Kansas City is a household word. In canned meats, pure lard, hams and bacon, they supply a large portion of the trade. They do business on a grand scale, and apply that skill in packing and canning meats that stamps their goods No. 1 in the market.

The combined packing of the Chicago and Kansas City houses foots up in round numbers about 1300 head of cattle and 5500 hogs daily, for every working day of the year.

Their goods find a market all over the world, and they have filled a single order for 5,000,000 pounds of canned beef. It is a national pride to know that foreign nations are paying tribute to the enterprise, thrift and sagacity of an American plant managed by American citizens who have seized the opportunity to become masters in this branch of the provision trade.

It is in keeping with the growth and development of our country for a few modest, unassuming citizens, bearing the name of "Armour," to create an enterprise in the center of the great Mississippi valley that takes the lead of any other packing-house in the world. It has been the policy and aim of the Armour Packing Co. to make a class of goods that should find a demand in every American home.

The system of canning meat for export and domestic use has grown in large proportions, and the growing demand for this class of goods in almost every household has engaged the attention of leading meat-packing companies to supply this want. The Armour Packing Co. makes a specialty of prepared meats, and their brand maintains the leading position in quality, and there is no establishment in the United States that equals it in quantity.

Mr. James McCullough, whose many years' experience in the provision trade has evidently qualified him to take the management of an enterprise of this character and magnitude, is the San Francisco representative of the Armour Packing Company.

The standard and excellent quality of their goods has become so well established that the affable agent from his office, No. 123 California street, fills orders for all distributing centers on the Pacific Coast, to meet the growing demand. Their business has assumed large proportions, running up into tens of thousands each month, and with their commercial advantages and the trade of the Northwest, extending to Sitka and "islands of the sea," this distributing agency will be one of great importance.

For the sale and consumption of their provisions they rely on their merit. It is a fact worth knowing that all their goods are in original packages direct from their packing-houses, and any provisions with the stamp and trademark of Armour Packing Company are warranted to the trade and the consumer.

It has been rumored that if sufficient inducements were offered this house would erect a great plant on the Pacific Coast.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JOHN G. H. LAMPADUS—S. L. Obispo & S. Barbara Co.'s.

G. W. INGALLS—Arizona Territory.

WM. WILKINSON—Fresno Co.

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Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

EL ROBLAS RANCHO, Los Angeles, Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford cattle. Information by mail. C. F. Swan, manager.

VALPARAISO PARK, Thoroughbred Polled Angus and Durham Cattle. Thoroughbred Berkshire Swine. Address F. D. Atherton, Menlo Park.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. P. O., Penn's Grove, Sonoma Co., Cal., Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Geo. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

JERSEYS—THE BEST HERD—All A. J. C. registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands; Asquie's and Case Strains. Punch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

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O. J. ALBEE, Lawrence, Cal., breeder and importer.

D. H. EVERETT, 1616 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

JAS. T. BROWN'S successor, A. C. Ruschhaupt, 18 Georgia St., Los Angeles, Cal., importer of Thoroughbred Poultry of the leading varieties. Fowls and Eggs for sale. Price list free.

PIEDMONT POULTRY YARDS, cor. Piermont Ave. & 8th St., Oakland, Wyandottes, L. Brahmas, P. Rocks, Langshans, B. Leghorns, B. B. R. G. Bananas. Eggs \$2 for 13; circular free; Mrs. J. N. Lund, Box 116.

THOS. WAITE, Perkins, Sacramento Co., importer and breeder of thoroughbred fowls of all leading varieties.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, Lt. Brahmas, Houdans. Eggs, \$2.

T. D. MORRIS, Sonoma, Cal. Toulouse and Embden Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

SHEEP AND GOATS.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

ANDREW SMITH, Redwood City, Cal.; see adv't.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine. High graded rams for sale.

E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

F. BULLARD, Woodland, Cal., importer and breeder of Spanish Merino Sheep. Premium band of the State. Choice bucks and ewes for sale.

J. B. HOYT, Bird's Landing, Cal., importer and breeder of Shropshire Sheep; also breeds cross-bred Merino and Shropshire Sheen. Rams for sale.

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SWINE.

I. L. DICKINSON, Central Point, Merced Co., Cal., breeder of thoroughbred Essex Hogs. Pigs now ready for sale. Prices reasonable.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

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A choice lot of young Cattle of the above breeds for sale at very low figures. Their breeding is A No 1 and from the **BEST MILKING FAMILIES**. Prices and **QUALITY** will suit. **ELEVEN YEARS'** experience on this Coast. Correspondence solicited.

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For information address or call on S. N. Straube as above. No trouble to show stock to intending purchasers.

HOLSTEIN-FRIESIANS, CLYDESDALE, FRENCH COACH AND HAMBLETONIAN HORSES. LAKEVIEW STOCK FARM has



The only Cow that has given 28,021 lbs. 2 ozs. of milk in a year.
The only four-year-old that has given 23,602 lbs. 10 ozs. in a year.
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The only herd of mature cows that has averaged 17,168 lbs. 1 oz. in a year.
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The only two-year-old Holstein-Friesian that has made 21 lbs. 10 1/2 ozs of butter in a week.

Fifty-two cows in this herd averaged 20 lbs. of butter in a week.
100 cows and heifers in this herd average 17 lbs. 1 1/4 ozs. of butter in a week. Over 100 cows in the Advanced Registry. Fine studs of choice highly-bred Clydesdale, French Coach and Hambletonian Horses. Send for Catalogue giving full records and pedigrees. In writing always mention **PACIFIC RURAL PRESS**.

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He has at his stable horses that received prizes in their native countries, and also first premiums at State and District Fairs of California. These are a very superior lot of horses and will be sold as cheap as the same grade can be had in any part of the world, with cost of transportation added. For terms address

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35 Head of Thoroughbred Holstein-Friesian CATTLE FOR SALE.

Eighteen cows and heifers, 6 heifer calves, 11 bulls and bull calves. Will sell the entire herd at a bargain. Farm one mile from Stronghurst, on main line of Santa Fe railroad, 200 miles west of Chicago, Ill., and 25 miles east of Ft. Madison, Iowa. Address, **J. B. FORT & SONS**, Olena, Henderson Co., Ill.

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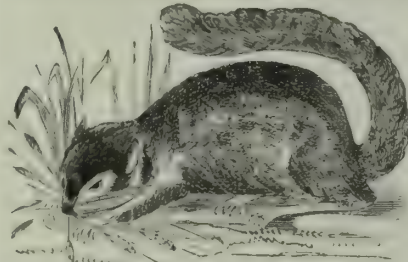
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For prices and catalogues apply to or address **GEORGE A. WILEY**, Cook Stock Farm, Danville, Cal., **SAMUEL GAMBLE**, 1307 Dolores street, or Bay District Track, or to

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Farmers who want the **PUREST and BEST** Strychnine, **SURE TO KILL** Ground Squirrels, Gophers, Mice and other animals which destroy the crops, should specify "**MALLINCKRODT'S ST. LOUIS**" STRYCHNINE, manufactured by

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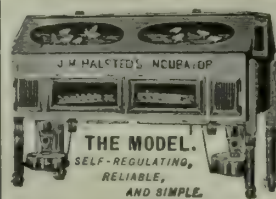
—AND—

SOLD BY ALL DEALERS.

Insist upon having our brand, and allow no substitution of other makes. See that our cap and label is on the bottles.

SPECIAL OFFER.—I will ship, in localities where, as yet, I have no agent, one sample improved "New Becker" Washer at **WHOLESALE** prices. Descriptive pamphlets free. **E. W. Melvin**, Prop. Office, 806 J St., Sacramento, Cal.

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Manufacture of the **PACIFIC INCUBATOR** and **Brooder**. Agency of the celebrated silver finish galvanized wire netting for Rabbit and Poultry-proof fences, the Wilson Bone and Shell Mill, the Pacific Egg Food, and Poultry appliances in great variety. Also every variety of land and water Fowl, which have won first prizes wherever exhibited. Eggs for hatching. The Pacific Coast Poultryers' Hand-Book and Guide, price, 40c. Send 2c. stamp for 60 page illustrated circular to the **PACIFIC INCUBATOR CO.**, 1817 Castro St., Oakland, Cal.

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One gallon, mixed with 50 gallons of cold water, will dip thoroughly 100 sheep, at a cost of 1 cent each. Easily applied; a nourisher of Wool; a certain cure for SCAB. Also,

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Mixes instantly with water. Prevents the fly from striking. In a 2 pound package there is sufficient to dip twenty sheep, and in a 7-pound package there is sufficient to dip one hundred sheep.

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EXTRACT OF TOBACCO.
Free from Poison.
Cures thoroughly the **SCAB OF THE SHEEP**. The BEST remedy known. Costs less than 1 cent per head for dipping. Reliable testimonials at our office. For particulars apply to
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2-WHEEL BUGGY or CART HARNESS, \$4 to \$25, Whip included.
SINGLE EXPRESS HARNESS, \$18 to \$50, includes a Cushion.
RANCH HARNESS, double, leather traces, \$20 to \$40, including Whip.
WHIPS, 15c. to 85c. each.
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In 10,000 Shares of \$100 each.
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BILLS OF EXCHANGE of the Atlantic States bought and sold.

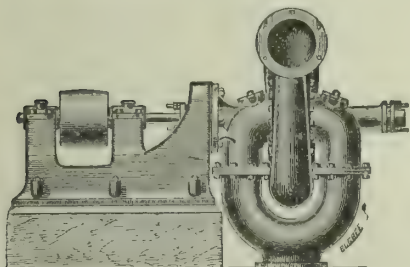
ALBERT MONTPELLIER,
San Francisco, Jan. 1, 1888. Cashier and Manager.

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IRRIGATING PUMPS.

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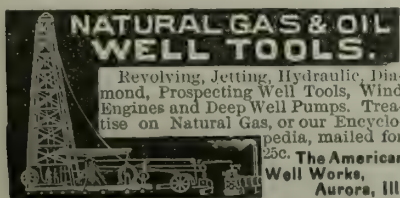
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THE GIANT POWDER COMPANY.

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NOBEL'S DYNAMITE,
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Best and Strongest Explosives in the World.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

BANDMANN, NIELSEN & CO, General Agents, San Francisco.

JUDSON POWDER,

The Only Reliable and Efficient Powder
For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

Farmers and Fruit-Growers, Attention!

To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

FERTILIZE!

FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. Korbis—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Pota-h.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

Dr. J. Korbis, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,

E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing applied at any time, will be found very beneficial.

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Every Can Warranted.

This Poison has been on the market less than two years, yet in this short time it has gained a reputation of "Sure Death," equaled by none. By its merits alone, with very little advertising, it is now used extensively all over the Pacific Coast, as well as in Australia and New Zealand.

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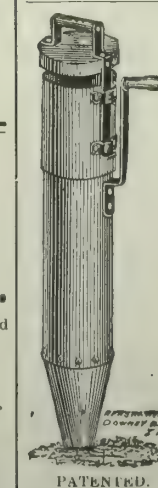
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S. H. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, March 28, 1888.

Two days of strong, drying north winds the past week, caused some uneasiness, but as they died out and were followed by dews at night and a generally moist atmosphere, all fears are allayed. Crop prospects of all kinds were never better, the only trouble now being the high transcontinental freight rates. Trading in farm products was fairly active during the week. Eastern and European telegrams reported steady, strong wheat markets up to Monday, when an advance came through. The following is to-day's cable:

LIVERPOOL, March 28.—Wheat—Firm. California spot lots, 65 6d to 6s 8d; off coast 33s@33s 3d; just shipped, 33s; nearly due, 33s; cargoes off coast and on passage, steady; French country markets, quiet and perhaps lower; wheat on passage to Continent, 211.000 qrs.; wheat and flour on passage to U. K., 2,061 000 qrs.; wheat and flour in Paris, quiet.

Foreign Review.

LONDON, March 26.—The *Mark Lane Express*, in its review of the British grain trade during the past week, says that the values of English wheat continue against sellers, quotations ruling 7d and lower. The sales of English wheat during the week were 59,824 quarters at 30s 6d, against 43,969 quarters at 33s 2d during the corresponding period last year. The reports from the country show that the wheat growth is excellent, and that no harm has been done by frosts. There has been labored selling of foreign wheat at a reduction of 6d. Flour is dull, but the receipts continue to increase. Corn is steady and barley maintains its recent advance of 3d.

California Products in Chicago.

CHICAGO, March 24.—Oranges rule steady and firm for choice fruit. The arrivals and offerings of such are very moderate, while a fair demand exists. Off grades of stock are rather slow.

Quotations are: California Riverside oranges, \$3.25@3.05; do, other kinds, \$2.75@3; do, No. 2, other kinds, Windfalls, \$1.75; do, Riverside Navel, \$5.50@6; do, other kinds, \$3.50@4. California lemons, \$1.50@1.75 per box.

California dried fruits are about steady. The supply is fair, as dealers have no difficulty in obtaining what they require at about former prices.

We quote: Peaches, sun-dried, in sacks, 1/2 lb, 11@12; do, evaporated, unpeeled, in sacks, 1/2 lb, 13@15; do, boxes, 1/2 lb, 14@16 1/2; do, peeled, in sacks, 1/2 lb, 17@21; do, in boxes, 1/2 lb, 22@25; apricots, sun-dried, in sacks, 1/2 lb, 10@11; do, evaporated, in sacks, 1/2 lb, 12@16; plums, pitted, in sacks, 1/2 lb, 11 1/2@12 1/2; prunes, small, 1/2 lb, 8@10; do, fancy large, 1/2 lb, 13@14; nectarines, according to quality, in sacks, 1/2 lb, 5@12 1/2; raisins, loose Muscates, two-crown, 1/2 box, \$1.35@1.45; do, three-crown, 1/2 box, \$1.50@1.65; do, London layers, 1/2 box, \$2.25@2.35.

California strained honey, 7@8c.

The demand for beans showed no improvement. The jobbing trade is fairly supplied and this causes the demand on the open market to remain rather limited. Prices are about the same as quoted for a day or two past. At the present prices stocks on hand are steadily held, although holders would like to see a little more doing than there is being done. California, according to quality, \$2@2.60.

Hops are ruling rather dull and slow. The demand is limited and only choice grades are called for. Common stock is very dull. Pacific Coast, choice, 1/2 lb, 12 1/2@13; Pacific Coast, common to prime, 1/2 lb, 9@12c.

Eastern Wool Markets.

NEW YORK, March 26.—There has been no marked change of features in wool. Former prices have been well supported, but no one seems disposed to negotiate large loans outside of market report. There have been reduced transactions. The following sales have been made: 8000 lbs California scoured at 40¢@45¢, 15,000 Oregon at 20¢@22¢, 20,000 Territory at 16¢@22¢, 5000 fall Texas, 16¢, 10,000 quarter blood at 35¢, 4000 XXX at 35¢, 3000 XXX and above at 32¢, 5000 XX at 35¢, 15,000 coarse washed fleeces 34¢, 55,000 Montevideo at 26¢@27¢, 20,000 Cape at 26¢.

BOSTON, March 26.—The total wool sales for the week are: Foreign, 317,000 lbs; domestic, 1,627,000. There were sales of 60,000 lbs California spring and Oregon, and 5000 lbs California fall, all at private terms.

Eastern Grain Markets.

CHICAGO, March 28.—Wheat—Lower; cash, 72 1/2¢; April, 72 1/2¢; May, 72 1/2¢. Oats, steady; May, 31 1/2¢. Barley, nothing doing.

NEW YORK, March 28.—Wheat—91 1/2¢ for cash, 89 1/2¢ for March, 89 1/2¢ for April, 89 1/2¢@89 1/2¢ for May, 88 1/2¢@88 1/2¢ for June and 87 1/2¢ for July.

California Raisins.

NEW YORK, March 26.—California raisins are finding a ready and wider distribution, buyers offering little or no opposition to the new prices established for the best brands. This feature is confidently referred to. The control of the stock in this market is in the hands of three concerns, and a large holder does not hesitate to say that a further advance soon is among the strong probabilities, intimating that a \$2 market for the best three-crown loose is now contemplated.

Miscellaneous.

NEW YORK, March 26.—Hops from the Pacific quiet at 4@12c. There is some home call for States at 8@14c. Beans are firm. Mustard seed, 3 1/2¢@4c. California unpeeled evaporated peaches, 14@18c, and stocks running out.

Local Markets.

BAGS.—The pool apparently is keeping quiet. The demand is only fair, as farmers only contract for part of their expected wants, preferring to wait future developments before buying all. Calculus are quoted at 8c cash, 8 1/2¢@8 1/2¢ for June-July, with some holders asking slightly more.

BARLEY.—With continued hammering of the market on Call by the bears with about all sales re-

ported cross orders so as to break prices for actual barley, farmers having barley have a serious time. Large holders say that prices have gone so low that it will pay to hold. Choice brewing and Chevalier are firm. On Call sales reported were downward up to Saturday, when they began to gain strength. The following are the sales reported to have been made on Call to-day:

Morning Session: Buyer season—200 tons, 80 1/2¢; 200, 80 1/2¢. Buyer 1888—200 tons, 80 1/2¢. Afternoon Session: Buyer season—500 tons, 80 1/2¢; 300, 80 1/2¢; 300, 80 1/2¢. Buyer 1888—100 tons, 80 1/2¢; 100, 80c; 200, 88 1/2¢ per ctl.

BUTTER.—Messrs. Hegler, Johnson & Co. furnish the following: Receipts from January 1, 1888, to March 22, 20,070 boxes; stock on hand March 22, 670 boxes and 824 bbls. Receipts for the like time in 1887, 21,964 boxes; stock on hand March 24, 1887, 1171 boxes and 56 bbls. The market under liberal receipts and warmer weather has tended down, admitting of packing, which is being done. Pasturage in some places is getting scarce.

CHEESE.—Receipts from January 1, 1888, to March 22 were 16,078 cheese against 21,617 for the like time in 1887. The stock on hand on March 22, 1888, was 2077 cheese and on March 24, 1887, 2052. The market is tending down under freer receipts and increasing stocks. Considerable reductions on quotations are being made for round parcels.

EGGS.—Market strong and higher, but it is expected it will go off again after this week. The consumption this week is large.

FLOUR.—Market steady, with a strong tone. Millers report a scarcity of choice wheat.

WHEAT.—Buyers still bearing, but holders of choice will not sell, preferring to carry it over into another season. Stocks in the State are light. Trading the past week was light. On Call the bears by cross orders keep prices from advancing so as to buy actual wheat cheaper. To-day's reported sales are as follows:

Morning Session: Buyer season—600 tons, \$1.35; 100, \$1.34 1/2; 100, \$1.34 1/2; 1000, \$1.34 1/2. Buyer 1888—100 tons, \$1.41 1/2; 300, \$1.41 1/2. Afternoon Session: Buyer season—400 tons, \$1.34 1/2; 400, \$1.34 1/2. Buyer 1888—100 tons, \$1.41; 400, \$1.40 1/2; 500, \$1.40 1/2; 200, \$1.40 1/2; 300, \$1.40 1/2 per ctl.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to Mar. 26, '87.	July 1 '87 to Mar. 24, '88.
Flour, qr. sks.....	3,471,803	2,824,479
Wheat, ctls.....	10,768,399	7,187,175
Barley, ctls.....	1,956,876	1,919,766
Oats, ctls.....	116,038	145,621
Potatoes, sks.....	712,259	916,956
Corn, sks.....	77,268	174,588
Rye, sks.....	20,522	15,262
Buckwheat, sks.....	5,547	2,979
Beans, sks.....	404,164	371,660
Bran, sks.....	367,583	383,262
Hay, tons.....	80,528	92,499
Salt, tons.....	17,768	12,710
Wool, bls.....	46,140	40,525
Hides, No.....	83,562	80,360
Raisins, 20-lb boxes.....	135,747	109,265
Quicksilver, flasks.....	13,791	23,812
Hops, bls.....	12,826	14,971

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to Mar. 26, '87.	July 1 '87 to Mar. 24, '88.
Flour, sks.....	115,783	225,229
Wheat, ctls.....	516,872	914,430
Barley, ctls.....	5,253	75
Oats, ctls.....	290,312	190,335
Corn, ctls.....	90,281	12,590
Wool, bales.....	9,063	7,370
Bran, sks.....	27,918	51,298
Hops, bales.....	754	398
Hides, No.....	25,723	23,775
Rye, ctls.....	4,798	4,798
Potatoes, sks.....	102,083	62,463

Cereals.

Eastern telegraphic advices report considerable damage to the growing wheat by the thawing and freezing weather in several of the States. This is rather unfortunate, for the acreage seeded up to March 1 was below an average. The blizzards reported on Sunday and Monday last are calculated to injure crops still more, and necessitates a large area to be reseeded.

The Government Department of Agriculture report, March 1, makes 132,000,000 bushels of wheat remaining in the hands of farmers in the United States March 1, 1888, against 122,000,000 bushels March 1, 1887. The visible wheat, the flour stock and the quantities in elevators outside of those included in official Exchange report is, including the California, Oregon and Washington stocks, a very considerable quantity. The Cincinnati *Price Current* makes the quantity held by farmers 107,000,000 bushels; plus visible 38,000,000 bushels, is 145,000,000 bushels, against 179,000,000 bushels March 1, 1887; including interior supplies and the visible, and 159,000,000 bushels March 1, 1886, including interior supplies and the visible. That journal makes the quantity 25,000,000 bushels less than the Government estimate. The Department of Agriculture's short estimate of the wheat crop of 1886, as shown by the *Price Current*, may have had some bearing upon this difference of 25,000,000 bushels between these two authorities.

Oregon advices are, taken as a whole, not so favorable for the wheat crop as at this time last year. The market in Oregon is reported very strong for choice wheats, with holders indifferent sellers at last week's quotations.

In this State, crop advices continue of the most flattering character. The wheat plant in parts of Tulare and Fresno counties is said to be about two feet high. Strong north winds swept over several counties the past week, but so far as can be ascertained did not do any material damage.

The wheat crop of Europe ranges from 1,152,000,

000 bu. minimum to 1,288,000,000 bu. maximum. The wheat consumption of Europe is on the average about 1,333,000,000 bu. of wheat. Some of the countries of Europe are exporters of wheat, and others both importers and exporters of wheat. The average quantity to be obtained from countries without Europe is about 161,000,000 bu. The wheat crop of Europe was in 1887, 110,278,786 bu. above average, which quantity the exporting countries of Europe have available for export if they sell so as to command buyers. India will probably have at least 30,000,000 bu. of her new crop for export. It is claimed Australia will have 16,000,000 to 20,000,000 bu. for export. The United States and Canada still have available for exportation about 45,000,000 to 50,000,000 bu. of wheat. The new crop of Chili may give 4,000,000 bu. surplus for her wheat crop just harvested, and the Argentine Republic also may contribute 5,000,000 to 6,000,000 bu. from her crop just harvested. Austria-Hungary had in 1887 the largest wheat crop for 10 years, and but a small proportion of her surplus has so far been exported. Egypt, that in 1886-87 exported scarcely any wheat, has harvested an average crop, and will probably have a full average surplus. Roumania had a large wheat crop in 1887. It will be observed that after a careful analysis of all these sources of supply there is no probable demand in sight to create a deficiency in any country sufficient to cause an advance of much moment in values, unless war or damage to growing crops shall intervene as a moving power for a rise. The following table shows the average wheat production of European countries for 10 years, compared with the wheat crops of 1887, 1886 and 1885:

	Wheat crop, 1887.	Wheat crop, 1886.	Wheat crop, 1885.	Ten years' average wheat crop.
Russia.....	271,200,048	192,000,000	228,000,000	230,516,979
France.....	311,463,816	304,480,739	312,924,137	306,500,455
U. Kingdom.....	78,627,169	65,285,353	82,145,888	78,082,750
Germany.....	34,568,088	32,000,000	106,973,750	103,711,321
Denmark.....	4,732,590	4,731,531	4,897,947	4,766,222
Holland.....	5,050,416	4,937,250	4,965,625	5,594,323
Belgium.....	19,790,196	18,514,888	19,573,926	22,261,975
Sweden & Nor.....	2,832,792	2,468,325	2,837,500	3,192,250
Italy.....	120,146,162	129,412,133	118,244,589	132,202,546
Austria-Hung.....	193,572,969	143,901,488	154,363,868	116,563,994
Spain.....	89,976,382	111,680,000	113,000,000	95,786,700
Portugal.....	6,150,000	8,225,750	7,961,280	8,435,205
Greece.....	4,963,000	4,937,250	5,102,841	5,075,263
Switzerland.....	2,076,000	1,645,750	2,051,188	2,085,906
Roumania.....	24,409,000	22,629,063	22,629,063	26,190,851
Turkey.....	42,610,000	41,143,750	45,400,000	41,288,025
Servia.....	6,545,600	4,558,813	4,681,875	5,169,614

Total bu. 1,262,634,838 1,141,602,183 1,235,941,530 1,172,365,052

It will be seen that the yearly average of European wheat production for a period of about 10 years is about 1,172,365,052 bushels, the basis being chiefly from official figures, some of the unimportant countries being estimated or partly estimated. The production in 1886 was 63,585,478 bushels above the average, and that of 1887 was 110,278,786 bushels above average, and that of 1888 was 30,753,869 bushels under average. The Russian wheat production, according to the official estimate, including Poland and Finland, is 50,683,069 bushels above the average of 10 years. The population of Europe in 1886 was 347,000,000, and the annual increase in the population for 26 years has been less than 1 per cent. With all industries in their normal condition, the consumption of wheat should show an increase of less than 1 per cent annually. The rye crop of Europe averages rather more than 1,000,000,000 bushels annually. The rye crop of Russia was in 1887 about 96,000,000 bushels larger than in 1886, and is upward of 700,000,000 bushels. The population of Russia is about 90,000,000. The bread of the Russians is chiefly black bread made from rye. This increase in the Russian rye crop in 1887 increases Russia's ability to export wheat, which also showed an increase in 1887-86 of about 50,000,000 bushels.

Telegraphic advices the past week report in England and parts of the continent a real genuine blizzard, followed by heavy snowstorms and changeable weather. The unseasonable weather has no doubt done considerable damage to the young wheat plant, besides delaying outdoor work, which will put back this year's harvest. In France, wheat crop advices are far from satisfactory when compared with this month last year, and as the stock in that country is light and very much less on the way, it is claimed that higher values are liable to obtain before next harvest.

The wheat market the past week has been dull, with buyers reported indifferent, except for parcels favorably situated that can be used for either stiffening or topping off. The small number of vessels in port under charter restricts trading, and as crop advices are good, the disengaged tonnage are held for better prices. The high charters offered for nitrate loading for Europe has taken quite a number of vessels away in ballast so as to load that kind of cargo. Wheat has sold the past week in this city at quotations. Milling grades are very scarce and wanted. For a gilt-edged article, over \$1.40 would be paid, but there is none of this grade offering for sale.

Barley prospects in this State are favorable, but the acreage seeded less than last year, while the low price ruling for barley will cause many to cut their fields for hay. Take the price of bags, freight charges and other charges, and the outlook for farmers to come out even is rather discouraging, unless prices advance for the new crop. Every one appears to be bears, and the daily papers are aiding them all they can so as to keep prices down and against farmers. The consumption of feed barley was never so large as now, but then there is no speculative or bull movement calculated to advance prices, which are the lowest for many years. For choice brewing and choice Chevalier, there is a good demand, but buyers are slow to pay asking prices. Eastern advices report light supplies, and choice still tending upward.

Corn is very strong at quotations, under higher prices at the East, and a good demand here. Choice grades are scarce.

Oats, if choice, find ready sales, but poor grades are slow and hard to place; even concessions do not tempt buyers.

Eastern rye continues to be offered on the market at \$1.85@2, the latter for the more choice. The demand is only fair.

Fruits.

Crop advices continue favorable. The weather is all that can be reasonably desired. It is conceded that this year's crop of fruits will be, as a rule, superior to former seasons, owing to more attention given to pruning and cultivation of the trees. It now looks as if the changeable weather at the East has done considerable damage to the fruit in several

of the earlier fruit sections, and if so, it will materially assist our market. Horticulturists will confer a very great favor by informing the writer by letter or postal card of the crop prospects in their sections, and other items of interest. Address J. R. Farish, San Francisco, Cal.

Apples are slow and hard to sell, owing to their generally poor quality and the lateness of the season. Berries have not put in an appearance yet, and none are looked for until well into April. The crop will be large, but the consumption will also be large.

In citrus fruits the market is very strong, with a good shipping and local demand for choice oranges. Poor are hard to sell, even at the low prices. Lemons and limes are steadier, with a better call.

In dried fruits there is more doing, with several carloads sent to Eastern points the past week. Choice bright are in light stock, but dark-colored are in liberal supply. It is claimed that the spring demand will soon clean up the stock now here. Apples are gaining in strength.

In raisins, the market is very strong for standard packs, which are about out of market. Some concessions are made so as to clean up. In outside packs the market is quotable at from 5c to 10c per box higher. The stock of all kinds is light, while the demand is improving in a small way.

Live-Stock.

Bullocks and mutton sheep are fairly steady, although receipts of dressed, from distant points, have somewhat of a disturbing character, owing to the unknown quantity that can be thrown on the market. With warmer weather and more liberal supplies of vegetables, the consumption, it is thought, will not be free. Hard grain-fed hogs continue scarce, and are wanted at full quotations; block hogs are wanted in preference to the large heavy. Spring lambs and calves are wanted. Milch cows are in good request. Dairy cows about 5 or 6 years old, average milkers, sell at \$30 to \$40. For family use, good free milkers, kind disposition, sell as wanted at \$45 to \$60 here. The price of cows depends on the urgency of the buyer, quality and quantity of milk, and also disposition. In horses, there is nothing new to report. Last week's report covers this week's market.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed, and one-half from the price of grass-fed, that is, animals running at large).

HOGS.—On foot, grain-fed, 6 1/2¢@6 3/4¢ per lb.; dressed 9¢@10¢ per lb.; soft, 5 1/2¢@6 1/4¢ per lb.; dressed, 7¢@10¢ per lb. Stock hogs, 3 1/2¢@5 1/2¢ per lb.

BEEF.—Stall-fed, 8 1/2¢ per lb.; grass-fed, extra, 7 1/2¢@8¢ per lb.; first quality, 7¢ — per lb.; second quality, 6 1/2¢ — per lb.; third quality, 5¢@6¢ per lb.

VEAL.—Choice, 12 1/2¢@15¢ per lb.; fair to good, 8¢@10¢ per lb.

MUTTON.—Wethers, 8 1/2¢@9¢ per lb.; ewes, 8¢@8 1/2¢ per lb.; lamb-spring, 12 1/2¢@15¢ per lb.

Feedstuff.

The call continues freer for bran and middlings, good for ground barley, and fair for feedmeal and cracked corn. The latter is very strongly held, while the others are barely steady.

Alfalfa hay continues in buyers' favor, but other kinds are strongly held at full prices. It looks as if farmers are selling closer than ever before, so as to take advantage of the present high prices. The consumptive demand is good.

Vegetables.

Continued favorable, except for two days, weather for garden truck has been experienced the past week, and in consequence vegetables begin to make a better showing.

Asparagus is coming in freely, causing prices to steadily shade off. Green peas are, as yet, in light receipt. Rhubarb continues to decline under liberal receipts. Cucumbers are still high, as are tomatoes. Mushrooms are in fair receipt, with the market firm.

Potatoes are slow and in buyers' favor. Dealers and consumers buy sparingly, owing to the advanced season, and also owing to the generally poor keeping qualities. New potatoes come in fairly well, but they are of small size and poor quality, which cause them to move slowly. When ripener and of better size, heavy shipments, it is expected, will be made to the East.

Onions are firm at full quotations for choice good keepers; poor are slow.

Miscellaneous.

Poultry ruled fairly steady throughout the past week.

Beans are firm, but not so active. Supplies are light.

In ham, bacon and lard there is a good trade, with the market firm and tending up.

Tallow is not quite so strong. Hides are weak.

In wool there is absolutely nothing doing. The East reports a strong growing market for the better grades, although buyers fight against an advance, using the "bugbear" tariff as the scarecrow, forgetting that the markets throughout the world are not only higher than a year ago but advancing.

Hops, if choice, find ready buyers, but poor and irregular are hard to sell. Choice hops at the East and in Europe are wanted, but poor move slow.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way.....	382,275	209,617
In port, disengaged.....	49,146	111,594
In port, engaged.....	20,447	21,440

Totals..... 451,868 342,651
To obtain the carrying capacity, add 60 per cent to the tonnage.

San Francisco, March 28, 1888.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

COFFEE-CULTURE on a large scale is again talked of in the Hawaiian islands.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, March 28, 1888.

Aples, bx com.	2 50 @ 5 00	do evaporated	12 @ 18
do choice	2 50 @ 5 00	do pared	9 @ 10 1/2
Apricots, lb.	— @ —	do evaporated	20 @ 25
Bananas, bunch	2 50 @ 5 00	Pears, sliced	4 @ 7
Blackberries, ch.	— @ —	do dried	11 @ 12
Cantaloupes, ch.	— @ —	do evaporated	11 @ 12
Cherries, white bx	— @ —	Plums, evapo'd	11 @ 12 1/2
do black bx	— @ —	do unpitted	4 @ 7
do Royal Ann.	— @ —	Prunes	7 @ 10
Cherry plums	— @ —	do French	8 @ 11
Crabapples	— @ —	Zante Currants	8 @ —
Oranberries	10 00 @ 12 00	— @ —	— @ —
Currants ch.	— @ —	Dehesa Clus, fcy	3 25 @ 3 50
Coccherries lb.	— @ —	Imperial Cabin-	— @ —
Figs, black bx	— @ —	et, fancy	2 00 @ 2 25
do white bx	— @ —	Crown London	— @ —
Grapes, white	— @ —	Layers, fcy	2 00 @ 2 25
do black	— @ —	do Loose Mus-	— @ —
do Rose Peru	— @ —	catels, fancy	1 90 @ 2 10
do Muscat	— @ —	do loose Mus-	— @ —
do Tokays	— @ —	catels	1 60 @ 1 90
Isabel	— @ —	Cal. Valencia	1 60 @ 1 80
Wine, Zinfandel	— @ —	do Layers	1 50 @ 1 60
do Mission	— @ —	do Sultanas	1 60 @ 1 75
Limes, Mex.	— @ —	Dried, sacks, lb.	5 @ 6
do Cal. box	— @ —	Outside brands of raisins	— @ —
Lemons, Cal. bx	1 00 @ 3 00	sell at from 25 cts. to 50 cts less	— @ —
do Sicily, box	4 00 @ 5 00	than above quotations.	— @ —
do Australian	— @ —	Fractions come 25, 50 and 75	— @ —
Nectarines box	— @ —	cents higher for halves, quar-	— @ —
Oranges, Com bx	1 00 @ 1 50	ters and eighths.	— @ —
do Choice	1 75 @ 3 00	VEGETABLES.	— @ —
do Navel	— @ —	Artichokes, doz.	— @ —
choicest	4 50 @ 6 00	Asparagus bx.	1 00 @ 1 10
do do Com	2 00 @ 3 50	do extra choice	1 75 @ 2 50
do Panama	— @ —	Okra, dry, lb.	15 @ 20
Peas, bx.	— @ —	do green bx.	— @ —
do Cravford, bx	— @ —	Parsnips, chl.	1 50 @ 2 00
do choice	— @ —	Peppers, dry lb.	8 @ 10
Pears bx	— @ —	do green, lb.	10 @ 15
do choice	— @ —	Pumpkins pr tol.	— @ —
do Bartlett, bx	— @ —	Squash, Marrow	— @ 25 50
Persimmons	— @ —	lat, ton	— @ —
Jap, bx.	— @ —	do Summer bx	— @ —
Pineapples, doz.	2 00 @ 4 50	String beans lb.	— @ —
Plums lb.	— @ —	Tomatoes box.	1 50 @ 2 50
Pomegranates, b	— @ —	do choice	— @ —
Prunes lb.	— @ —	Turpids chl.	1 00 @ 1 50
Quinces bx.	— @ —	Beets, sk	— @ —
Raspberries ch.	— @ —	Cabbage, 100 lbs.	90 @ 1 00
Strawberries ch.	— @ —	Carrots, sk	30 @ 45
Watermelons 100	— @ —	Eggplant, sk bx.	— @ —
Apples, sliced, lb	54 @ 62	Garlic, lb.	— @ —
do evaporated	94 @ 104	Green Corn, cr.	— @ —
do quartered	11 @ 12 1/2	do sweet cr.	— @ —
Apricots	84 @ 104	do large box.	— @ —
do evaporated	15 @ 17	Green Peas, lb.	6 @ 9
Blackberries	124 @ 15	Sweet Peas lb.	— @ —
Chitron	18 @ 25	Leitune, doz.	— @ —
Dates	9 @ 10	Lima Beans lb.	— @ —
Figs, loose	5 @ 6	Mushrooms, lb.	10 @ 30
Nectarines	8 @ 11	Rhubarb lb.	3 @ 5
		Cucumbers, doz	1 00 @ 2 00

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, March 28, 1888.

BEANS AND PEAS.		Paper shell	15 @
Bayo, chl.	2 25 @ 2 50	Brazil	11 @ 12
Butter	— @ —	Pecans	10 @ 16
Pea	3 75 @ 4 00	Peanuts	4 @ 6
Red	2 20 @ 2 50	Filberts	10 @ 12
Pink	2 20 @ 2 50	Hickory	5 @ 6
Large White	3 50 @ 4 00	POTATOES.	
Small White	4 00 @ 4 50	New	1 50 @ 2 50
Lima	3 25 @ 3 85	Burbank	80 @ 90
Fld Pos, blk eye	2 00 @ 2 10	Early Rose	50 @ 65
do green	2 00 @ —	Cuffey Cove	— @ —
do Niles	2 10 @ —	Petaluma	55 @ 70
BROOM CORN.		Tomatoes	70 @ 80
South'n p'ton	50 @ 80 00	River reds	40 @ 60
North'n p'ton	60 @ 80 00	Jersey Blues	— @ —
CHICOORY.		Hummels	— @ —
California	6 @ 7	do Kidney	— @ —
German	7 @ 8	Peachblows	70 @ 85
DAIRY PRODUCE, ETC.		Ohite	— @ —
BUTTER.		do Oregon	— @ —
Cal. fresh roll, lb.	20 @ —	Poorless	75 @ 90
do Fancy brands	22 1/2 @ —	Salt Lake	— @ —
Pickle roll	— @ —	Sweet	2 @ 3 50
Firkin, new	— @ —	COUNTRY AND GAME.	
Eastern	17 1/2 @ 18	Hens, doz.	7 00 @ 9 00
ORANGE.		Roosters	10 @ 12 00
Cheese, Cal. lb.	15 @ —	Broilers	6 00 @ 8 00
Eastern style	17 1/2 @ —	Ducks, tame	9 00 @ 13 00
EGGS.		do Mallard	— @ —
Cal. ranch, doz.	22 @ 23	do Sprig	— @ —
do store	20 @ 22	Geese, pair	2 25 @ 2 75
Ducks	— @ —	do Goatings	— @ —
Oregon	— @ —	Wild, doz.	— @ —
Eastern	18 @ 21	Turkeys, lb.	19 @ 21
FEED.		do Dressed	20 @ 24
Brn, ton	13 50 @ 15 00	Turkey Feathers,	— @ —
Feed meal	30 @ 31 00	tall and wing.	— @ —
Gr'd Barley ton	18 00 @ 19 00	Snipe, Eng. doz.	— @ —
Hay	11 00 @ 12 00	do Common	— @ —
Middlings	17 00 @ 18 00	Doves	— @ —
Old Oake Meal	32 50 @ —	Quail	— @ —
do new process	28 50 @ —	Rabbits	1 00 @ 1 25
Straw, bale	45 @ 65	Hare	1 00 @ 1 50
FLOUR.		Venison	— @ —
Extra, City Mills	4 00 @ 4 35	PROVISIONS.	
do Co'stry Mills	3 75 @ 4 00	Oal. Bacon	— @ —
Superfine	3 25 @ 3 50	Heavy, lb.	11 @ 12 1/2
GRAIN, ETC.		Medium	12 @ —
Barley feed, chl.	70 @ 85	Light	12 1/2 @ —
do Brewing	95 @ 1 15	Extra Light	13 @ —
Chevalier	1 25 @ —	Lard	9 @ 11
do Coast	95 @ 1 15	Cal. Smoked Beef	11 1/2 @ 12 1/2
Buckwheat	1 75 @ 2 25	Hams, Cal.	12 1/2 @ 14
Corn, White	1 32 1/2 @ 1 35	do Eastern	14 @ 15
Yellow	1 30 @ 1 25	SEEDS.	
Small Round	1 32 1/2 @ 1 35 1/2	Alfalfa	8 1/2 @ 9
Nebraska	1 65 @ 1 70	Canary	5 @ 4
Oats, milling	1 65 @ 1 70	Glover red	11 @ 12
Choice feed	1 47 1/2 @ 1 50	White	20 @ 22
do good	1 42 1/2 @ 1 45	Cotton	20 @ —
do fair	1 35 @ 1 40	Flaxseed	2 @ 3
do black	1 30 @ 1 40	Hemp	4 @ 4 1/2
do Oregon	— @ —	Italian Rye Grass	10 @ 11
Rye	1 90 @ 2 00	Perennial	7 @ 9
Wheat milling	1 40 @ —	Millet, German	5 @ 6
do Choice	1 37 1/2 @ —	do Common	5 @ 6
do fair to good	1 35 @ —	Mustard, white	2 @ 2 1/2
Shipping choice	1 35 @ 1 36 1/2	Brown	3 @ 3 1/2
do good	1 32 1/2 @ 1 33 1/2	Rape	14 @ 2
do fair	1 30 @ 1 31 1/2	Ky. Blue Grass	15 @ 17
HIDES.		Id quality	13 @ 15
Dry	12 1/2 @ 13	Sweet V. Grass	7 @ 8
Wet salted	5 @ 6 1/2	Orchard	17 @ 18
HONEY, ETC.		Red Top	9 @ 10
Bee wax, lb.	21 @ 25	Hungarian	8 @ —
Honey in comb	12 1/2 @ 16	Lawn	30 @ 40
Honey in comb,	— @ —	Mesquit	8 @ 9
fancy	16 @ 19	Timothy	7 @ —
Extracted, light	6 1/2 @ 7 1/2	TALLOW.	
do dark	5 1/2 @ 6 1/2	Orade, lb.	2 @ 4 1/2
WOOL.		Refined	6 @ —
Oregon	6 @ 15	FALL—1887	
California	6 @ 15	Humboldt and	— @ —
ONIONS.		Mendocino	15 @ 18 1/2
Pickling	— @ —	Sac'o valley	12 @ 15
Red	— @ —	Free Mountain	15 @ 18 1/2
Silverskins	2 00 @ 2 50	N'hern defective	— @ —
Cut	75 @ 1 25	S Joaquin valley	— @ —
NUTS JOBS.		do mountain	12 @ 15
Walnuts, Cal. lb	8 @ 10	Cava'y & F'th'l.	12 @ 17
do Chile	8 @ —	Oregon Eastern	14 @ 20
Almonds, hd shl.	5 @ 7	do valley	16 @ —
Soft shell	12 @ 13	Southern Coast	— @ —

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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.	Eureka.	Red Bluff.	Sacramento.	S. Francisco.	Fresno.	S. L. Obispo.	Los Angeles.	San Diego.
	Rain.	Rain.	Rain.	Rain.	Rain.	Rain.	Rain.	Rain.	Rain.
	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.	Temp.
	Wind.	Wind.	Wind.	Wind.	Wind.	Wind.	Wind.	Wind.	Wind.
Mar. 22-28.									
Thursday	.00 58 Cm Cl.	.00 50 N Cy.	.00 70 NE Fr.	.00 64 Nw Cy.	.00 53 SW Cy.	.00 66 Nw Cy.	.00 58 SW Cl.	.00 64 W Cy.	.00 60 N Cy.
Friday	.00 50 W Cy.	.03 48 Nw Cy.	.00 58 SE Cy.	.00 58 S Cy.	.00 56 W Cy.	.00 56 Nw Cy.	.00 56 SW Cy.	.00 58 W Cy.	.00 58 Nw Cy.
Saturday	.00 52 N Cl.	—	.00 62 N Cl.	.00 60 Nw Cl.	.02 62 W Cl.	.00 62 Nw Fr.	.00 56 NE Cy.	.01 62 W Cy.	.00 58 Nw Cy.
Sunday	.00 50 Nw Cl.	.00 50 N Cl.	.00 58 N Cl.	.00 56 Nw Fr.	.00 58 Nw Fr.	.00 58 Nw Cl.	—	.00 64 SW Fr.	.00 58 W Cy.
Monday	.00 56 Nw Cl.	.00 52 N Cl.	.00 58 N Cl.	.00 60 Nw Cl.	.00 62 N Cl.	.00 60 S Cl.	.00 59 SW Cl.	.11 56 E Ry.	.04 56 SW Ry.
Tuesday	.00 54 NE Cy.	.00 50 N Cl.	.00 66 N Cl.	.00 62 Nw Cl.	.00 68 N Cl.	.00 64 S Cl.	.00 64 SW Cl.	.00 60 N Cl.	.00 58 Nw Cl.
Wednesday	.T 48 E Ry.	.00 48 N Cy.	.00 66 SE Cl.	.00 64 S Cl.	.00 58 W Cl.	.00 68 SE Cl.	.00 61 W Cl.	.00 64 E Cl.	.00 62 SW Cl.
Total	.T	.03	.00	.00	.02	.10	.00	.12	.00

EXPLANATION.—1. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature, wind and weather at 12:30 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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GRANGERS' BUSINESS ASSOCIATION.

The Annual Meeting of the Stockholders of the Grangers' Business Association (a corporation) for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis street, San Francisco, California, at 10 o'clock A. M., Wednesday, April 11, 1888.
I. C. STEELE, President.
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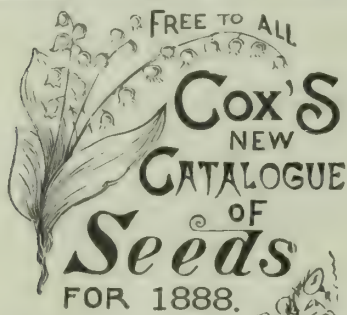
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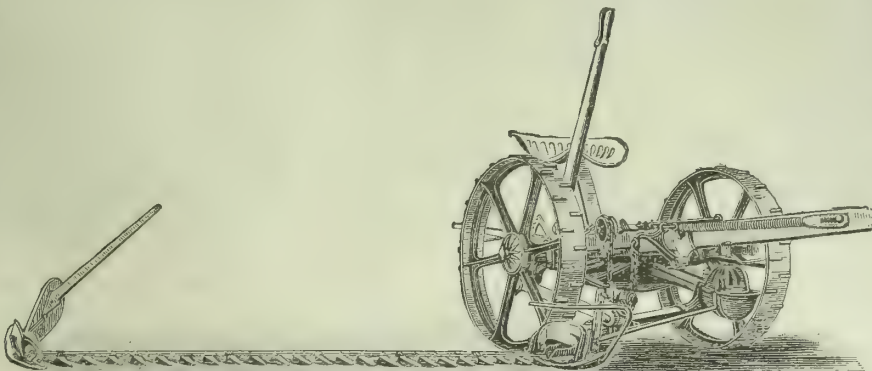
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4 ft 8 in., 6 ft and 7 ft. cut.

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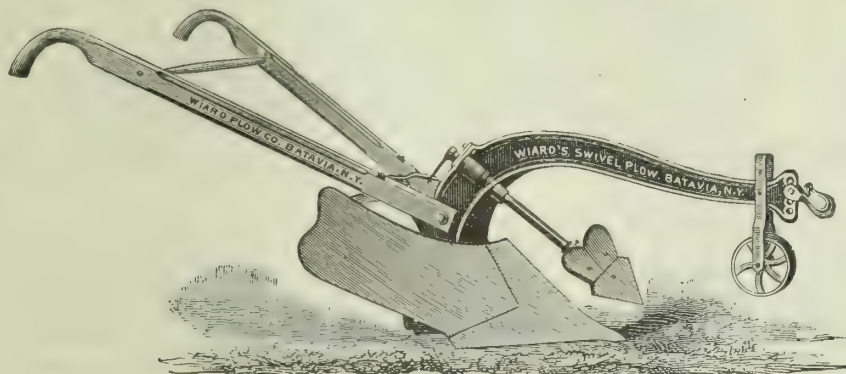
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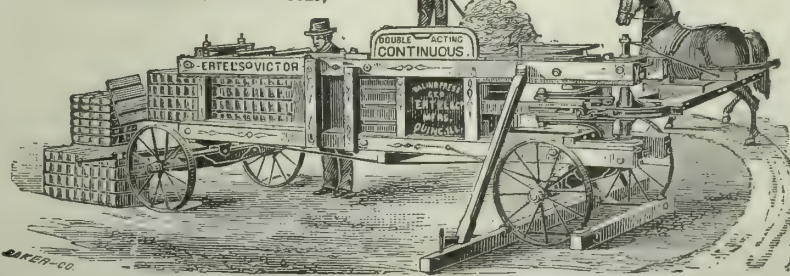
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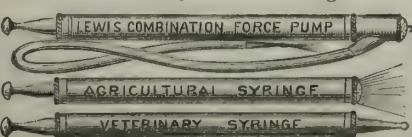
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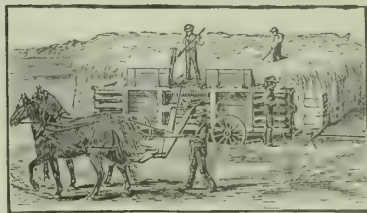
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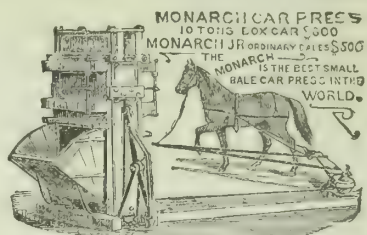
A mounted, horizontal double-ender. Size of bale,
when in the press, 17x22-40 inches. Average weight of
bale, 220 pounds. Capacity, from 16 to 25 tons per day.
Uses 4 men and works with 2 horses. REQUIRES NO
TRAMPING. Puts 10 tons or over in a box car.

Price.....\$1000.

THE HURRICANE—Size B.

Size of bale in press, 22x24x46 inches. Average
weight of bale, 260 pounds. Capacity, from 20 to 35
tons per day. Uses 5 men and works with 1 or 2 horses,
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or wire. Puts from 7 to 8 tons in a box car.

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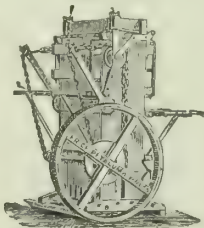
Size of bale in press, 22x24x46 inches. Average
weight of bales, 260 pounds. Capacity, from 15 to 25
tons per day. Uses 3 or 4 men, at option of baler.
Works with 1 or 2 horses. Uses rope or wire. DOES ITS
OWN TRAMPING. Puts from 7 to 8 tons in a box car.

Price.....\$500.

THE MONARCH.

Same principle as Junior Monarch, only smaller and
heavier. Size of bale, when in press, 17x20x40 inches.
Average weight of bale, 220 pounds. Capacity, from 12
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Uses wire only—rope will not hold. DOES ITS OWN TRAMP-
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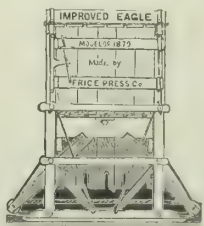
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THE GENUINE PRICE PETALUMA.

Size of bale in press, 24x24x50 inches. Average
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Size of bale in press, 26x26x50 inches. Average
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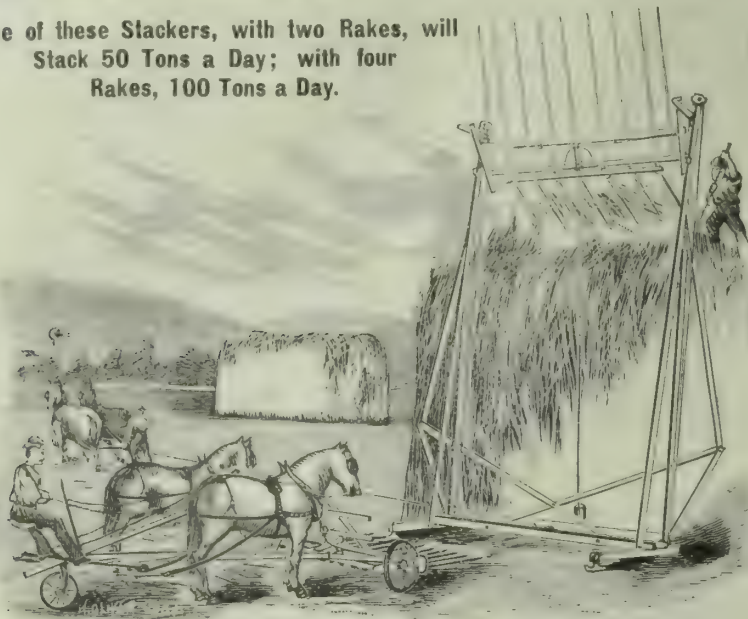
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One of these Stackers, with two Rakes, will
Stack 50 Tons a Day; with four
Rakes, 100 Tons a Day.



Jackson's Improved "Eclipse" Stacker and Loader. \$100.

With the rakes the hay is taken from the swath, when cured, just as left by the mower, or from the cock or windrow, if it is desired to rake it before it is cured sufficiently to stack; and when the Rake is loaded it is driven to the Stacker, the rake-teeth entering between the pitcher-teeth; the hay is pressed forward against the pitcher-head, the horses then back the Rake off, leaving the hay in a compact mass upon the pitcher, and return to the field for another load. As soon as the Rake is out of the way, the horse attached to the pitcher rope is started, elevating the load the desired height, when the latch-rope is pulled, and the hay is dropped in the center of the stack, the horse is backed up, the pitcher being brought back to the ground by its own weight, ready for another load.

I have adopted the "ECLIPSE" as my standard Stacker and Loader. I mount it on wheels, which are not shown in the picture. It builds stacks 30 feet high, and the load may be "tripped" at any point, after the horse is started, varying with height of stack, or of load on wagon. This feature is peculiar to the "ECLIPSE," and of great importance, enabling the farmer to stack hay in the windiest weather, as it does not carry all the hay up over itself, regardless of height of stack, but dumps it just where wanted, and the hay, while being elevated, is held so that the wind cannot scatter it.

It is light, yet strong enough to lift the heaviest rake load; easily and quickly moved; requires but one stake.

Weight, 1500 pounds. Price, \$100.

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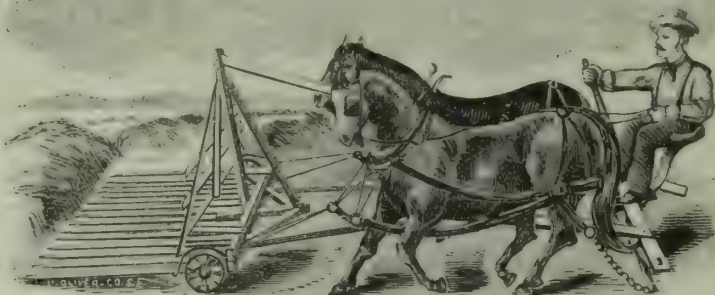
"ECLIPSE" HAY STACKERS AND LOADERS AND "ACME" RAKES,

MANUFACTURED UNDER THE "ACME" AND OLIVER PATENTS

—BY—

Byron
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SAN FRANCISCO,
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Jackson's Improved "No. 3" "Acme" Rake and Buck Combined. \$50.

Does the work of all other Hay or Horse Rakes, viz., wire rakes, sulky rakes, revolving rakes, buck rakes and "go-devils." It rakes from the swath, and leaves the hay in large bunches at once, requiring no hand-work. One man and two horses will keep up with two mowers, following the mower as soon as the hay is wilted enough to be raked clean with any rake. It rakes CLEANER. The hay will cure quicker without bleaching by dew or sun. Very large bunches can be made by pushing two or more rakes into one.

If raked and bunched by my Improved "Acme" Rake, the hay is in very much better shape to reload and deliver on the Stacker evenly and level (loading the rakes all they will carry to the stack), and spreads well over the stack, saving labor in stacking, because it has not been tangled, as it is when gathered with the sulky or revolving rake. It also saves waste of leaves and seeds, and gathers the hay clean of trash, such as old stubble, stalks and lumps of dirt. Bear in mind that wind-rowing hay with any rake is labor thrown away, and is detrimental to the heat and most economical working of the "ECLIPSE" Hay Harvesting Machinery.

These rakes, as offered for this season, are an improvement over all others. They have high wheels (34-inch), with wide tires (4-inch) (not shown in the cut), and the patented ratchet-lever device, which enables the driver to easily raise the heaviest load.

Weight, 650 pounds. Price, \$50.

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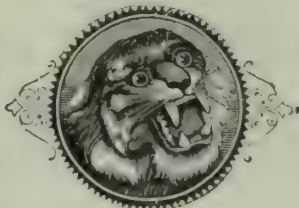
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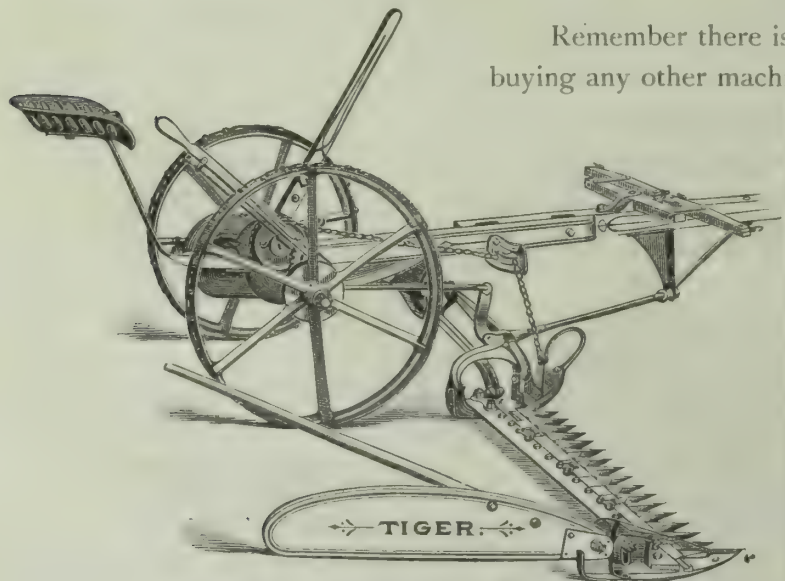


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Do not think it can be beaten."—PATRICK ROWAN, SALINAS, CAL.

"The best Mower in the market."—THOMAS ROBINSON, LOMPOC, CAL.

Remember there is but one GENUINE TIGER, and farmers should not be deceived into buying any other machine. Be fully satisfied that you are getting THE TIGER.



THE TIGER MOWER.

WHAT IT WILL DO.—It will do the best of work in all kinds of cutting, under the most trying circumstances. It is free from all side-draft. It is the quietest-running machine, the easiest to handle, the strongest Mower made. It has all the good points and none of the defects of the most perfect Front-Cut and Rear-Cut Mowers. It is the best in principle, best in construction, best in operation, best in durability and best in design and finish of any Mower in the market. SEND FOR FREE CATALOGUE.

TIGERS.



THE TIGER RAKE.

WHAT IT WILL DO.—There are 151,000 Genuine Tiger Rakes now in use. One hundred and fifty-one thousand prosperous farmers made happy in the continual use of a Rake that has never been equaled the world over. Its best advertisement is its use in your neighbor's field. Look about you! Prepare for harvest. Any boy or girl can drive it. The TIGER is the only Rake that has proved strong enough to stand the tests of a Self-dump Hay Rake. SEND FOR FREE CATALOGUE.

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PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 14.

SAN FRANCISCO, SATURDAY, APRIL 7, 1888.

\$3 a Year, in Advance.
SINGLE COPIES, 10 CTS.

Merinos Then and Now.

Solomon W. Jewett, who was a pioneer in the wool interest of California, was about 50 years of age when he brought pure-bred merinos to this State in 1859 as described in our issue of Oct. 1, 1887. Before that time he had done important work in aiding in the upbuilding of the merino interest of Vermont, and one of our engravings shows the portrait of the merino ram Fortune which Mr. Jewett owned in 1840 and which was counted one of the best sheep of his day.

Solomon W. Jewett traces his ancestry to their residence over 200 years ago in Lincolnshire, England, where they were wool-carders and weavers of dress goods. The members of the family who came to Massachusetts about 200 years ago pursued their vocation of carders and weavers. Afterward later generations of the family went into Vermont, and there the grandfather and father of Solomon W. Jewett were prominent flock-owners. Mr. Jewett himself began collecting a flock when he was seven years of age, and when he was ten years old he put out his sheep at an income of one pound each per annum. In 1830 the old homestead and a portion of the landed estate fell into his hands. By diligence in continued breeding and letting, at 26 years of age he was the largest owner of sheep in the State. He began to breed from thoroughbred Spanish stock in 1839, crossing up with Don Pedro, a two-year-old which produced, the next coming clips, 28 pounds in two brook-washed fleeces. In the meantime he procured Fortune, a still superior ram, a pure descendant on the side of the dam from the flock of Manuel Godoy, whose stock was considered by Consul Jarvis the most desirable in Spain. It was acknowledged in 1840 that Fortune at that date had never been excelled in the amount and evenness of wool. He was fairly covered with prizes and medals at the leading fairs of the time. The portrait of Fortune which we give on this page was engraved from a fine painting by Dr. Arthur W. Saxe, who did fine work in art in his old home in Vermont, and is now a leading physician in Santa Clara in this State. Mr. Jewett assures us that the engraving of Fortune which we present was the first illustration of a Spanish merino ram that ever appeared in American agricultural literature.

We use the portrait of Fortune for several reasons; first, the historic interest pertaining to it; second, the fact that the two gentlemen who were, one owner and the other artist, in Ver-

mont nearly 50 years ago are now well-known residents of California; and third, because by using Fortune in connection with engravings of two prominent merino rams of this day, our

g. g. dam bred by E. S. Stowell, Monroe No. 319 was sired by F. D. Barton's Wrinkley 273, dam by Reliable 285, g. dam by Torrent 71, g. g. dam by F. H. Dean's Wrinkley 58.



MERINO RAM FORTUNE, OWNED IN 1840 BY SOLOMON W. JEWETT.

wool-growing readers may have a chance to compare the past with the present in merino development.

The larger illustration represents two merino

They clipped last spring respectively 33 and 30 pounds, 345 days' growth of fleece. His ewes averaged about 16 pounds. He also has a ram lamb, 7 months old, sired by Monroe 319, that

Selling Fruit at the East.

We have had the privilege of looking over a lot of letters received by the secretary of the California Fruit Union in answer to the circular we published recently, asking all stockholders to state their views on the question of selling fruit at the East by auction. A hurried calculation by Secretary Fairbank from the pile of letters seems to indicate that the replies, merely considered numerically, are about ten in favor of the auction method to one against it, but considering the opinions in connection with the amounts of fruit those who hold them usually ship, and the result is wholly reversed, for while about a hundred letters in favor of the auction plan are from those who ship in the aggregate perhaps 100 carloads of fruit, the 10 letters against the auction are from those who ship several hundred carloads. This calculation is not put forth as accurate, but merely to indicate that while the prevailing sentiment of the stockholders is in favor of the auction, the sentiment of those who ship the most fruit is against it.

There is another consideration apparently involved. The stockholders in Vaca and Pleasant valleys are united in opposing the plan. Their argument is that as their fruit goes to market first they would have to stand all the risk of the experiment, which they do not propose to do. The census of opinion on the

matter results about as we expected—in fact we did not see that the auction method had much show of enactment under the new management of the Fruit Union. It is, of course, plain that the Union now has the shippers' interest predominant, and the shippers generally have not favored the auction method. The disposition of most growers so far as we have heard it is to continue with the organization this year and give the new management a chance to demonstrate its faith by its works. It is a fact that growers generally have not participated in the organization as was expected, but have left it to a few. Though the matter is of the utmost importance in its possible bearing upon fruit values this year, it is impossible for an outsider to predict the course which

will ultimately be pursued, and we can only await further developments.

It is thought that the population of California has doubled within the past 10 years. The census of 1880 gave the State 864,694, and that was before the great tide of Eastern immigration had commenced.



MERINO RAMS BATAVIA AND MONROE, PROPERTY OF L. C. WALDBRIDGE, KANSAS.

rams owned by L. C. Walbridge, Russell, Kansas. The pedigrees of the rams Batavia 209 and Monroe 319, which stand at the head of his flock, are as follows: Batavia No. 209 was sired by L. P. Clark's noted ram, No. 128, generally known as Money Maker, dam sired by Longfellow No. 85, and g. dam by Addison 100, g. g. dam by R. T. Sampson's stock ram, and

weighs 70 pounds. Mr. Walbridge is one of the most progressive breeders of the West, and his establishment is widely known.

California flock-owners have not had much to say of their affairs in the RURAL of late. When the free-wool issue is buried next fall they will no doubt be heard from again.

THE STABLE.

Breeding Trotters from Thoroughbred Sires.

EDITORS PRESS:—I desire to enter a mild protest against your "hoss" editor for republishing that contribution of Mr. De Groat's to the *Hollister Free Lance*. Mr. De Groat is evidently a breeder of thoroughbreds, and as such is entitled to hold them in high esteem and crack them up as much as he pleases, but when in so doing he finds it necessary to run down the trotting-bred stallions, it seems to me about time to call upon him to "hold his horses."

Almost the first words of his article constitute the golden axiom in breeding, "like begets like," but where does he get the next which he quotes, viz.: "The sire must be the superior animal; therefore if you would breed the highest type * * of either the racer, the trotter, or horse for all purposes, recourse must be had to the thoroughbred * * ?" I wonder what my friends in the cattle line would think of me should I proclaim in print "that if they would breed the highest type of either Holsteins, Jerseys or Polled Angus recourse must be had to the Short-horns, and claim infallibility in the verification of my assertion on the grounds that "like begets like!"

Mr. De Groat naively asks "Why will breeders seek this peculiar strain (of Messenger blood) if so desirable, adulterated as it is by the common horse of the country, when it can be found so pure and rich in the thoroughbred?" Now, I have no objection to the gentleman asking himself all sorts of conundrums if it please him and suit the *Free Lance* to publish them, but if he purpose answering them I should advise him to "give himself an easier one." Behold his solution: "Because old Messenger was a racer and a thoroughbred." This is wrong. It was not because old Messenger was a racer! The breeders of 30, 40, or 50 years ago were no greater fools than are the breeders of to-day, and we do not find the breeders of to-day purchasing thoroughbred stallions that have proved their worth at the blood-horse meetings to improve their trotters. If the gentleman himself were undecided which of two horses he should use to cross on his mares for the purpose of raising trotting colts, would he select that one which, in repeated trotting contests, bolted with his driver and raced from wire to wire, or would he prefer the competitor that trotted fairly and squarely around the circuit without hitch or break? Would he deduce from the "racing" proclivities of the first that he must be a better and faster trotter than the second, and be more likely to beget trotters, i. e., to transmit trotting instincts which every evidence tended to prove that he did not possess? If so, why quote the principle that like begets like?

And again I say wrong, Mr. De Groat, to the second assertion contained in the reply to his own question, for old Messenger was not a thoroughbred, as Mr. John H. Wallace has very satisfactorily demonstrated. In other words, Messenger himself was "adulterated by the common horse of (not this) country" (but of England), and hence it does not follow that the "peculiar strain," which breeders of trotters consider "so desirable" in him and his descendants, "is to be found so pure and rich in the thoroughbred." In fact, it might not be found there at all, as the peculiarity and desirability of the strain did not consist in his racing properties, which he doubtless inherited from the thoroughbred portion of his ancestors, but were based on the trotting proclivities of himself and his descendants, and it is more than probable that he inherited these from what Mr. De Groat designates as the "adulterated" or "common-horse" crosses in his breeding. But whether they were or were not is a matter of slight moment at the present day; suffice it that no thoroughbred or quasi-thoroughbred has produced such a strain of trotters as did Messenger, and that the trotters of to-day are vastly superior to those sired by old Messenger himself or by any of his sons or grandsons. Then why go back to the point even where we started to improve? Does Mr. De Groat to-day use a pole and a cross-stick to plow his fields? Does he cut his hay with a scythe? Does he thrash his grain with a flail? These questions seem and are absurd, but are they such in any greater degree than Mr. De Groat's appeal in behalf of the "thoroughbred's" trotting instincts?

We need not go very far from home to refute the claim that even an inbred Messenger must necessarily be the best trotter and producer of trotters. Gov. Stanford has a remarkably inbred Messenger in Gen. Benton. There is not a single "common horse" out-cross in his breeding, and yet where does he stand as a sire of trotters when compared to Electioneer, to Geo. Wilkes, or to dozens of other trotting stallions?

I would not wish to be understood as belittling Messenger, even though he were a thoroughbred. Messenger was undoubtedly the fountain-head of the "trotting gait," and the judicious inbreeding of his immediate descendants caused that gait to become an "instinct" so intensified that the later members of the family have been enabled to transmit it to their descendants in an ever-increasing ratio, until, in some instances, even when the progeny was

from mares which for 20 generations or more was "running bred," the issue has shown extraordinary trotting powers, and has entirely overcome the racing instinct it should have inherited from the dam.

I think I hazard but little in predicting that this reversion to the Messenger strain through Gen. Benton at Palo Alto will ere long be admitted immeasurably more valuable than all the infusions of Planet, Glencoe, Lexington, Don Victor and all other thoroughbred blood, rich, pure, sound, worthy and (as regards racing) proven though it be that has been used at that great breeding establishment.

To "return to our muttons," as our Gallic friends would say, San Benito county must be poorly off indeed if the trotting stallions there are all, or nearly all, "without beauty and finish, with big ugly heads, coarse limbs, curby hocks, upright pasterns, sponge-boned, flat-footed and faint-hearted." There can certainly be no excuse for this state of affairs at this late day, with the innumerable trotting stallions of a higher type bred and for sale at reasonable figures in other parts of this State. If Mr. De Groat counts as a "trotting" stallion every cross roadster "in the country" which is said to be by Bill Jones out of Tom Brown's "Messenger mare" (who died last spring), I will readily admit that his "picture of trotting stallions" may be more or less true, but in fair play, if nothing else, he might have extended it so as to include the "cross-roads" thoroughbred stallion as well. His omission to do so, and his attempt on these "false" premises to usurp for the thoroughbred the uses and purposes of all trotting stallions, are, to say the least, in bad taste.

Not every trotting stallion, it is admitted, can be expected to prove himself the equal of Electioneer, of Guy Wilkes, or of Sultan; but neither is every thoroughbred a Norfolk, a Joe Hooker or a Grimsdale; and the fact of any trotting stallion being inferior to the three first named does not place either or all of the thoroughbreds mentioned superior to him as a begetter of trotters.

To use some of the gentleman's words, "it is highly amusing to one at all familiar with the stock of the country" and the breeding of trotters to read the claims set up by some breeders of thoroughbreds that to breed the highest type of trotters recourse must be had to thoroughbred sires.

W. P.

FORESTRY.

Report of Head Forester for March.

At the last meeting of the State Board of Forestry, H. Rowland Lee, head forester, presented the following report:

Hon. Abbot Kinney, Chairman State Board of Forestry—DEAR SIR: I respectfully submit my third monthly report of the work done and supplies furnished at the Santa Monica Forest Station.

The month ending March 20, 1888, has proved remarkably favorable in the locality for tree-planting and for vegetation generally. The work that has mainly received our attention during the month has been the final preparation of the grounds, the establishment of a water system by hydraulic power and the planting out of a large variety of trees, the young seedlings receiving unremitting attention. We have now received a staff of help which qualifies us for the important duty of transplanting our stock, and whose experience in this respect will render their service and ability more efficient in the future. Seeds which have been sown this season proved highly successful, with one exception (*Catalpa speciosa*), which seed must have been very bad, as the variety is easily grown, and seeds of the same variety procured from another source proved successful.

During the past month we secured a hydraulic ram with piping, which raises water from the creek to a height of 125 feet, a small stream, however, but the same power will fill a 2-inch pipe and discharge at 110 feet elevation. Eventually, when a better water system is established, the whole machinery will continue of service, and in the meantime will cost nothing to keep. The lumber procured was used in building a shed for wagons, tools, etc. The surveyor's map has just been finished, and the bill for the same submitted.

We have planted in the vicinity during the month over 3000 trees for experiment, which comprise those suitable for timber, sea-coast protection and other valuable properties. This number is large, when it is considered that the trees have to be purchased and shipped long distances. In future, when we have our own stock on hand, four times that number will be a moderate calculation and many left for distribution. Answers to queries respecting the planting and cultivation of forest trees have continued during this month as in the past, by mail, notes of which are made in a book kept for that especial purpose.

A donation of forest tree seeds has been thankfully received from R. Douglas & Sons, nursery and seedsmen of Illinois, which will receive due attention. Within the last week a quantity of trees have arrived at the station in a very poor condition for our work, being in all instances improperly labeled, consequently much of their interest will be lost to us until the trees reach maturity, when the trees can be properly named.

Matters at Santa Monica Station are now well under control. In a few weeks we will

require more room for the quantity of trees we have to handle, and from the general aspect of affairs we are fully prepared to commence operations in another field. As evidence of the rapid progress of our work, I may state that what appeared twelve months ago in the shape of blossom is to-day being manipulated as young forest trees, and in the course of another couple of months may be planted in their respective forest positions.

H. ROWLAND LEE, Head Forester.
Santa Monica, Cal., March 20, 1888.

POULTRY YARD.

Chicken-Raising in Southern California.

Whether erroneous or otherwise, it has become an accepted fact that chickens cannot be successfully raised in Southern California. If this is the case, then the climate must be more or less enervating, for nowhere in the colder sections of the States, or even in the South, is the mortality of the feathered tribes brought into question—at least I have never heard so. I have always been interested in chickens, because I believe that, like babies, their care belongs more to women than to men, and because, too, their growth presents an entertaining study; but since I have resided in Los Angeles I have given them more attention than ever before. The result of my investigation is the conviction that chickens can just as well be raised here as anywhere else. To me it seems that the whole trouble originates in palpable indifference, and that the "swell-head," which is affirmed to be climatic, is due to bad accommodations. The days are warm and the nights are cold, therefore through the day the chickens should have shade, and through the night snug shelter. But they have neither; they are simply turned loose to provide comfort for themselves, and to forage as best they may; while cleanliness—which in the care of chickens certainly is next to godliness—is utterly ignored. Chickens in Southern California may not be a bonanza, I do not think they are anywhere; but looking at the matter in a purely common-sense point, there seems to be no good reason why they should not be made to yield a fair profit. To begin with, though, they ought to have good houses, not low, open sheds made of lath, or, worse still, dirty old barrels rolled upon their sides; but substantial houses such as we find on every farm in the East; and these houses should be kept clean and dry, and at night warm. The roosts should be cleaned every day, the nests very often, while lime should be abundantly used every week. Then too, carbolic acid and coal oil should be faithfully resorted to, as preventives of lice, while a little coal oil mixed with soft food ought to be administered once a week as a tonic for the stomach and bowels. Besides, fresh water and plenty of it should always be within reach of the fowl. Much that is written for the direction of the inexperienced in the growth of poultry serves only to confuse the mind and to make the investment an exorbitant loss instead of a moderate gain. But there is no doubt but that a varied diet upon which all such guides insist is desirable. In the absence of worms, too, meat should once a week be provided; and in the case of laying hens milk is a highly productive beverage. But the young chickens are perhaps the most delicate members of the family, and therefore should most carefully be looked after. Like babies, they should be fed regularly, and also should be kept warm and dry. During the day their coops ought to be cleaned and aired; while before the little ones retire to them at evening-tide, they should be closely covered with some weighty fabric which will entirely shut out the heavy dews. In all climates, and with the most skillful handling, chickens will at times become the subject of epidemics. Against such calamities even the most careful cannot provide; but it is my belief that if in Southern California chickens were attended to instead of neglected, the demand would not, as it now is, be greater than the supply. — *Belle Smith Meade, in Los Angeles Times.*

The Coyote.

The author of the following essay on the coyote, which appears in the *Fresno Examiner*, is clearly no admirer of that nocturnal prowler and howler:

The animal is sometimes confounded with the American wolf, but while the latter has no noble elements in him, it would be injustice to the *canis occidentalis* to ally him in kinship with the wolf except through Noah's Great Aggregation of Zoological Wonders and Congress of World-beaters—ten allied shows in one—organized for a memorable rainy season. The coyote, like the late Senator Nesmith's mule, has no pride of ancestry, but, unlike the mule, he has no fears of a paucity of posterity. There is, probably, nothing meaner looking in the animal kingdom than the coyote, and he travels under no false colors, for he is as mean as he looks. Unlike the jack-rabbit, the coyote's depredations are confined to the "witching hour of night," and his favorite point of attack is the hen-roost. How he revels in the bloodshed of the Coshin, the Plymouth Rock and the

dunghill! The younger the poultry the better suited is the coyote. There is no case on record of his ever having attacked a game chicken, for that would involve a certain degree of courage, and of this he is as destitute as he is of fat in his unjuicy body. There is no nutriment in him; and a green fly or a gnat would as soon think of stealing a meal out of a broken-down wagon as getting a mouthful out of the coyote. He is a sneaking, curriish wretch, hiding as best he can in the daytime, after the manner of the Chinese highbinder, many of whose worst characteristics are similar to his own, and generally confining his attacks to moonless and starless nights. He will not drive, or rather he cannot be driven, for one can never get near enough to him for such a purpose, and a coyote drive is, therefore, among the impossibilities. The coyote is a pioneer in this country, claiming a sort of prior residence, and, doubtless, relies on the argonautic plea of immunity from attack through the rifle or strychnine. Fortunately for Fresno county the coyote family is not as numerous as formerly, and when the Logan of the tribe disappears there will be cause for rejoicing.

Keeping a Watch-Goose.

The following dialogue, which we find in the *Oakland Tribune*, may be of interest to poultry-keepers in some places:

"They got a couple of Inghram's pet quail the other night," remarked Captain Thomas, referring to the fact that thieves had stolen two of the dozen quail which Prison-Keeper Inghram recently brought down from the country.

"Have they scooped yours yet?" inquired Special Officer Scoville.

"Not much! Inghram gave me a pair, and they are so tame that I let them run about the kitchen during the day. At night they roost in a cage made by putting wire over the open end of a dry-goods box. But they won't get those quail as long as that goose is on deck."

"So you've got the goose yet, eh?" commented Scoville, sitting back entirely satisfied.

"What's the goose got to do with it?" asked the police reporter.

"A goose!" snorted Scoville. "What's a goose got to do with it? Well, a goose is just the best thing made yet when it comes to watching a chicken roost. There isn't a chicken-thief in this State so fly that a goose won't squawk on him every time. Why, any of these professional chicken-thieves will not go near a roost where they know a goose is kept with the chickens. It is a game they can't beat. The only thing that can get away with a goose is a fox. He'll play dead, and the bird, which has more curiosity than any other thing that walks, will come up to see what's the matter. Then it loses a life in the pursuit of knowledge. But the chicken-thief ain't foxy enough by a long shot. Those quail will be there as long as the goose stays."

THE DAIRY.

Means and Methods on Jersey Farm.

We gave last week a portion of an article written by R. G. Sneath for the April *Overland* on the subject of "Dairying in California." The following paragraphs are selected from the closing portion of Mr. Sneath's article, and we illustrate them with engravings made by the Dewey Engraving Co., showing the arrangement of buildings, etc., on the two portions of Jersey Farm. Mr. Sneath's remarks on the plan and construction of these buildings and his deductions from his experience in feeding and handling dairy cattle will be interesting to all dairymen, whether they furnish milk for city sale or use it in the manufacture of butter or cheese. We quote from Mr. Sneath as follows:

Within a radius of 20 miles from San Francisco are situated numerous dairies that supply the city with fresh milk and cream. Most of these are south of San Francisco, on the peninsula, and in San Mateo county. They supply the better class of trade, which desires good, wholesome country milk, and is willing to pay higher prices than city-made milk sells for. A description of the "Jersey Farm Dairy," the largest and best-appointed dairy in the State without doubt, will serve as an illustration of what can be done.

This dairy was established in 1875 and is situated near San Bruno Station, on the line of the Southern Pacific railroad, some 10 miles south of the city, in San Mateo county. It contains some 3000 acres of rolling land, most of which, having been seeded to rye and orchard grass, produces a large quantity of excellent pasture and supports over 1000 animals.

Between 600 and 600 cows are milked, producing about 1200 gallons of milk daily, the average to the cow being from 2 to 2½ gallons each daily during the year.

There are two main dairy barns, 50x250 feet each, two stories high, and located about 1½ miles apart.

There are four rows of cows the length of the barns, each two rows facing each other, and secured by stanchions. A double line of feed-boxes extends through the length of the barns between them, excepting in the middle of the

barn, where an open space about 30 feet square is left, in which to cool and handle the milk.

The floor is of concrete, shaped to facilitate drainage to traps that lead to sewer pipes under the floor, which carry the liquids out to the fields. The floors are washed clean twice daily with a hose.

The barns are located on elevated ground, so that the liquid manure may be conveyed by gravitation—after being reduced by water—to any portion of the field.

An iron-rail track extends through the center of the barns lengthwise, on which a canvas box-car containing the hay is moved, and a tight wooden box-car for the slop feed. All of this is dealt out by several men as the cars are moved along, the double row of feed-boxes being filled from the center aisle, through the stanchion openings.

The cows are then let in by their respective milkers, each cow taking her usual place and the stanchions closed on them. Over each string of 36 cows is a blackboard with the number of each cow's stall, the horn number of the cow, and the date of her calving, marked with white chalk, and the stall number permanently painted. There being just eight strings of cows, numbered one to eight, it is only necessary to mention, in speaking of a particular cow, the number of her string and stall, by which even a stranger can find her without difficulty. Each cow has her record number branded with small figures in the rear side of her off horn, so that the milker can readily see it when at her side.

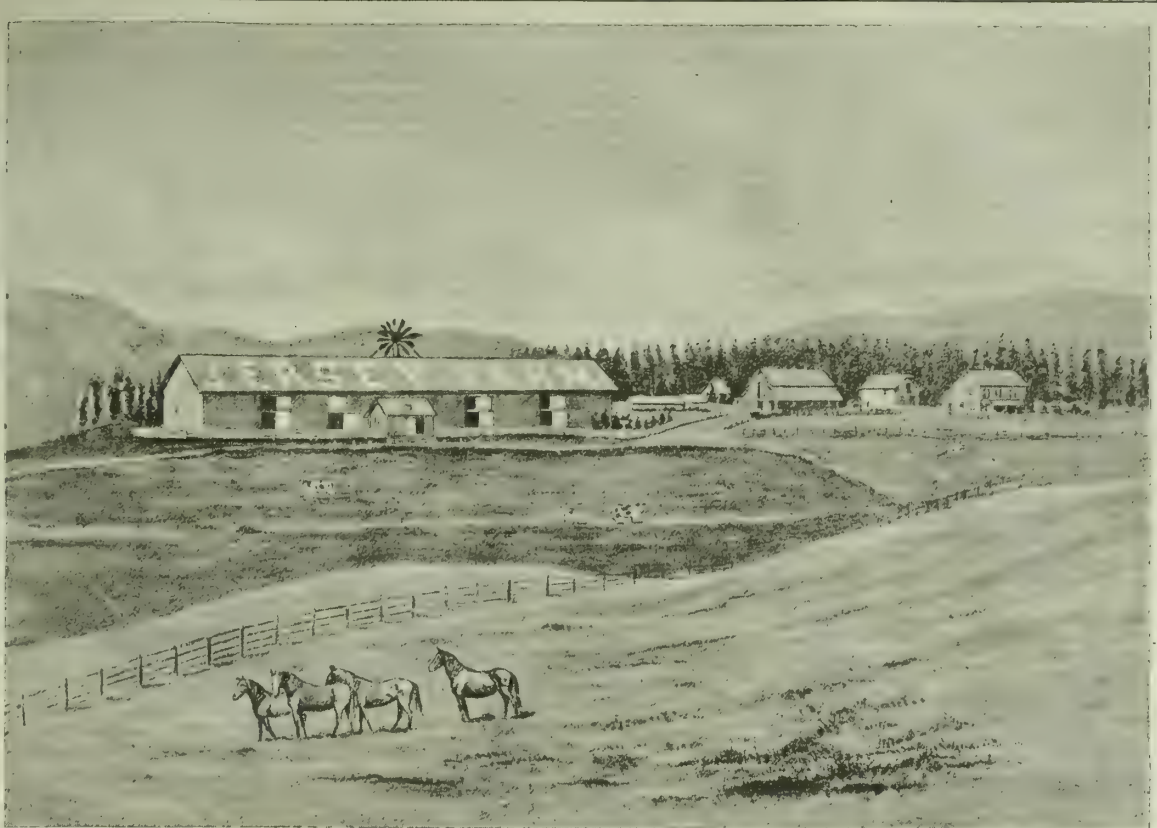
One barn record book contains all the numbers of the cows, and every fortnight each cow's milk is weighed and entered opposite her record number, by which means a fair estimate may be made of the quantity of milk given between calving or by the year, and those not giving 3500 pounds between calves are now being marked for beef. This standard can be raised to 4000 pounds by condemning about 100 cows out of say 900 milkers, and this will be done during the next year in the ordinary course, by killing from 75 to 100 head as beef cattle for use on the place. The record will then show the range to be from 4000 to 10,000 pounds of milk per cow for the period between calving. Another record shows the daily operations of the dairy in a line for each day of the month, ruled in columns, to cover the following facts: The day of the month, the number of cows milked, the number of fresh cows taken in, the number of dry cows going out, the number of three-gallon cans of milk in the morning, number at evening, quantity and quality of hay or green feed, quantity and kind of ground feed, condition of pasture, state of weather, number of calves on milk, and any other matter that might have an influence on the quantity or quality of the milk. Numerous experiments have for many years been made with various kinds of feed. Cooking food on a large scale has been thoroughly tried and abandoned, as it produced no more milk than soaking the same in water.

Sugar beets, mangel-wurzels, carrots, potatoes and squash, both cooked and raw, have been tried, but none of them would take the place of good hay and ground feed, or cultivated grain feed, such as corn, barley, wheat, oats, and the grasses. Molasses makes fat, but does not increase the milk.

Cornmeal should be ground fine, and soaked in water from 24 to 36 hours, to obtain the best results. Cornmeal and bran, or middlings, about half and half, have been found to make the most and best milk per pound of food; as compared with wheat, oats, barley, and rye—the food value ranging in the order stated.

Full feeding consists of 20 pounds of hay and 10 pounds of ground feed daily, besides a fair pasture-ground—and as the pasture improves, the dry feed is shortened.

Soiling commences with green barley about the middle of March, and ends with corn in November, taking both crops from the same land. Ensilage of green barley has been tried and abandoned, and this process of preserving green feed is not considered a success in this State. Green cornstalks will make an unpleasant sweet milk when fed largely. Beets and potatoes make milk flat and watery. Alfalfa, turnips and cabbage



UPPER RANCH, JERSEY FARM, SAN BRUNO.

give an unpleasant flavor; squash is too fattening in feeding the large quantity required to keep up the flow of milk.

The farm is divided into numerous fields and pure cold spring water is obtained from the hillsides and conveyed to large troughs in every field by iron pipes. Two reservoirs for catchment water, holding 40,000 000 gallons each, have been constructed at an elevation of 225 and 425 feet above the building on the lower part of the ranch, for motive-power, irrigation and drinking purposes. Several miles of macadamized road and lanes have been built through the farm to keep the stock out of the mud during the winter season, as so many animals in going and returning from pasture twice daily would soon make roads of earth impassable.

The milk cans are washed with revolving brushes by water-power, and the hay is cut and the cream separator run by the same power. The first milk drawn is run through a De Laval separator, and the cream is then ready to be shipped with the milk. Such cream is much sweeter than that raised by setting, and entirely free from any foreign flavor.

About 150 calves from the best cows are raised each year. Thoroughbred Jersey bulls were used for ten years in crossing with common American-grade cows, while the last two years thoroughbred Holstein bulls have been used. The calves have a warm, well-lighted shed, with well-drained, concrete floors for cold, rough weather, and a well-irrigated ryegrass pasture with fresh grown grass the year through.

Calves are not allowed to suck except in spe-

cial cases. When a very choice calf is desired, it will be given to a cow that is sound, but either a moderate milker or one difficult to milk. Calves grow much faster and do better when raised by a cow.

Calves raised on skim-milk alone are generally of little value, even when the milk is fresh and warm from a cream separator. They run to paunch, are feeble, and will not withstand unfavorable food or weather after leaving their milk.

The method of raising calves on Jersey Farm is to give straight milk as it comes from the cow for the first month, half skim-milk the second month, and all skimmed, with hay, grass, and bran after that.

Many calves are lost among the butter dairies by their cows nearly all coming in with the new spring grass. Such calves, after they reach an age to take care of themselves, find the grass dry and parched up, and quite unsuitable for their delicate stomachs. They consequently become enfeebled, and the cold rains of fall and winter carry them off.

By starting calves in December and feeding them on milk and other food until February, they then have a full season on grass to prepare them for the dry grass of fall and early winter, and with this treatment grow strong and hardy.

The ration for a young calf is about two gallons of whole milk daily, or three to four gallons of skim-milk. The value of whole milk at a fresh milk dairy farm cannot be estimated at less than 15 cents per gallon, which is 30 cents daily or nine dollars monthly, and somewhat less when the skim-milk is considered.

In the spring of the year on good grass, cows give an increased quantity of milk, and at the same time there is a lessened demand for milk from the city, by reason of people going to the country for recreation and pleasure. This surplus milk is then used largely in raising calves, which are provided for later on with plenty of green grass by means of irrigation.

For this purpose about five acres of good land is enriched with barnyard fertilizers, plowed deeply, cultivated fairly, and seeded to English ryegrass. Iron pipes have first been laid about the place for the introduction of water. It is then sprinkled daily through large revolving sprinklers similar to those used on lawns. The grass

grows rapidly and it is eaten when fresh and tender, and greatly relished by the calves. Such grass, with a little hay, bran and skim-milk, and a warm shelter at night or in stormy weather, does not fail to raise strong, healthy calves that make excellent cows.

Orchard and rye-grass, being perennial, keep growing most of the year without irrigation, and are, no doubt, the best kind of grasses that can be used in the ranches along the coast.

They have stood the test now for 10 years without reseeding the fields, except on one occasion of a dry winter, when mice and gophers became so numerous as to destroy a large proportion of the grass roots. The pests were destroyed by securing about 250 cats and scattering them about the fields in small colonies, each colony being provided simply with a box-house placed near a spring of water. Afterward seed was scattered over the pasture, and harrowed in. Sometimes when the grass becomes thin or scattered it is allowed to go to seed for a season to thicken the growth.

Alfalfa does remarkably well in stock-raising, but does not answer for fresh-milk purposes in supplying cities, as it imparts an unpleasant flavor to milk and the milk will not keep sweet long.

The milkers receive \$25 to \$30 per month and found, and are generally Swiss. They commence milking at 8 A. M. and 8 P. M., and take 2½ hours to milk 30 cows each. They are mostly strong, healthy young men, and generally do not speak English. They are much more reliable than men of other countries, and do not drink and squander their time or money.

There is a workshop, well fitted with machinery run by water-power, and a blacksmith, tinman and woodworkman make the wagons and milk cans and do all the repairs on the farm. About 75 men are employed altogether, and about the same number of horses and mules. From 1500 to 2000 tons of hay and about the same quantity of mill feed are used annually. A good mill to grind the grain, and ample warehouse room to store it and the hay, are provided.

About 20 wagons are used for the business in the city and on the farm, and wagon-building and repairs constitute a large item of expense.

The horses used—and a great many are used up annually by being driven rapidly over rough stoned streets—come generally from the mountains, and are broken in on the farm at about four years of age to work both single and double. They are almost always perfectly sound and extremely hardy.

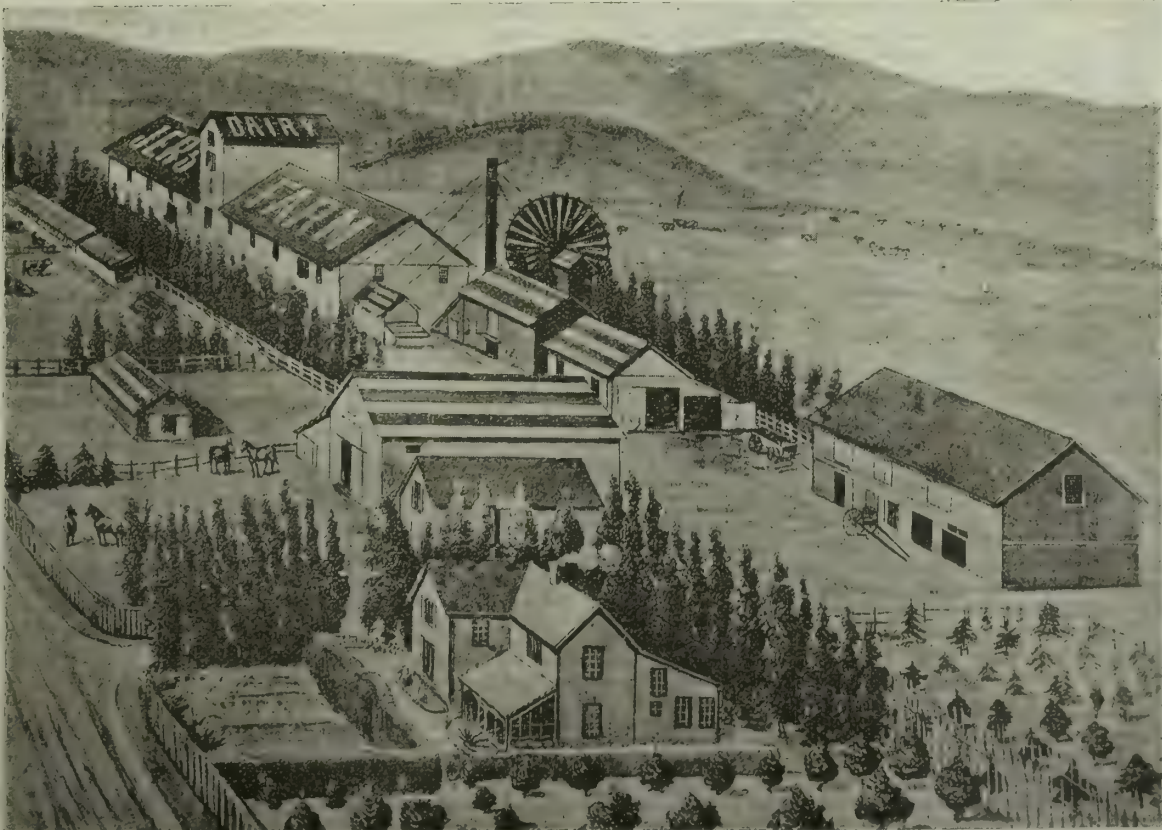
They come from good stock and bring from \$70 to \$125 each in the city, not even halter-broken, but when properly handled make kind and useful animals.

The milk and cream is conveyed to the city by large teams and thoroughbred wagons that can carry 200 cans at a load twice daily, going about five miles an hour. Most of it is delivered at a central depot to small delivery wagons belonging to the farm, and the remainder is placed in cool tanks for public sale.

About 1200 families are supplied by the delivery wagons, besides hotels and restaurants. The milk brings a higher price than that from any other dairy, and is much sought after on account of its superior quality.

What cream and milk is left over on a fresh arrival is taken to the butter room and churned by electrical-power in a large square churn. About 21 pounds of milk make a pound of butter, and the butter and buttermilk, being fresh daily, sell at good prices.

Many people visit the depot daily in search of health, as milk is growing rapidly in popular favor as a remedy for many diseases.



HOME RANCH, JERSEY FARM, SAN BRUNO.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Telegraph Legislation.

On the 28th Dr. Green, president of W. U. T. Co., again addressed the Senate committee on Spooner's Interstate Commerce bill. He said he did not appear to oppose a fair and reasonable enactment for the regulation of the telegraph business. If the telegraph were commerce in a constitutional sense, and the Supreme Court had decided that its business is commerce, then there could be no question of the power of Congress to enact a law such as that proposed. Ordinarily his company would desire to be let alone, but under the circumstances it was not averse to such an enactment as proposed, with certain objectionable features stricken out. He was led to this conclusion from the fact that his company owns and operates perhaps seven-eighths of all the telegraphs in the United States, and is therefore an apparent monopoly, while in point of fact it has no exclusive franchises, no legal privileges that anybody else cannot get. But the telegraph had drifted into a combination, not from the grasping efforts of any one man or set of men, but from the necessities of trade. Rates have been cheapened and business greatly improved in its facilities and promptness of service.

He said there were gross popular errors regarding the maintenance of telegraph property. The Government could not send messages for ten cents and make the lines self-supporting. He believed the Western Union property could not be duplicated for its cost.

He said, in answer to a question, that no higher tariff was charged between points on the lines from New York to Omaha than between the terminals. If the second section of the bill gave the Interstate Commerce Commission the right to say what charges were unreasonable, it would amount to a confiscation of the company's lines. He would substitute the word "exorbitant" for "unreasonable." The long and short line clauses should be modified by the insertion of the qualifying words, "under like circumstances."

In Section 5 the bill provides that all parties, excepting news service, should be charged like rates. In that respect it differed from the Interstate Railroad bill, which made a number of exceptions, relating to charities, employees, officers, etc. The Western Union had contracts with 600 railroads, for which free and half-price services were rendered in return for transportation services. The Western Union wanted a provision like that in the railroad bill to cover the railroad contracts. * * *

In conclusion Dr. Green addressed himself to the Anderson bill, requiring the Pacific railroads to maintain and operate their own telegraph lines, and criticised some of its features. The effect of the measure, he said, would be to decrease the revenues of the roads. By such legislation the railroad companies would be the losers, the Government would be the loser and nobody would be benefited.

Col. R. G. Ingersoll, representing the Postal and United Lines, said to the committee: These lines are now substantially under one management. They met the Northern Pacific road at St. Paul, the Union Pacific at Omaha and the Santa Fe at Kansas City. At these points the lines he represented had to stop. The lines over the Pacific railroads were all operated by the Western Union, consequently the only contention was whether the lines of the company which he represented should have equal facilities over roads built by the people under the various Pacific railroad Acts, or whether they must pay tribute to the Western Union from the terminal points he had named. There was still another question, whether his company could even be allowed to put their own lines along these roads. * * * He did not want the Western Union to stand in the bars at Omaha like a contrary steer and say: "We have all these rights. All this right of way belongs to us to use, and these railroads built for the people shall treat us in a certain way. It shall haul our poles and wires and perform other services for us, and if any other company tries to build a line it shall charge an exorbitant price for hauling the material."

The Western Union had a peculiar philanthropy of its own. It did not wish anybody to live if it could help it. It did not suppose that his company could make a contract with the Canadian Pacific or that it could raise the necessary funds to build a line from British Columbia to San Francisco. While the Western Union was in doubt as to the absolute health of competition it sat down to wait until it died, and if it did not die in a reasonable time it proceeded to do what it could to hasten its demise. The monopolies all declared that they are public benefactors; that they would cheapen products. The Standard Oil Company said: "We are a blessing. We give you oil cheaper than you can get it in any other way."

General Swayne said if Colonel Ingersoll wanted to build a line on the Pacific railroads he did not need the help of Congress. There was on the statute-books authority for any individual to compel the Pacific railroad companies by mandamus to do anything which they were required under the statute or common law.

The committee adjourned.

Grange Work and Progress.

[By Mortimer Whitehead, Lecturer National Grange.]

In as few words as possible the Grange is teaching the farmer to "mind his own business," as a producer, as a man and as a citizen. In a single sentence, the Grange means education. It teaches the farmer that he has mind as well as muscle, brains as well as land, and that it pays him to cultivate the one as well as the other, for "Knowledge is power."

It is teaching the farmer not only how to be a better farmer, how to get better returns for his labor, how to grow a crop, but how to sell it. Not only how to earn money, but how to spend it to the best advantage. By organized effort and on business principles he knows the cost of goods and the value of his products; and how to open up the channels of trade so as to reach the best markets. Grange banks, Grange fire and life insurance companies, Grange co-operative stores, creameries and schools organized and run by farmers as a part of their business, have been in successful operation for years. Grain warehouses, grain elevators, freight lines, fruit-growers and other "exchanges," and dozens of other organized business helps, are springing up more and more in all parts of the country. The Grange has and is making the farmer and his family more social.

It Makes Brighter and Happier Homes.

It benefits its members mentally, morally, socially and financially. Temperance is supported; charity is a prominent characteristic. It makes the farmer better to himself, better to his neighbor, better to his country and better to his God. It has by none of its teachings ever made a man or woman worse, but it has made hundreds of thousands better. Its lessons all develop the good, the beautiful, the true. The half has not been told of its good work, and it can and will do more in the future. Every farmer and his family should become members. It will return dollars for every cent that it costs if its advantages are improved.

The Necessity of Continuous Work

And discussion of public questions in the Grange is most forcibly shown in the following extract from a recent editorial in the New York Tribune: "Farmers should come into more frequent contact than now seems to be the custom. We have received many letters in which a remote date in the past is mentioned as that of the last meeting of the Grange, and an equally remote date in the future as that of the next meeting. This may answer certain purposes of the organization, but events move rapidly, and while Congress and many State Legislatures are in session constant watchfulness is necessary." This reminds farmers that the interests of other classes are constantly looked after in State and National legislation, and that organization and watchful care on the part of farmers is an absolute necessity for the protection of their best interests.

The Social Feature

Should receive special attention. Viewing the Grange from this standpoint, it is one of the most progressive of organizations. Within the gate woman is man's equal and eligible to any office. The Matron is seldom greeted with, "I'm going to the Lodge;" but often these words greet her: "This is Grange day; let's hurry and be on time."

Oh! that more of the tired mothers on farms might be greeted thus, and urged to a day of rest; for far from all belong to the Grange.

Brothers, if you only knew how tired, how soul-sick and weary wives are when kept at home week after week, sometimes month after month, housed with the little ones, the manifold and perplexing cares of which would cause you to quote "Old Grumble" most earnestly, surely you would try harder to get your loving, self-sacrificing heart-companions to mingle more in society, and not practice the schoolboy dream of "If I had a little wife I'd put her in a pumpkin shell and let no one come nigh her." It is rather a romantic dream; but the bliss is seldom such as the happy dreamer presumed.

THE MINNESOTA FARMERS' ALLIANCE created an odd political sensation on the 29th ult. The Democratic platform was adopted and President Cleveland was emphatically indorsed. Albert Schepper, a wealthy St. Paul Republican, was unanimously named for Governor. This indorsement possesses especial significance from the fact that it now places Schepper in the field as the candidate of the farmers and ahead of Merriam as the ring candidate. Unless the latter's money can accomplish more than the farmers' influence it places the fight between Schepper and McGill. A curious fact is presented of an organization indorsing the Democratic President, adopting the Democratic platform and placing on

its ticket the Republican candidate. The Alliance issued a ringing address to the people, in which it is asserted that it had in the past presented its grievances to the State authorities and State conventions, only to be rewarded with fair words and broken promises. To remove this state of things it advises the support of Albert Schepper for Governor. The Executive Committee of the Alliance, comprising members of both political parties, adopted resolutions indorsing President Cleveland's views on the tariff issue, denouncing the protective tariff and calling for its immediate repeal on all raw material and necessities of life.

Strangling the Trusts.

A "Trust" bill has been introduced in the New York Legislature that proposes to tax all the mischief out of this class of monopolies in the necessities of life. The experiment is a novel one, but there is no reason to doubt that a policy of taxation could be devised which, if rigorously enforced, would overthrow the system of trust monopolies. The effect of this policy would be not only to protect the public from extortion, but to relieve individual enterprises of a dangerous and remorseless enemy. A good round tax upon every "trust" certificate, while exempting from the tax all persons engaged in like business outside of the "trusts," would be a wholesome and righteous discrimination. It would be crushing a most odious form of despotism. It may be objected that such a policy of taxation would be a State recognition of a form of monopoly that should not be allowed to exist. This is the same kind of objection that radical temperance men use against the high-license system on the liquor traffic. But if we expect to do any good we must take the world as it is, and not sulk like Achilles in his tent because we cannot have everything our own way. It is a great deal better to recognize an evil and endeavor by surgical legislation to extirpate it than to hurl idle anathemas at it. If this hideous shape of monopoly can be taxed out of existence, by all means let it be done. It may save the people of this country from ultimately having to resort to harsher means. That the people of this country, conscious of their power, will long submit to this gigantic mode of public plunder cannot be expected.

Grange Meetings.

As we go to press on Wednesday the Executive Committee are gathering for the semi-annual meeting. We expect a good success of the Deputy Lecturers' meeting on Friday, and will report in our next issue. Business of importance is on hand. The times are auspicious for work in the California Grange field. Let all Patrons come forward with new zeal for the season, and with united hearts and hands we will make a good harvest for the year of 1888.

It is going to be a grand year for this State. We have great public responsibilities, which we must each and every one answer for.

A rousing Grange meeting is anticipated Saturday, April 7th, at San Jose, with several officers of the State Grange present.

Temescal Grange meets the same evening and hopes to have a good sprinkling of distinguished visitors also.

The weather is now likely to be fair, and we hope to receive reports of good meetings from all quarters.

Enterprise Grange.

EDITORS PRESS:—Enterprise Grange had quite an interesting meeting this afternoon. The Third Degree was conferred on a class of three young brothers. Several brothers and sisters occupied the time devoted to Good of the Order with music, recitations, essays and short impromptu speeches. The Worthy Lecturer appoints several members every meeting to be prepared with something for entertainment the following meeting, and in this way the meetings are made interesting. New names are being brought in nearly every session, showing that there is considerable interest taken in the welfare of our Order. Preparations are being made for our annual reunion, which will take place April 20. All Granges are cordially invited to attend.

Fraternaly, ETTA PLUMMER,
Perkins, March 17. Secretary.

FORFEITURE OF LAND GRANTS.—It is reported that the Public Lands Committee of the House has decided to report the bills forfeiting about 40,000,000 acres of Northern and Southern Pacific Railroad land grants and the Ontonagon grant.

BRO. AMOS ADAMS has been confined to his home in San Francisco for some time by sickness.

The Grange is What we Make it.

[Read before Enterprise Grange by Past Master W. A. Birch.]

I have oft heard the expression made, "The Grange is of not much benefit." Now the Grange is just what the members make it. The Order of Patrons of Husbandry has a splendid Constitution and By-laws and a compact, business-like organized basis, the very element of strength and perpetuity. But all of these essentials, while they are the foundation of success, are of no account unless the members take hold in active earnest, and make the meetings interesting and instructive, thus keeping up the interest of the Order; and the more thoroughly this is done the more direct the educational, social and financial benefits of the Grange. Every member of the Grange has an individual responsibility that they should feel and do all that lies in their power to make the organization a success in every way. Let each member select or have an original article to read or recite for the Good of the Order, or any subject that they may choose. Our range is wide. The State Grange has recitations which make a very interesting feature. Our school exhibitions draw a large crowd, which proves that the people like such entertainment. There are subjects that interest us daily, and could they be discussed at the proper time, so that the benefit could be practically applied, so much the better.

In Memory of Joel Russell.

WHEREAS, It is with great sorrow that Merced Grange has learned of the death of Brother Joel Russell of Eden Grange; therefore be it

Resolved, That as individuals and as a Grange we mourn his loss and extend our heartfelt sympathy to his sorrowing family who best knew his kind, generous, loving and true character. As a Granger, we knew him to be one of its staunchest supporters and true counselors, ever a friend of the weak and oppressed and a champion of the weak against the strong; every ready to do battle for the right without regard to the majority and strength opposed, only being satisfied that the cause was just and right; a supporter of the keystone of our republic, the public schools, which is attested by the Russell school-house built upon land donated by him, which is a monument more to his credit than one constructed of granite.

Resolved, That in the death of Bro. Russell the Grange has lost a firm friend, the cause of temperance an active and brave supporter, the country a statesman and true patriot, and the cause of virtue an active supporter. One the sum of whose character, whether a Patron, citizen, patriot, friend, husband or father, was such as all could revere, love and endeavor to imitate.

Resolved, That we express our heartfelt sympathy with the sorrowing wife and family in their great affliction and overshadowing misfortune.

Resolved, That a copy of these resolutions be sent to the bereaved family and to the PATRON and papers of Merced.—L. APPLE-GATE, E. KAHL, H. J. OSTRANDER, Com.

A SWINDLER SENTENCED.—Walter Neustadt was before Judge Toohy in S. E. March 31st, to receive sentence for obtaining money under false pretenses. In November last he entered into a conspiracy with Hamberg and Pilcher to fleece F. M. Parker, an Oregon farmer. So successful was the gang in their devices that before the old man was aware of their true nature he found himself penniless. The particular charge against Neustadt was selling to Parker for the sum of \$750 a half interest in a worthless real estate business, which, according to his representation, was worth \$150 per month. The Judge sentenced Neustadt to one year's imprisonment in the County Jail and a fine of \$2249. If the fine is not paid Neustadt will have to serve one day additional for each dollar, or six years and forty-nine days. This is the extreme penalty of the law, which allows a fine three times the amount secured by the fraud.

OVERTAKEN STOCKMEN.—The Inyo Independent says that the cattlemen of Mono county are moving for a repeal of the ordinance imposing a tax on the business of raising cattle. The cattlemen are taxed on their land and on their cattle. To impose another tax on the business of raising cattle is double taxation, manifestly unjust, and discrimination against that particular business.

FATAL CASE OF GLANDERS.—Constable Morris Ladd of San Jose died of glanders a few days since. He caught the disease from a sick horse which he was treating about three weeks before. He had a slight scratch on one finger, with which a portion of the matter from the horse's nose came in contact.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Palm Valley.

EDITORS PRESS:—Knowing that your paper and your readers are interested in the development of California and its agricultural and horticultural resources, I desire to give a few facts relative to the fruit possibilities of a new valley now being developed in Southern California.

It is a well-known fact that fruit and vegetables which get into the market a few weeks in advance of the regular season always command good prices and are a source of great profit to those who produce them. It is with this idea in view that work was commenced last season to develop the only tropical valley now known in the State of California. I refer to Palm valley, which is located in San Diego county, about 25 miles southeast of the San Geronimo Pass, and about five miles south of the Southern Pacific railroad, on the edge of the Colorado desert. To show the warm character of this valley at this season of the year, I will state that the maximum of the thermometer was 90 degrees, that the minimum was 40 degrees for the month of February; that the average maximum was 78, and the average minimum for the month was 48 degrees. Comparing the temperature of this valley with that of Riverside, we find that the maximum in Riverside during February was 78 and the minimum 33. These figures show that the average temperature of that valley at this season of the year is from 7 to 12 degrees warmer than the temperature of Riverside.

Heretofore this valley has not been developed so as to show just what it will do, but a few grapevines, half cultivated and half taken care of by the Indians last year, ripened grapes fully seven weeks in advance of the earliest sections of the State outside of that valley, while watermelons matured fully that much earlier than those of any other place. This year grapevines of various table varieties are being planted in the valley. They will be taken care of, and we shall soon know just what they will do under favorable conditions. The raising of watermelons is also being gone into on a large scale to test that matter fully.

If the owners of land in Palm valley can have seven weeks of the market for early grapes, early watermelons and other early fruits and vegetables, they can well afford to let the fruit-growers of other sections of the State have the balance of the year, and they will still have the cream of the market and will make fabulous profits on their investments.

A number of San Francisco and Riverside capitalists last fall, appreciating the future of this valley, went to work and purchased 2500 acres of land and bought the stock of the Palm Valley Water Company, a company which owned absolutely about 1000 inches of water and had a stone ditch constructed for eight miles to bring the water from the sources of supply in the White Water river to the lands to be irrigated, and have pushed the work of developing the valley as vigorously as they could during the winter months. The town of Palmdale has been laid off as a central business point for the valley, which will eventually consist of about 8000 acres of land. The Palmdale railroad is now being constructed from Seven Palms to the town of Palmdale, a distance of 6½ miles, and it is expected that this road will be in operation early in April. The Palm Valley Water Co. is extending its ditches to all portions of the valley. The Land Co. is preparing the land for the largest Navel-orange orchard in California, and probably in the world, and it is expected that the trees will nearly all be planted this spring.

The attention of fruit-growers throughout the State has been directed to this valley, and although the company were not ready to push the sale of lands, still the demand for them has been such that a large tract has already been sold at prices commencing at \$150 an acre and advancing to \$175 per acre, and shortly to again be advanced to \$200 per acre.

As a sanitarium and a fine climate for invalids, Palm valley, during the winter season, has no equal on the coast. Being at the foot and on the east side of the San Jacinto mountains, which extend nearly two miles very abruptly above the level of the valley, this place is entirely sheltered from the north winds which sweep over the greater portion of the State periodically during the winter months, and it is only on rare occasions, when a strong wind comes from the northeast, that any wind reaches this valley, except the summer trade-winds, which come in from the southwest, on the south side of the high mountain peak. Every one who visits this valley is charmed with the mild winter climate.

Another great attraction of this valley is the celebrated Agua Caliente Springs, which have been noted throughout Southern California as among the very best mineral springs ever discovered in this State. Hundreds have visited this valley for the express purpose of securing the beneficial effects of these waters, and the testimony of all has been very flattering to their curing qualities.

Just south of this valley is the celebrated Palm canyon, a canyon which, for over four miles in length, is full of fan-palm trees, ranging in height from 50 to 100 feet. As one of the natural wonders of California, this palm grove stands out as one of the most prominent,

and as soon as railroad and hotel facilities make it possible, this canyon will be one of the popular resorts of tourists visiting this coast, and it is safe to predict that in the near future on the completion of the Palmdale railroad, and the erection of a fine tourist hotel, Palm valley will become the popular winter resort of Southern California, as the conformation of the country is such that not only are the north winds kept out, but rainy days are very rare, and fogs are absolutely unknown. The damp, cold weather, which is to be found in so many localities, and so universally at times, over California, is here reduced to the minimum, and the thermometer rarely goes to a point where frost is formed at all. The lowest temperature of the past winter, on an extreme cold day, which was noted for being cold all over the coast, was only 31 degrees, one degree below freezing.

As further evidence that this valley will, in the near future, come to the front as a great winter resort of Southern California, I would state that 1000 acres of land adjoining the Palm Valley Land Co.'s tract has been purchased by the Garden of Eden Co., a corporation controlled by B. B. Barney of Riverside and the Coronado Beach capitalists of San Diego. This 1000 acres lies adjoining the town of Palmdale. It has been subdivided into villa lots. Water will be piped over the entire tract, and a magnificent hotel is to be built for tourist travel. The very fact that these capitalists believe that they have a market for 1000 villa lots of an acre each, for 1000 homes, shows that they have unlimited confidence in the climate of this heretofore unknown valley.

Sapsuckers and Trees Again.

EDITORS PRESS:—Little did I think to call forth such a humorous, amusing and sarcastic rejoinder from your Pajaro correspondent by incidentally referring to the sapsucker. But now really this sapsucker question is serious, as its decision renders the little speckled white and gray bird, sometimes with a little red top-knot, either a friend or relentless foe of the horticulturist. I am for giving him all the benefit of a fair trial, so will give a few unvarnished facts.

I have four old apple trees of one variety whose surface is almost one complete scar from the pit-holes made from year to year. I have a can of old tallow to rub in and fill the holes and thus keep them alive. Now about the poetical sap-tears weeping of your correspondent, they (the tears) of my trees may not be flush and

Like diamond dew so pure and clear
That rivals all but beauty's tear.

But before the late rains, marks of the rich amber juice that trickled down the tree to the ground could be seen.

Now why were the old peach and pear trees on every side left with seldom, if ever, a pit or mark? The only solution or answer I can give is they did not relish the sap as well.

When the bodies of these apple trees were wrapped or smeared with something offensive, the larger branches would be girdled.

I don't know as I understand the anatomical construction of the different varieties of birds and insects, or exactly how they get outside their fluid food; but in my innocence (or ignorance) I had not supposed it necessary for them to have the suction valve and pipe tube even of a common Douglas pump.

Now, Messrs. Editors, you just submit the decision to any intelligent jury if the humming-bird sucks the sweets from out the flowers and you can win that box of apples.

Lower Lake, Cal. C. P. SCRANTON.

The Sapsucker Sets a Trap.

EDITORS PRESS:—I have just been reading Dr. Gally's letter in the last PRESS, in which he refers to the sapsucker and asks: "Who ever saw the little woodpecker pits in a tree's bark weeping?" I have, lots of times, seen small sugar-maple trees girdled by these pits made by the woodpecker and the sapsucker, and the sap oozing out profusely therefrom. But I have also observed that these birds do not make these punctures for the sake of the sap (though I have seen the sapsucker sipping it in the same way every fowl drinks), but for the purpose of attracting bees, flies and insects, so that a meal may be made of them. Where the carrion is, there will be the buzzards gather; and where the sap issues from a tree, as it will where these punctures are made, there will bees, flies and other insects gather to be devoured.

Santa Rita. J. S. TIEBETS.

A HARVESTER SUIT.—A dispatch from Modesto to the *Chronicle*, March 31st, is as follows: For the past week the case of John Fox against the Shippee Harvester Works of Stockton has been on trial before the Superior Court of this county. The case has attracted widespread interest among the farming community, as it is the first case tried out of a large number of similar ones now pending in the court brought by farmers who, in 1884, purchased the Shippee harvester. Suits were brought against the company for damages claimed on the ground that the machines, after a few trials, did not come up to the proficiency promised. This suit was to recover the value of the machine and damages caused by its use in the grain-field. The jury at a late hour last evening rendered a verdict against the company for \$6000. The verdict causes great satisfaction among farmers.

Springtime Promises.

About the middle of March the S. F. *Chronicle* sent out circular letters asking information as to the agricultural condition and prospects of the different quarters of the State, and within a few days past has been publishing the answers of many correspondents scattered all along between Tehama and San Diego. From these reports, filling several columns of the journal aforesaid, we glean as follows:

In Tehama county the acreage of grain is considerably larger than it was in '87; the rainfall has been copious and well distributed, and crops have not promised better for 15 years. Fruit has suffered no injury from frost, and the general outlook is a fine one.

In Butte the wheat is estimated at somewhat over 180,000 acres—a trifle in advance of last year's sowing—while the yield is likely to prove 12 to 20 per cent heavier. Barley also is in excellent condition. Great activity in vine, deciduous and especially citrus planting is noted.

In Colusa the acreage of wheat is about 420,000, and of barley 50,000, and grain has seldom looked better. Some 50,000 vines and twice as many fruit trees have been set out this season.

Sutter being so thoroughly under cultivation already, there is no material increase in the acreage of wheat and barley, but the condition of the crops is very favorable, 20 bushels of the former and 30 of the latter being looked for. Orchards and vineyards have received large additions.

In Yuba, while there has been no falling off in the grain area and the outlook was never more promising, last year's 650 acres of vines and 1200 of fruit trees have been extended to 1500 and 3000—the latter increase being mostly peaches, apricots and Bartlett pears.

Sonoma wheat looks superbly and an average yield of 27 bushels is anticipated, while barley-growers expect 35 bushels. But prune, peach, pear, olive and nut trees are crowding into the old grain-fields by tens of thousands.

In Santa Clara the decreased acreage in cereals and hay, and the increase in vines and trees, is very marked. The outlook for crops of all sorts is of the brightest, and the yield of prunes, and indeed of every fruit except the Moorpark, promises to be very heavy.

In Contra Costa almost all available land is sown or planted, and the prospect is good for a generous yield of both grain and fruits.

From Sacramento and El Dorado orchards, all accounts are encouraging, and what grain there is, is in very good condition.

In San Joaquin the wheat acreage is 260,000 against less than 240,000 in 1887; the crops are doing finely, and 15 bushels is the predicted average. Barley shows first-class and promises 20 bushels. The vast increase in the fruit areas of this county was spoken of in our "Agricultural Notes" of March 24th.

In Stanislaus the grain is said to stand quite as well as it did in 1882—the most prosperous grain year ever known in San Joaquin valley. Merced wheat-growers look for an average to full crop, say 12 bushels for the whole county, while rye and barley are expected to give at least 25 bushels. But "this year will probably witness the last full grain crop in Merced county, for many fine grain farms are being cut up into small lots for fruit culture."

Tulare has, by close calculation, 600,000 acres sown to wheat this year, and the probable yield is placed at 8,400,000 bushels, while the corresponding figures for barley are 50,000 and 800,000. Great activity has prevailed in vine and tree planting, and the season has been propitious to all fruits except apricots and late peaches, upon which in blossom came a heavy frost.

San Luis Obispo has 110,000 acres or more planted in wheat, against 83,000 reported by the assessor last year, and the present condition is thought to warrant a hope of 20 to 25 bushels. East of the mountains the grain appears perfect, but on the coast side there are some signs of the wire-worm. About 42,000 acres of barley were sown, but the yield is not likely to exceed 200,000 centals. Here, as in so many other districts, vast additions have been made to vineyard and orchard.

In San Bernardino but little wheat is raised, but something like 200,000 acres is in barley. This crop at present is in most promising condition. Fully half of it will probably be cut for hay, and the rest is likely to run 35 bushels. Raisin grapes, deciduous fruits and oranges are extending their acreage, and the situation appears highly gratifying.

San Diego joins the chorus of cheerful voices with assurance of magnificent crops of cereals on largely augmented acreage—28 or 30 bushels of wheat and 35 of barley being talked of, and myriads of newly-planted fruit trees, citrus and deciduous.

Reports from other counties are of the same general tenor, and with the seasonable and welcome showers of the past week, every one save the incurable grumbler is hopeful and happy at the outlook.

SILKWORM EGGS.—The State Board of Silk Culture received from Italy, last week, 720,000 silkworm eggs in fine order, and are now distributing them. Another lot is soon to arrive, and the board will begin propagating the worms at their new quarters in the Flood building.

PINKYE.—This disease is reported as more or less prevalent in the city stables at present.

News in Brief.

ABOUT 200 new buildings are going up in Jose, and many substantial improvements are being made.

THE salmon season opened on the Columbia river on the 1st, though few fish have so far been caught.

THE surveys on the proposed Nicaragua canal are about completed, and the prospect is that the old Menocal route will be adopted.

THE large granary on Eppinger & Co.'s ranch, near Germantown, Colusa county, was destroyed by fire on the 29th ult. The loss is \$3000.

THE plans for the Lick Free Baths in this city are to be completed this month. The sum of \$150,000 was left by the late James Lick for these baths.

SENATOR STANFORD has presented to the Senate the petition of the citizens of Placer county asking for the preservation of the forests of the Pacific Coast.

OFFICERS have brought 150 of the convicts from the Folsom State prison to that at San Quentin, where they are to be put at work in the jute-mill making grain sacks.

THE report of the secretary of the North Pacific Coast Railway Co. shows that during 1887 the road sustained a loss of \$23,864, owing to the heavy expenditures for repairs.

THE public debt was decreased \$11,198,625 in March. The total cash in the United States treasury is \$586,454,000. The public debt less cash in the treasury is now \$1,202,454,714.

THE death of one of the newly-imported negroes at Fresno from pneumonia, the disease being caught on the route, has had a bad effect on the darkies, who are beginning to grow homesick.

THE Public Lands Committee of the House has decided to report bills forfeiting about 40,000,000 acres of the Northern and Southern Pacific railroad land grants and the Ontonagon grant.

A PATENT has been applied for by a Gilroy man for a process of manufacturing illuminating gas from the bitumen of which there is an inexhaustible supply on Sargent's station, on the Southern Pacific.

THE Oakland city wharf is to be shortened, a shipway dredged between it and the channel of the harbor and additional piers constructed. It is presumed that the work will cost between \$30,000 and \$40,000.

ON Monday of last week an excursion party went from Sacramento to Placerville to celebrate the opening of the railroad line to the latter city. The opening of this road is of the utmost importance to El Dorado county.

DURING the month of March 4000 Eastern tourists returned home by the way of Ogden over the Central Pacific, Union Pacific, Denver & Rio Grande and the Burlington. The number going East this week will be equally as large.

CLAUS SPRECKELS has decided to build a sugar refinery in Philadelphia with a capacity of 2,000,000 pounds daily. The cost of the plant will be \$3,000,000, and the annual output will be \$36,000,000. The capital to be invested, \$5,000,000, will all be supplied by Spreckels.

THE impressment into the French army of John Franchier, a naturalized citizen of the United States, will probably be the means of the United States and French Governments reaching a correct understanding of the rights of a naturalized citizen when revisiting his native country.

POSTMASTER-GENERAL DICKINSON, in his estimate, finds it necessary to increase the item for the hire of clerks in postoffices \$6,000,000. The estimate for rent, light and fuel for postoffices is increased to \$575,000. The estimate for the free-delivery service is increased to a total of \$6,000,000.

THE State Board of Trade has received from the Placer County Board of Trade the money necessary to arrange for an excursion to New-castle, to be held under the auspices of the latter organization on the 17th instant. A banquet and free carriages will be offered the excursionists who visit the home of the orange.

AN issue of \$500,000 bonds in San Jose is said to be invalid, owing to an error in the advertising. For the present the improvements which were going on have been stopped until the matter is investigated. The notification comes from Adolph Sutro, who purchased all the lands and had already paid \$202,500 of the money.

A BED of coal has been found on land belonging to the Pacific Improvement Company at Slack's canyon, near the boundary line between San Luis Obispo and Monterey counties. The coal is similar to Seattle. Several hundred tons have been taken out already for the railroad company, but the exact value of the mine is not yet known.

THE Merced *Express* denounces as untrue the statement telegraphed from Fresno that 1000 jack-rabbits were saved alive from a recent rabbit round-up there to be sent to Merced and used in coursing matches. The *Express* adds: There are no coursing matches at Merced. We have more than enough jack-rabbits for all sporting purposes. In fact, Merced is an exporter of jack-rabbits.

THE Central Pacific Railroad Co., in the U. S. District Court, asks an injunction be issued to prevent the heirs of those 30 persons killed by the Julia disaster from bringing suits for damages until the hull of the Julia is sold. The company contends that damages must be confined to amounts within the value of the remains of the steamer, and asks that the hull be sold to ascertain said value.



What Makes a Man.

Not numerous years, nor lengthened life,
Not pretty children and a wife;
Not pins, and chains, and fancy rings,
Not any such like trumpery things;
Not pipes, cigars, not bottled wine;
Nor liberty with kings to dine;
Nor coat, nor boot, nor yet a hat,
A dandy vest or trim cravat;
Nor master, reverend sir, nor squire,
With titles that the memory tire;
Nor ancestry traced back to Will
Who went from Normandy to kill;
Nor judge's robe, nor mayor's mace,
Nor crown that deck the royal race;
These, all united, never can
Enlarge the soul to make the man.

A truthful soul, a loving mind,
Full of affection for its kind;
A helper of the human race,
A soul of beauty and of grace.
A spirit firm, erect and free,
That never basely bends the knee;
That will not bear a leather's weight
Of slavery's chain for small or great;
That firmly speaks of God within,
And never makes a league with sin;
That snaps the fetters despots make,
And loves the truth for its own sake;
That worships God, and only God,
That trembles at no tyrant's nod—
And thus can smile in curse and ban—
That is the soul that makes the man.

—Exchange.

Mr. Mouser's Sawbuck.

Mr. Mouser and his merry little wife occupied a charming cottage in the suburbs of a large city in the "Fatherland." His business connections were of such a nature that he was usually at leisure after four o'clock in the afternoon.

Mr. Mouser prided himself on being a man of originality and brains. Mr. Mouser also liked a little joke—at other people's expense.

It was autumn. Mr. Mouser had just laid in a goodly supply of winter fuel. Wood was chiefly used for this purpose in the land of Mr. Mouser's birth.

Sitting by the window of his cosy living-room, enjoying a royal smoke from the long-stemmed porcelain pipe, Mr. Mouser watched the wood-sawyer plying his trade, made easy by long habit of handling wood and saw. As Mr. Mouser gazed and pondered, an idea crept into his head. It was grasped—as ideas quickly became captive there.

"Lizbeth," said he to his wife, "it is singular I never thought of it before—I generally think of such things—but it strikes me that I could saw that wood myself."

"Gracious! what an idea!"

"A bright one, isn't it? A big saving, too! Just see with what ease it is done—the man cuts through the sticks as if he were slicing bread and butter; besides, I require more exercise; my health is not what it has been."

"My dear, do you feel ill?"

"N-no, but a man needs to exert himself if he does not wish to run down in muscular power. My habits are too confining; a sense of this fact has been growing on me lately. But I have solved the mystery while watching that man play on his saw-jack."

A merry twinkle of the eyes and a laudable endeavor to maintain a serious expression would have convinced the beholder that Lizbeth also had ideas, but like a properly respectful wife she kept them to herself until called for.

"Do you think, Lizbeth, that a little gentle muscular activity is what I need to stimulate appetite?"

"You might paint the house, or do some less tiresome work than wood-sawing," replied Mrs. Mouser.

"Oh, you underestimate my capacities, my dear. And sawing wood is not such hard work. Come and see how simply it is done, yet how every muscle is brought into play. I am enchanted with my idea, and shall carry it out. The man can finish this job, but it shall be the last I ever pay for. What think you of it, wife?"

"Well," laughed the lady demurely, "I think we shall be obliged to live on cold victuals and wear blankets to keep from freezing. But seriously, dear, you had better consider what hard labor you are planning for yourself. If I were you I would experiment on a few cordsticks and assure myself that it is as easy as it looks."

"That's just like a woman!" retorted Mouser, disdainfully; "she never does anything heroically; she is totally incompetent in matters of physical calculation. Now, I can see just as well as if I had stood over that man's saw-jack for an hour, the amount of force required to drive a saw through a stick of cordwood. And I declare to you here and now that I am going

to do the next load myself. It is play; nothing but play!"

Lizbeth laughed so tantalizingly that Mr. Mouser turned upon her in a flurry of indignation, saying:

"You seem to have your doubts, madam!"

"Seeing is believing, sir!"

"Well, you shall see. You ought to know by this time that I am a man with a mind of my own, and when I say I am going to do a thing I do it. Please bear this in your shallow mentality, Mrs. Mouser, that I, your husband, am determined to never more pay one dollar for a wood-sawyer's hire."

"I am afraid I shall have to do a little of the wood-sawing myself, then," gravely murmured Mrs. Mouser.

Mr. Mouser meant business. He at once ordered the very best kind of a new saw-jack made. He purchased a splendid saw, with sharp teeth and a light frame. He pranced about, happy as a schoolboy, with dabs of yellow and green paint spattered all over his person, until finally the saw frame suited him in its bright yellow coat. The saw-jack he painted a lovely light green.

Daily he promenaded impatiently around the sheds where the wood was stored, and grumbled because the fuel lasted so unusually long. At intervals he added another coat of green paint to the highly decorated sawing-jack ("sawbuck" it is called sometimes), and bade all his acquaintances and friends come and inspect his patent calisthenic toys, until every one for miles around became familiar with Mr. Mouser's green sawing-jack.

At last the longed-for day arrived. A big load of fine hickory had been piled up in close proximity to the tools of decimation.

Mr. Mouser was all excitement. He passed by his amused wife with important disdain and scarcely gave himself time to devour his dinner, he was so eager to be at work.

"Nothing more, thanks," he replied, as his wife wished to replenish his cup. Rising, he hastened to handle his pots with an ardor that caused Lizbeth to smile knowingly as she watched him pick out the very smallest and most slender cordsticks.

This was a great mistake on Mr. Mouser's part. He should have tackled the difficult ones first, on the simple but fruitful theory that custom would have sweetened his toil with the balm of greater ease.

My! how the saw rent and the abbreviated sticks tumbled to the ground! Still Lizbeth, who was peeping with laughter-brimming eyes, noticed that at the third cordstick work seemed to slacken just a little, but seven were finished and Mr. Mouser came in, declaring he felt glorious.

The second day Mr. Mouser remained at table a trifle longer. Four cordsticks in broken lengths licked the dust, however.

Third day—Mr. Mouser took time to glance over the daily news after dinner. Record: Three cordsticks.

"Lizbeth," said he, "I think I've been cheated in the saw jack. It is not put together on as practical a plan as I was led to believe. It wriggles."

Fourth day—Mr. Mouser toyed over his dinner extensively. He smoked his pipe and read the paper. He glanced over his monthly magazine until dark, and then started up, exclaiming:

"Mercy! how short the days are!"

Mrs. Mouser enjoyed the situation intensely, but said never a word.

Fifth day—Mr. Mouser rose with a sense of injustice resting upon him. All day he was haunted by the outrageous fate that made him the owner of a sawing-jack.

"My dear, we require more wood than usual to-day and to-morrow, washing and ironing days, you know," said Mrs. Mouser as soon as he got home.

"I never saw anything like the way you women manage to consume fuel!" and Mr. Mouser grabbed his hat and strode angrily toward the woodpile. A few sticks fell before the savage manipulation of the saw, while Mr. Mouser's snarling kept excellent time to the wild motions of that sawyer.

With a crash he sent the saw flying over the woodpile. This was too much. His wife was a brute to expect him to work like a slave during the few moments he could call his own free from business drudgery. But if he gave up he would never hear the last of it. Oh, if he could only get rid of the saw-jack.

A long time he pondered; at last a smile of joy illuminated his face. That night, after his wife had retired, Mr. Mouser slipped out and carried that hated green object to the front gate. Presto, in the morning the *corpus delicti* would be gone. The highway was full of robbers, who would steal anything and everything.

He would make a big fuss about the loss, but take good care not to buy a second saw-jack.

He slept the sleep of the just until about 4 o'clock in the morning. It was still dark, but his anxiety to assure himself of the loss of his trouble caused him to sneak out and reconnoiter. The saw-jack was still there. Mr. Mouser whispered—not a prayer. "Oh, well, there is time enough still between this hour and daylight for a theft to be committed," he muttered. It was the voice of Mrs. Mouser that awakened him in time for breakfast. He glanced out of the window the first thing. Oh, how brightly the sun shone, and that saw-jack gleamed up at him in all its verdant beauty. No robber hand had carried it away. A fearful sigh escaped the Mouser bosom.

"You must saw some wood for me before you go, dear," said his wife.

"What, more wood!"

"Yes, dear; recollect you only sawed one stick last evening," rejoined Mrs. Mouser, meekly, but a wicked gleam of mischief played about her eyes and mouth.

Mr. Mouser ignored her reply, and hastened to town with his pretty tools with a vigor born of awful fury, but way down in his soul a voice groaned, that sawing-jack must go!

Where? whence? how?

Mr. Mouser was a man of resources. Twelve o'clock, midnight. A burglarish darkness and silence brooded around as a man stole hence from his couch, and, grabbing his trousers, left a cosy bedroom. A little later the only other active creature about, a feline prima donna, might have witnessed a sorry sight—a solitary man marching toward, clutching in his strong right hand a beautifully painted green sawing jack.

Soon he returned. The sawing-jack, where was it?

Mr. Mouser rose that morning in a most delightful frame of mind.

"Lizbeth, my dear little Lizbeth," he exclaimed, friskily, "I am going to work in earnest to-day. I am feeling fine, much better than I have for some time. Here, feel this arm. How's that for muscle, eh? That's what sawing wood has done!"

Lizbeth blinked oddly, but looked contented. Mr. Mouser hastened out to "flip off a stick or two before breakfast," but soon came in looking quite angry and puzzled.

"What in the world has become of that jack?"

It was gone. "Such infamy—to steal one's very implements of toil!" he cried, in a rage, as he sent for the old wood-sawyer again.

Mr. Mouser, of course, grieved over his loss, but managed to conquer the regret sufficiently to display some of his old wit and mirth.

But this good feeling received a sudden check the morning after the burglary of the jack.

He had just opened the daily paper when his glance was arrested by a leading paragraph.

"Lizbeth, look at this!"

Mrs. Mouser became alarmed. Her husband was pale as death and trembling in every limb as he handed her the paper. She read:

"The residence of the Hon. Oliver was broken into night before last and a large sum of money and valuable plate and jewelry stolen."

"The robbers entered by the garden window, from which they had removed the iron grating, while standing on a singular-looking wooden object, recognized by old-fashioned country folks as a 'sawbuck.' It is painted a light green, and will doubtless prove a valuable clue toward tracing the miscreants. A thousand dollars reward is offered for return of jewelry or information leading to the arrest of the robbers."

"Why, this is splendid! You can at once notify the authorities that the 'jack' is yours—the thieves who carried it off!"

"Oh, my—oh, my!" groaned Mr. Mouser; "don't talk to me about thieves. I may be arrested any moment when they discover—"

"Discover what? How can they arrest an innocent man because he owns an article stolen from him and used by wretches—"

"Oh, Lizbeth, I may not even be able to prove an alibi. Oh, what shall I do! I tell you, wife, I am not entirely innocent."

"Ah! we nab you confessing, my fine bird," a rude voice here interrupted, followed by the entrance of the minions of justice.

Mrs. Mouser begged, cried, stormed and implored. Mr. Mouser was mute and totally crushed, but the bold minions of authority led him away to a dungeon, where he languished for three days before his friends could obtain a hearing for him. In the meantime the real culprits had been caught, but the law required an explanation of the language that appeared to the police like a confession of complicity, notwithstanding Mr. Mouser's unquestionable social standing and perfect respectability.

The court-room was crowded with his friends and neighbors. His wife gazed at him tearfully and lovingly, but Mr. Mouser was very much cast down. There was no escape. He had to tell how distasteful wood-sawing had proved to him, how he feared the ridicule of wife and friends if after all the boasting he gave it up. But when he related his midnight elopement with his green sawing-jack, even the court joined in the broad smile that ripened into a roar of laughter from the less dignified listeners. The crowning humiliation came, however, when he left the prison for the coach to be taken home. There he saw the green abomination resting at the driver's feet on the front of the carriage. His wife has not stopped laughing yet at his midnight adventure.—Adapted from the German by Mrs. Miles H. McNamara.

An old lady subscriber wrote the editor a letter of reproof and stopped her paper, because he had neglected to denounce in its columns the skating rink which had just been revived in that town. The same day the proprietor of the rink came in and ordered his paper stopped, because the editor neglected to give the rink the usual local mention due such enterprise. This kind of business is of almost daily occurrence, and the case above cited will serve to give the public an idea of what causes the editor to live in perfect peace and happiness, always looking smiling and continue his efforts in behalf of suffering humanity.—Exchange.

The Frost Plant, or Frost Flower.

EDITORS PRESS:—Many have no doubt read glowing and poetical accounts of the beautiful and wonderful frost flower of Siberia and Northern Europe. These have perhaps been considered pure fiction by nearly all readers. These accounts say that late in the fall, after the first snows have fallen, this plant springs into growth and pushes itself up through and above the snow for a foot or two in one night, branched in many beautiful and fantastic ways, each branch ending in beautiful snow-white flowers of many varied forms, which by midday have ripened and decayed, the whole plant and flowers being as white as the driven snow, the stem built up of the most delicate tracery. This seems like fiction, and is unreasonable, yet this, like nearly all other myths, has a foundation of apparent fact. And here is the explanation.

The writer was spending a winter in Lower Arkansas with dog and gun. In December a norther came with three or four inches of snow. The weather immediately preceding had been warm, sunny-growing weather. The fall rains had started many hardy plants in the warm valleys into rapid succulent growth. The soil was warm. The snow covered the ground before the cold of the norther or blizzard had time to freeze it.

We were out next morning early, hunting after any of our deer that might have strayed or been stolen. We had not gone far when a fine young buck stopped and lay down at the command of our Winchester. He was butchered and hung up out of the reach of the many wild hogs, and the hunt went on. About 9 o'clock, descending a steep bank, we found at its foot a narrow valley which had been in corn which had been cut and carted away for feed. Coarse succulent weeds had sprung up thickly all over it. These had recently nearly every one been broken down to the ground by cattle feeding on the grass growing among them. The snow came suddenly and covered them over. The soil was warm and their roots were busily at work pumping up water for the use of the plants; but the plants being broken off instead, they pumped it into the cold snow, where it was at once frozen into gossamer threads of the whitest frost. The few inches of snow guided and supported these frost threads directly upward, and held them in bundles until they grew from 6 to 20 inches above the snow. Just as we reached this valley, about 9 o'clock, the sun shone out brilliantly and gave us one of the most beautiful sights the eyes of man ever looked upon. At the first glance it looked simply like a great number of different plants thickly covered with pure, white, sparkling hoarfrost. But the white was too pure for such, besides, the shapes were too fantastic, curious and beautiful. They stood up in nearly every beautiful and intricate form from 2 to 20 inches above the snow. The most common form curved over in the finest feathery snow-white spray, like an ostrich plume. But there was every shape imaginable, and the stems were of every shape except round. One who has seen winter's tracery of frost on windows can have an idea of these beautiful and varied forms.

After feasting our eyes with this most brilliant sight, the next thing was to seek an explanation of the phenomenon. As before said, the weeds—nearly all of one species—were broken off at the surface of the ground by the hoofs of cattle, and the roots being still at work in the warm snow-covered soil pumping up crude sap (which is water), on reaching the cold snow it was frozen, the pressure and supply below continuing, and the air in this completely sheltered little valley being motionless, these delicate frost forms were pushed up through the snow into the air; so delicate were they that the least motion of the air would have prostrated them. While we were examining, the warm sun caused the frost flowers on the north half of the valley to disappear; soon all were gone. During the day the snow all disappeared from the valley. Crossing it again the next morning, which was again quite frosty, we found the same phenomena in that and in several other warm valleys, except that there being no inches of light snow to guide the frost plants upward, they had curved and rolled themselves up in bunches of pure foam-like frost.

Such is an explanation of the "frost flower" or "frost plant," perhaps rarely seen so far south as was these examples. On telling this true tale to a resident of Upper Michigan, he said: "I have often seen examples of these strange forms of growth up through the snow in early autumn in my region, in warm, moist, rich soils in sheltered places. They looked so uncanny to me that I did not search for an explanation. The Chippewa Indians have great dread of and will not go near them. With us the ground seldom freezes before the snow comes, and it soon covers it so deeply that it does not freeze at all." The same is true, we suppose, in North Europe, and in both places, therefore, strong, vigorous "frost plants" would be sometimes found. One tourist in Siberia—we suppose a tenderfoot—tried to obtain seed of the beautiful thing to take home for planting.

D. B. WIER.

415 Montgomery St., S. F.

GRIST-MILLS are said to have been an Irish invention and were first run in Ireland in 214.

To Be Remembered.

There's a year to be remembered
When your eyes first looked in mine,
And I felt my heart outreaching
Like the tendrils of a vine.
Then the world grew full of sunshine,
And the heaven above seemed near;
And I hoped with words unspoken—
Need I tell you, love, the year?

There's a day to be remembered
When your lips were pressed to mine,
And I felt my pulses beating
To a measure quite divine;
It was bliss to lean upon you
Like a child who, tired with play,
Nestles closely to its mother—
Need I tell you, love, the day?

There's an hour to be remembered
When your soul was pledged to mine,
And a perfect satisfaction
Seemed my being to enshrine.
Love was life, and life was loving;
Rich was autumn leaf and flower;
Two as one, henceforth, forever—
Need I tell you, love, the hour?

—Sarah K. Bolton.

Circling Letters—A Pleasant Usage.

Some 25 years ago there lived a happy family in the State of Maine. There were five sisters in the family. After awhile they all married—as all happy sisters should—and separated from each other as all happy sisters have to do when they marry. After years of separation it was remarked that communication between them was very irregular, and it was impossible to tell how the different members of the family were prospering. One of them at last wrote another a letter and requested her to send it with one from herself to a third sister, with a request to do likewise with another sister, till the circle was made complete. The custom has been kept up ever since. When the package arrives it contains a letter from all the sisters. The children of the sisters have inaugurated the same custom and when one of them gets a package, it contains 15 or 20 letters, so all the cousins talk at once. It is a very pleasing custom, and should be adopted by other families who are separated. One of the sisters mentioned resides in this city, and from her we received the basis of this article.—*Nevada City Herald*.

NEVADA'S WALTZING GIANTS.—“Out in Nevada,” said a mining man from White Pine, “we have the sublimest dance that any man ever saw. We call it ‘the dance of the giants.’ Great cylinders of sand, from 8 to 20 feet in diameter, and sometimes immensely tall, come careering across the desert with a whirling, waltzing motion that is very graceful. I have often seen them when they must have been two or three miles high, for their tops reached into the clouds. But oftener there will be one big column, with a lot of little columns attending it, all waltzing together. The effect is the strangest thing imaginable. It is both sublime and grotesque. It inspires you with awe, and at the same time fills you with the desire to laugh at the odd performance. And if the man is superstitious, the weird, fantastic sight can make him feel mighty uncomfortable. They are never seen except in the summer-time, and are most frequent in July. They have their beginning in some incipient whirlwind, which snatches up a handful of sand while the surrounding air is still, and then they keep on growing and moving onward. They are not like the cyclones farther east, for they move with very little noise, and, instead of being funnel-shaped, are of the same size from top to bottom. The motion is the same, being both circular and advancing. They draw up into the cylinder fabulous quantities of sand, tons of sagebrush and sometimes good-sized stones. How far they travel nobody can tell. They must travel the whole distance of the White Pine valley, 350 miles, and sometimes they come down through Spring valley from Idaho to the Peranegat valley.”—*Chicago Inter-Ocean*.

CIGARETTE PHOTOGRAPHS.—Connected with the sale and purchase of deadly cigarettes of certain brands are the highly objectionable photographs of half-nude women, not a few of whom are nothing more nor less than cyprians. This subject has been referred to in this paper before, but not in the manner we shall speak of it now. Do parents of Calistoga and vicinity know that there are schoolgirls from 8 to 15 years of age who are particularly fond of the photographs mentioned, and in some instances are making collections of them? That some of these collections embrace from 80 to double that number of the objectionable pictures? We do not wish to be understood that the Misses attending school all seek the photographs, but we are well informed that too many of them do. The pictures are often secured of boys, who are frequently requested to buy with their cigarettes certain ones of these objectionable cards. Parents who have examined a collection of these small photographs well understand that their girls ought not, by any means, to be permitted to handle them, and that the boys should not be given greater privilege in the matter. But it is impossible to ascertain just what the boys are doing, and this is true of those particularly who have so far passed from under parental control as to smoke cigarettes.—*Calistogan*.

YOUNG FOLKS' COLUMN.

Happy Jim.

A California Story.

(Written for the RURAL PRESS.)

“What's your name, my little man?” asked Mr. Kellogg as he confronted a little five-years-old boy standing in front of the store he had paused to enter.

“Happy Jim!” was the answer, given in a rather bored tone, as if the youngster was tired of telling his name.

“Happy Jim!” said the gentleman, looking down at him; “Jim what?”

“Jess Jim—Happy Jim!” said the child, impatiently walking away. He passed on down the street, a little fellow still in kilts, hatless and yet showing that care had been taken in dressing him in the morning, then still in its early freshness. Although the dew was not long off the grass, his gingham blouse was badly soiled, his hands and face both dirty, and his light curly hair full of bits of hay. The men in front of a saloon called out: “Halloo, Happy Jim, come in and have a drink.”

The child looked up and down the street as if in search of some one, and then went in.

“Hain't seen my guv'nor this mornin', have you?” asked the little fellow.

“No,” said the barkeeper, “he hasn't passed here. Does he carry his stick yet, young man?”

“Name's Happy Jim,” said the youngster, scowling. “Course he carries it, the old —;” and here followed an oath most fearful to hear from the lips of the baby who stood there with his feet far apart, waiting for the lemonade, with a generous dash of whisky in it, the barkeeper was mixing for him.

“Come, Happy Jim,” said one of the more quiet-looking men in the crowd, when the shout of laughter had subsided, “you oughtn't to call the old man such names.”

“Calls me 'em his self, 'n thrashes me for saying 'em,” retorted the child, smacking his lips as he put down the glass.

“That's so,” said one; “he taught the child to swear when he couldn't walk yet, and now it ain't so funny. He can't keep the young one off the street, and they never know where he is.”

“Where's his mother?” asked a bystander.

“Poor woman, she has no time to see to him after she dresses him in the morning. Jim Bourne did well enough till he left the ranch and came up here to keep the Western. His old woman has no time now for anything but the work of the hotel. Bourne's running behind, too. They can't keep many to help her.”

Just then the shadow of a man fell across the floor and the boy's father called out “James!”

The child started, but walked right out to him. The man held up a stick and said: “See this, my boy? You march home. Your mother wants you.” Happy Jim walked away, and the man entered the saloon.

“Toss me up a cocktail, Mike,” he said, “I've got to get back and take that little cuss to school. His mother is worrying her heart out over the way he's growing up, and she says he must go to the kindergarten. There he'll be safe, and she'll know where he is.”

A little later, Happy Jim, all sweet and clean, entered the schoolroom with his father. The heart of the little teacher sank, for although she had agreed to take him, she dreaded his influence on the little ones, who were from the best families in the town.

“What's your name, my little man?” she asked, taking his hand in one of her own cool, firm ones.

“Happy Jim,” said the child laconically.

Repressing a smile, she asked, “How old are you?”

“Sixty-five,” he answered, looking about the room. It seemed best to ask no more questions then, so she gave him a place among the little ones, and he was soon interested in the pleasant work so new to him. Miss Nannie paid little attention to him, wishing him to get used to the new surroundings before she undertook the task of conquering the little man. That afternoon one of his many friends (?) among the men met him on the street and said:

“Ah there, Jim! you dirty little rascal, why ain't you at school?”

“Did go this mornin',” said the boy. “Too busy this afternoon. Ain't got time.”

“Wait till the old man gets you,” said the man.

“Hoh! he's gone in the country; won't see anything of him for awhile.”

“What'll you do if he asks you?” questioned a man who had stopped to hear the child's quick answers.

“Tell, o' course,” said Happy Jim. “It's no good to lie.”

There was the making of a fine man in the boy, but he would never be one. He was quite a character of the town, and every one seemed to conspire to spoil him. The next morning Mr. Bourne took him to school again.

“Here, Miss Nannie,” said he, “I've whipped him for not coming yesterday, and I wish you would do the same now and whenever he is absent without bringing a note from us when he comes back.”

The child looked at her curiously with something of defiance in his face.

“No,” she said; “Mr. Bourne, I never whip the children. I think Jim and I will be good friends soon.” As it was quite early yet, and none of the rest had come, she had a quiet talk with him, and she saw the sweet, wholesome nature hidden under the crust of his sadly-perverted disposition.

He went regularly to school after that, and though no one noticed much difference, he had less time to be on the street, and the teacher knew she was slowly winning him.

One morning he said to his mother, while she was getting him ready for school:

“I like Miss Nannie; she's a bully girl. She says if I'll be a good boy she'll like me better. Would you, ma?”

The tears filled her eyes, but she only kissed him and said:

“Yes, Jim.”

Slowly rubbing off the kiss, he went on:

“I asked her the other day if she'd marry me, 'n she said if I'd try to grow up a good man she would if I wanted her then. Say, ma, why don't you ever tell me 'bout God? Miss Nannie she says He don't like to hear me swear, so I ain't never goin' to no more. There now,” he cried, squirming away, “my hair looks good enough, 'n you needn't kiss me every mornin', either; men don't care for such things.”

“True enough,” thought the poor little overworked woman, “they don't. It's no wonder the child notices it. He has been so much among the men that he is five years older now than his years.”

One evening he came straight home from school, and going up to his mother's room, lay down on her bed. There she found him late in the evening. No one had missed him, for he was usually on the street. He was breathing heavily in his sleep, and his face was highly flushed. All night he was delirious, and tossed in his sleep, talking now of Miss Nannie, and then muttering oaths and low talk that had been all too familiar in his ears all his short life. The doctor was called in the morning and pronounced it malignant diphtheria. He was only ill a few hours, and toward the last fell into a stupor from which they did not expect him to arouse. Just before the end, he opened his eyes, and looking up, said:

“Yes, God, I'm comin'; you know me; Jess Jim—Happy Jim.”

He didn't breathe again; there was no struggle, but a look of content of such perfect peace settled on the little round face that his mother sobbed out, “Thank God! Thank God!”

“Yes,” she said to Miss Nannie, when she came with flowers to lay in the little hands now so white and cold. “Yes, I'm glad he's gone. He was a sweet baby, Miss Fletcher, and he filled an empty spot in my heart when he came; but I had to push him away from me as soon as he could barely toddle, for you see,” she said, “there was work to do. I had no time to take up my boy and feel his little, soft arms about my neck. Boys grow away from their mothers so fast, too, and what was cute in him at first was soon rough and rude. Maybe if we hadn't come up here to the hotel he'd have been different, but it's a bad place to bring up a boy. The men have all helped to spoil him. He was a better boy, though, after he went to school, Miss Fletcher, but there was too much against his making a good man; so I'm glad he's safe. I love babies,” she said, her tears streaming on the little face with its look of strange content, “and he was so sweet when he was little; but I'm glad; yes, I'm glad he's gone.”

“Yes,” said Miss Fletcher softly, wiping her eyes, “for of such, even 'of such, is the kingdom of heaven.”

A California Boy on Minnesota.

EDITORS PRESS:—I will write the young folks' column a letter about Minnesota. The winters in Minnesota are long and severe and the summers short and warm. The second berries are blueberries; the folks go out and pick them to sell. The first berries are wild strawberries and then there are cranberries. There are hazelnuts which grow wild everywhere. They raise peaches in some places. They pile straw on the trees.

I have a picture of the Ice Palace at St. Paul. I have three sisters and two brothers in Minnesota now. There are many wildflowers growing out in the woods. They have fun there in winter as well as they do here; I think they enjoy themselves a little better sliding down hill and snowballing. They have toboggan slides, sleds and suits at the Ice Palace.

The toboggan sled is made flat on the bottom and curved at one end; they slide about a block down the street. They storm the Ice Palace with fireworks. The summer king storms the winter king who has possession of the Palace. I would like to send you all a picture of the Palace. When they have a storming the city is so crowded that you can hardly see it. The people rent their windows to see it for a dollar apiece, and you have to engage them a long time before hand. The men and women of the toboggan clubs are dressed in blankets. Every toboggan club in the State goes to see the storming and helps to storm it. The toboggan slide is at an angle of about 90 degrees. [Whew! That's a pretty steep slide.—EDS. PRESS.] They throw snow on it and then sprinkle it with water.

The most beautiful place in summer is the upper part of the Mississippi. They ought to fetch some prairie chickens from Minnesota to

California. There the lakes are so thick with fish you can throw them out with a pitchfork in the winter where there is an airhole. cyclones come up they are beautiful, but don't want to be more than a mile from them. When my father first came to Minnesota the deer were so thick that you could stand in a door and shoot them. There are about 10,000 lakes in the State of Minnesota, and about all have fish in. E. G. DELAMATER.

Newcastle, Cal.

DOMESTIC ECONOMY.

CELERY SALAD.—One head of cabbage, three bunches of celery chopped very fine; take one teacup of vinegar, lump of butter the size of an egg, yolks of two eggs, one teaspoonful each of mustard and salt, a pinch of cayenne pepper, two teaspoonfuls of sugar; mix well, then put on the fire and heat until it thickens, stirring all the time; when cold, add two tablespoonfuls of thick cream, pour over the salad, and if it is not moist enough add a little cold vinegar.

STUFFED PORK.—Make deep incisions in the meat, trim so as to leave the skin longer than the flesh; then parboil some potatoes, mash, season with butter, cayenne pepper, salt, a minced onion and a little sage. With this dressing fill the incisions, draw the skin down and skewer it over. Season the outside by rubbing with salt, cayenne pepper and sage. Roast slowly. When done, skim off the fat, thicken the gravy with browned grated chicken. Serve with apple sauce.

SALMON CROQUETTES.—To make salmon croquettes boil half a pint of milk, thicken it with a tablespoonful of flour and let it become cold. Mince a pound can of salmon or one pound of fresh salmon. When very fine add a saltspoon of white pepper. Moisten the minced salmon with the boiled milk, work to a paste and add breadcrumbs if too thin. When wanted, shape into cakes, rolls or cones, dip in egg and crumbs and fry in hot fat.

LOBSTER BISQUE.—Take one good, firm lobster; take all the meat out and make a broth with it. Take the shell and pound it very fine. Put one quart of water, one onion and a carrot to boil for one hour; strain and keep cool. Chop the meat very fine; make one quart of cream sauce with the broth. Let it simmer gently and pour the stock made from the shell. Keep the carrot and the claws separate, cut in small dice to garnish the soup, and when finished add a pat of good butter.

CRYSTALLIZED FRUIT.—Take slices of orange or clusters of grapes, or any other fruit desired, and dip them first in white of egg beaten to a froth, and then in pulverized sugar. Lay a sheet of paper in a pan; spread the sugar and fruit on it, set it in a cool oven until dry, then keep in a cool place. It is quickly done, and is a pretty variety for the lunch table.

CREAM CAKE.—One cup of butter, two cups of sugar, whites of two eggs, $3\frac{1}{2}$ cups of flour, one cup of sweet milk, one teaspoonful of soda, one teaspoonful of cream of tartar. For the cream: One pint of sweet milk, sweetened to taste, yolks of three eggs; thicken with flour to the consistency of custard; flavor with lemon. This amount makes two good-sized cakes.

BEEF JELLY.—Take about one pound of lean, juicy beef, cut it into small pieces, put into cold water and let soak for one hour. Then put on the fire with one pint of water, seasoning with salt, pepper and a little celery seed, and let it stew until reduced two-thirds; strain on a few blades of mace. Serve hot.

MASHED POTATOES.—Boil a sufficient number of potatoes, peel, then crush them with the potato-masher; to a dozen large potatoes add one egg, well beaten, a tablespoon of sugar, and a cup of cream or milk; beat together, and sift through a colander into the dish they are to be served in.

FRIED CAKES.—One pint of sour milk, three tablespoonfuls of melted lard, two quarts of sifted flour, two cups of sugar rolled fine, a little salt and half a nutmeg; mix all well together, then add two tablespoons of soda, dissolve in one-eighth of a cup of lukewarm water.

RISE PUDDING.—One-half cup of rice, salt, and one cup of raisins, boiled until the raisins are tender and the rice dry. Add a custard, and pour into a pudding-dish set in a pan of water, and do not bake too long. The rule for the custard is four eggs to a quart of milk.

BREAD SAUCE.—Crumble some stale bread very fine; set it on the fire in a saucepan with as much sweet milk as will make it thick; put in a slice of onion and stir it till the bread is soaked and the sauce is quite smooth. Season with pepper and salt.

CAKE.—One cup sweet milk, one cup brown sugar, one-half cup molasses, one-half cup butter, four cups flour, one-half pound raisins, one cup currants, one tablespoon salt, one of cloves, one of cinnamon, two of baking powder, one nutmeg, two well-beaten eggs.

GINGER SNAPS.—One cup of molasses, one cup butter, one cup sugar; place them on the stove and let boil, and add teaspoon soda and tablespoon ginger and enough flour to make soft dough. Roll thin and bake quickly.

PICKLED FISH.—Spice the vinegar, cooking the spices in a bag; when hot, put the fish in and let it boil slowly until tender. Take out carefully and lay away in a stone jar.



A. T. DEWEY. W. B. EWER.

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The Week.

Two groups of splendid showers have refreshed a great area of the State since our last writing. The downpour was most acceptable after the drying winds of the preceding fortnight, and seems to insure fullness for the season, for, though the year's rainfall figures are not large at many points, the distribution has been timely. It is fair to expect good returns from field, orchard, vineyard and garden this year. Such an outlook inspires content and confidence, and our people generally are fully indulging therein.

The chief question in the fruit districts at present is concerning the labor supply. It looks as though all available force would be required. As we have already stated, a band of young men from the East were speedily placed in the Vaca valley, and no doubt among the year's immigration quite an amount of help will be available for the fruitmen; but whether enough or not cannot be foretold. In the Winters district there will probably be a number of Indians brought from the North. Over a hundred negroes with families, coming from North Carolina, have been placed in Fresno at \$15 per

month, and they say there are many more in the South who would prefer \$15 per month in California to \$7 in their present homes.

The Age of Science.

Sir Isaac Newton describes matter as some thing that when at rest will remain so forever unless moved by some outside force, and when in motion will keep on forever unless some impediment intervenes. It has an obstinate tendency to go on doing just what it is now doing.

Man, with all the complications and possibilities of his higher nature, inherits the same tendencies. He is conservative to a degree, and yet when once started in a new direction, it is difficult to divine where he may come to rest.

In looking over the earth we find man in every stage of improvement from the simplest savagism of Africa and Australia to the highest grades of Europe and America. The tendency to stand still is apparent in almost all nations. A state of motion is the exception, and seems always to wait for a grand exciting cause.

How long has man been in attaining his present condition? Lay the term when you may, and how unequal the march has been from barbarism to civilization, history dawns upon us some 3000 years again. We had taken all the previous ages in learning to record events. From that time we may form some estimate of the progress of different races.

China was then foremost, with an arrested development. She had got to the length of her chain. Egypt would seem to have fallen back. The pyramids were marvels to the men of those days. The Arab had reached his culmination. He is there to-day, as he was when Moses met him in the wilderness. A well was his grandest work.

Taking a map of those days, and picturing on it the people as they were, few have made the least advance, save from the impulsion of those without. No nation has risen up without an infusion of new blood by colony or conquest.

The races Asiatic, African and European met each other about the head of the Mediterranean sea. They mingled, fought, intermarried, and more vigorous blood and better mind seems to have been the result. If a circle be formed, with its center at Tyre and its circumference at Rome, it will include all the space occupied by the three races, with any kind of admixture. Outside of it all are of pure blood, one or the other, while within you find the half-strains—the fruit of miscegenation.

And among these the best foundations were laid for the future progress of the race. Egypt led the way in agriculture, architecture and religion. Greece refined on these, and added letters, music, sculpture and painting. Rome contributed government, conquest and law. And the Church planted in Rome by the Emperor, as a part of the State, became the most complete and solid hierarchy in the world. It is so to-day, though in decadence.

Westward the seat of progress seemed to move. France—Paris—climbed over Rome as the center of power and art. London seized the crown, and holds it still. England entered upon a new career. Greece, Rome, Paris, are all exceeded in their own specialties. She has more arts than Greece, more colonies than Rome, more science than Paris, and one thing more. She has called up all the powers of nature to aid man in the labor of his hands. The wind was known as a servant for ages, and water has turned the mills of the gods for thousands of years. But she called up other spirits—fire, steam and gunpowder—to her aid.

She illustrated all the powers of motion, how it could be made straight, rotary, eccentric, all that was wanted, and converted from one to the other at will. She made fingers of iron and steel, and twisted fibers into garments of the richest texture. She gave the world a new age. She "called spirits from the vasty deep" and made them work for her. Coal, fire, water, iron, air, all the elements of nature became her slaves. With only 20,000,000 of people in 1840, she had machinery equal to the labor of 600,000,000 of slaves. She did more work than the Chinese Empire. An Englishman was a magician who wielded the strength of a hundred men when he touched the valve of the steam engine.

Her ships cover the seas. Her arts and arms enrich and subdue the earth. She is the great teacher of the nations. In fact, the English age is capturing the world.

China may repel her religion, her literature and her law, but cannot repel her gunboats. They teach a lesson that must be heard. And all the world must have them, or yield to those who do. And with them sooner or later will go the law and religion. All the nations of the earth will be woke up now. No *vis inertia* can withstand those guns. They must all fall into line and be savages no more.

And we of this country are heirs—natural-born heirs—of this new dispensation, and with a broader base to plant it on than the original inventors. With fields, forests, fisheries and mines of inexhaustible riches, we have all her engines of production. Double her people, forty times her territory, ten times her freedom and twice her genius and invention, who can predict our career? Who shall set bounds to our prowess? It is not in man to conceive our glory in the year 2000.

Ah! if our wisdom, our morals, our knowledge of Government, shall keep pace with our other achievements, our country in a hundred years will rival the dreamland of the Utopian. We shall not be laborers in those days, but magicians, who do but speak to the spirits of earth and air, and they come forth to do our bidding.

"The fount of life shall then be quaffed
In peace by all that come;
And every wind that blows shall waft
Some wandering mortal home."

The Tariff Question.

The minority report of the Committee of Ways and Means on the tariff question was introduced in Congress on Monday. It discusses the effect generally upon American industry and especially notes the disastrous effects which will result to the agricultural interest. One comment is as follows:

The American farmer will appreciate the vicious character of the bill when he is apprised of the fact that while the products of land and labor are shut off from Canada by the protective tariff imposed by the Canadian Government, the Canadian farmer can send many of his products here without the payment of duty.

Concerning the effect upon the wool industry, which has unfortunately been the point upon which the free-traders have centered their forces, the minority report says:

Why have the majority put wool on the free list? The purpose is to bring down the price of wool. If this should be the result, we inquire, at whose expense and loss? It must be at the expense of the American grower, and to his loss, who, at present prices and with the present duty, is being forced out of the business by ruinous foreign competition. The injury, by the confession of the majority, will fall upon American wool-growers. The bill will greatly increase imports of the foreign product and diminish, if not wholly destroy, our own production. * * * Wool upon the free list is a deadly assault upon a great agricultural interest, and will fall with terrible severity upon a million people. It will destroy invested capital, unsettle established values, wrest from flock-masters their lifetime earnings, bankrupt thousands of our best and most industrious farmers, and drive them into other branches of agriculture already overcrowded. Finally the report declares the battle in defense of American industry will be resolutely fought, in the following words:

"We regard this bill as a direct attempt to fasten upon this country the British policy of free foreign trade. So viewing it, their sense of obligation to the people, and especially the working people employed in manufacturing and agriculture, impel them to resist it with all their power. They will assist the majority in every effort to reduce the redundant income of the Government in a direct and practicable way, but every effort of fiscal legislation which will destroy or enfeeble our industries will be met with the persistent and determined opposition of the minority represented in the House."

FUNDS FOR IRRIGATION.—Balloting in the Central Irrigation District, April 2d, on the question of issuing bonds to the amount of \$750,000, resulted in a vote of 159 for to 17 against in Maxwell, Williams and Norman, the three largest precincts. This practically carries the measure, pending the decision of the Supreme Court as to the constitutionality of the Wright bill, which is expected within 30 days.

California Lumber Trade.

Every one who has traveled very extensively throughout the State during the few months last past must have noticed the unusual activity everywhere manifested in building. Cottages, mansions and dwellings of every description are going up on all sides and in every direction. Although this activity is more apparent in the Southern portion of the State, it is seen largely on the increase all the way from the Southern portion of the San Joaquin valley to the very Northern extremity of the Sacramento valley, and even beyond, along the line of the Oregon railroad.

The indications are daily growing stronger that there will be a largely increased demand for lumber in Central and Northern California the coming summer and fall than ever before. The same is true, also, up and down the coast, more particularly in the lower Central coast counties.

The lumber business in this city was never more active than now, although lumbermen are not very sanguine that the present prices can be maintained through the season.

The increase in the lumber fleet during the past season has been quite large. Aside from sailing vessels there are now 15 steam schooners plying up and down the coast, mostly engaged in the lumber business, and it is stated on good authority that at least 15 more vessels of the same class are under contract to be built during the present season, all to be furnished with compound engines. These vessels move quickly and load and discharge very rapidly. They can steam from 9 to 12 miles an hour and lose no time in port. They are often discharged in this port in a single day and are off without waiting for wind or tide. A large number of barges and fore and aft vessels have also been added to the lumber fleet during the past season. A four-masted schooner and a steam schooner are being built at Port Madison, W. T. The steam schooner will be the largest on the coast and will have a carrying capacity of 450,000 feet.

New sawmills are going up in every direction, stimulated by the present unusual demand for lumber. The Loma Prieta mill at Santa Cruz is now in active operation, cutting about 70,000 feet of lumber per day. The Pacific Lumber-mill at Felton is also in operation, turning out 40,000 feet per day.

Moore & Smith, the lumber merchants, who recently purchased 3000 acres of timber land in Fresno county, are erecting two sawmills about 60 miles up Kings river from Fresno, where the timber belt is situated. The two mills will be of a large size, and will have a combined capacity of from 160,000 to 200,000 feet of lumber a day. A railroad will be built to the timber lands from Centerville, about 20 miles below Fresno. The road will be built up the King's river canyon to the site of the mills, with a prospect of its ultimate extension some miles further on.

There is standing in the belt of timber in the mountains, near where these sawmills are being built, fully 1,200,000,000 feet of lumber, 900,000,000 of which is redwood. Fresno county has the largest grove of redwoods in the world, it being 3600 acres in extent, and the majority of the trees being from 20 to 32 feet in diameter. A flume, 20 miles long, will be built to tap this and a belt of sugar pine and yellow pine, which is estimated to contain 750,000,000 feet.

The State Board of Trade.

At the regular meeting in this city on Tuesday the following resolution introduced by General Chipman of Red Bluff was adopted:

Resolved, That this board arrange a series of meetings under the direction of the Executive Committee, to be convened by the several county boards having membership relations with this board, and that a committee of three persons be appointed to attend such meetings as representatives of this board with a view to the mutual discussion of the plans and methods best calculated to secure the objects for which this board and the various county boards were organized.

Resolved, That the first meeting of the series be held by the Tehama County Board of Trade at Red Bluff on some day next week.

The objects of these meetings are to secure harmony and unity of action among persons and communities desirous of adding to the population and developing the resources of the State, to stimulate local improvements in interior towns, and to advance the interests of the country generally.

The Spanish Tongue in California.

California, since the time of the American occupation, furnishes a notable example of the manner in which the spoken language of a people may grow and wane through the commingling of races speaking different tongues. Prior to the inauguration of the gold-mining era most of the Americans who had arrived in California found it convenient to gain some knowledge of the Spanish, not a few of them mastering it completely. Among the earlier immigrants nearly all the younger members learned to speak the Spanish fluently, the elder picking up such words and phrases as were used in the transaction of business, and in conducting the more ordinary affairs of life. The two races saluted each other in either language, the Americans generally conforming to the Spanish mode, as, indeed, the latter people do not, nor have they ever taken readily to the English.

With the influx of immigration consequent on the discovery of gold, the English speedily became the predominating tongue, few of the newcomers trying to learn, or even paying any attention to the Spanish, as in fact there was no longer much need for their doing so. But while this language was so suddenly and almost wholly ignored, there had already been a great many Spanish words added to our vocabulary, some of them having been engrafted on it through sheer necessity, there being in the English no word for expressing the idea intended to be conveyed; and this for the reason that the thing itself had among the Americans no existence. They were obliged to adopt the terms corral, vaquero, rodeo, and the like, simply because there were no such things in the United States, nor had our people ever seen or heard of them. In like manner we had to adhere to the names given the trappings and implements of the vaquero, and to the caparisons of the caballero or horseman, such as tapajo, mochila, tapabero, cincho, lasso, etc. We had to continue calling a certain style of vicious animal a *bronco*, because the *bucketing* horse was a brute unknown to our people and with which they had happily had no experience.

Some names at first adopted by the Americans have since been wholly or partially dropped and English ones substituted in their stead: *embarcadero* has, with few exceptions, given place to the English term *landing*; *punta* has in most cases yielded to *point*; *pueblo*, to *city*; *presidio*, to *garrison* or *fort*; *rio*, to *river*—and so in many other instances. In designating natural objects, we have sometimes shared the names with the Spanish; thus we have in California ravines and canyons, *arroyos* and creeks, etc. In this State we retain the Spanish name *salinas*, but in Arizona they call a stream marked by the same peculiarities *salt river*. The Spanish *los* has generally had to succumb to the English definite article *the*. Where retained, as in the case of Los Angeles, our people, yielding to the national instinct, manage to give to the *o* the short sound instead of preserving the long sound which that letter has in Spanish. When it came to gold mining, this being an entirely new industry with the Americans, our language was without the terms and the phraseology pertaining to that business, hence the Spanish names such as *placer*, *batea*, *arastra*, etc., were by us accepted and have since been retained. The practice common among miners in early times of rushing off hastily to new diggings having made necessary a term for expressing this peculiar phrase of mining life, the word *stampede*, a corruption of the Spanish *estampada*, was adopted and is still in use.

Formerly the word *Ranch*, a contraction of the Spanish *Rancho*, was here in common use, being applied to every kind of landed estate. Since the large Mexican grants have been subdivided and the smaller holdings have come to be cultivated after the American fashion, the English term *farm* has in great measure superseded the Spanish *Rancho*, though chicken ranches, hog ranches, etc., still continue to be spoken of, and for designating these, the phrase is very convenient. Indeed we might well have retained much more which, in primitive times, we had the good sense to accept from that beautiful and expressive language, which, in so far as we have made appropriations from it, has greatly enriched without at all enfeebling our mother tongue.

Killing Animals Humanely.

Humanity requires that animals be killed in the quickest and least painful manner. The Massachusetts Society for the Prevention of Cruelty to Animals has issued a circular to the police of all Massachusetts cities, and to 450 agents of the society throughout the State, giving diagrams, and directions for killing. We give herewith the engravings, which may be of some interest and use to our readers. In the case of the horse and ox, the following directions are given:

Shooting.—Place the pistol muzzle within a few inches of the head, and shoot at the dot, aiming toward the center of the head.

Blows.—Blindfold, and with a heavy ax or hammer, strike just below the forehead, at the point indicated in the present cut. Two vigorous, well-directed blows will make death sure. Be careful not to shoot or strike too low.

In killing the dog, especial emphasis to shooting at the side of the head, as shown in the engraving.

Shooting.—Place the pistol muzzle near the head, aiming a little one side of the center of the top of the skull, and shoot downward at the dot, so that the bullet shall go through the brain into or toward the neck. Do not shoot



POINT FOR SHOT OR BLOW TO KILL ANIMALS HUMANELY.

too low, or directly in the middle, because of thick bones. The engraving of the dog's skull shows the thin place in the bone in contrast with the thick central ridge.

After much consultation with veterinary surgeons and experts, the society announces that no better or more merciful method of killing cats has been found than to put, with a long-handled wooden spoon, about half a teaspoonful of pure cyanide of potassium on the cat's tongue, as near the throat as possible. The suffering is only for a few seconds. Great care must be used to get pure cyanide of potassium, and to keep it tightly corked.

NIGHT AND DAY GROWTH.—Fruit trees acquire most of their growth by night. The fruit of the cherry laurel, for instance, increases at the rate of 90 per cent at night and only 10 per cent by day, while apples increase 80 per cent at night and 20 per cent in the daytime.

WILD CATTLE in great numbers are said to frequent the Umpqua valley in Oregon. They originated from a pioneer's herd that became wild in 1853. Some of them are 25 years old. They smell a man a long distance, and are as wild as deer.

A TRACT of 1400 acres in the Simi ranch has been sold to a gentleman from Illinois. A colony of 100 families who will settle upon it are on their way from the State mentioned.

THE Excelsior Lumber Company of Eureka has decided to do away with oxen for use in the logging woods, substituting horses for that service.

QUERIES AND REPLIES.

Important Facts in Potato-Growing.

EDITORS PRESS:—Less than 20 years ago the soil in this valley produced 12 tons per acre of large, smooth potatoes, and of excellent quality. At the same time the yield of oats was from 90 to 100 bushels per acre. Now, with far better cultivation, the yield of potatoes is about four tons per acre, very much smaller, less smooth, and frequently of an inferior quality, while the yield of oats is from 75 to 80 bushels per acre, and of high grade.

This shows a falling off in potatoes of 66 per cent, whereas that of oats is but 10 to 15 per cent. As potatoes is our most profitable crop, I am induced to ask you the following questions:

1st. Can anything be done to restore in any considerable degree the former yield?

2d. Would an analysis of the soil be necessary to determine that matter?

3d. If so, how should the soil be taken and in what quantity; and what would be the cost?

Should you deem it useless to answer any or all of the above questions, could you advise me as to what course I should pursue that would be most likely to show good results?

Where barn-yard manure is used it seems to cause the scab and a predisposition on the part of the potato to rot.

The valley is situated at the northern extremity of Humboldt bay, has an elevation of 8 to 12 feet above the sea level. The soil is a heavy, black loam ranging in depth from 10 to 30 inches, with clay subsoil, holding the water like a pitcher. Any answers to the above questions through your paper will be gratefully received.—DAVID WOOD, Arcata.

EDITORS PRESS:—Your letter requesting

The farmer's main dependence for fertilizing material has always been, and I think will always be, upon the barnyard, but it is evident from the system of farming practiced in this State of cropping the land to the exclusion of stock, in too great a degree, the barnyard supply will be and is sadly deficient, and if we wish to keep up the fertility of our soil we must resort to commercial fertilizers. The question with us is, will it pay? We know with the prices of cereals at present, and the constantly decreasing crops, there is but little and in some years no money in crops. We must restore the fertility of our soil or farming will soon cease to be profitable.

The value of commercial fertilizers can only be ascertained by personal experiment. My experience in this matter is, I confess, very limited, but what little I have inclines me in its favor. Last season I experimented with bone-meal in my garden, with marked increase in its products where it was used. This season I am experimenting with the "high-grade vegetable fertilizer" and bone-meal on a larger scale, and if it meets my expectations shall use considerable next year.

According to Prof Hilgard's writings, there is a deficiency of potash in the soils of this State. Now, as the "high-grade vegetable fertilizer" advertised in the RURAL PRESS is rich in nitrogen and potash, it seems to me peculiarly adapted to the wants of the potato. The following is stated to be a fair analysis of a fair average farmyard manure and the "high-grade vegetable fertilizer" advertised in the PRESS:

	Farmyard manure, lbs.	High-grade fertilizer, lbs.
Phosphoric acid	10	240
Nitrogen	10	80
Potash	8	200
2000 lbs. of each.		

Now I wish your correspondent would try the experiment. He can try it on a small scale and give the result of his experiment in the RURAL PRESS next fall for the benefit of the whole RURAL family, and I will do so also. By writing to Prof. Hilgard at Berkeley he can get the University Bulletin giving all necessary instructions in relation to analysis of soils, cost, etc.

One thing is certain, we have got to stop cropping our land and diversify our farming or go to heavy expense in fertilizers to keep up the fertility of our soil. The blight in potatoes exists to some extent, but less than formerly; the changing of fields and seed is a remedy. The old system of cutting seed to one eye is a thing of the past, as cut in this way nearly half rot in the ground and never come up. Cutting fair-sized potatoes through the seed end in halves or quarters gives the best results.

I would like to see the experiments of others published in the PRESS. Anything tending to a better, broader and more comprehensive system of farming would be useful and entertaining.—E. H. CHENEY, Smith's Ranch, Sonoma County.

Killing Moles.

EDITORS PRESS:—I have been for many years a subscriber to your valuable paper, and during that time we have had a great many directions in regard to the killing of gophers; now what I want is some instructions for killing moles. They are giving me a great deal of trouble. If you will kindly give your attention to this matter in an early issue of your paper, I shall think it a great favor, and no doubt there will be many more of your subscribers of my way of thinking.—OLD SUBSCRIBER, Sebastopol, Sonoma Co.

We should like to hear from successful mole-killers.

Buckwheat and Timothy.

EDITORS PRESS:—Please inform me through the PRESS when is the time to sow buckwheat; also if timothy will grow here without irrigation.—CONSTANT READER, Suisun, Cal.

Sow buckwheat when you would corn, when danger of frost is over. Timothy is not a trustworthy grass except in the extreme north of the State. It has a bulbous root which burns in the sun.

PRESERVING THE FORESTS.—Senator Hale lately introduced a bill prepared by the American Forestry Congress to preserve the forests, which is outlined as follows: "It withdraws from entry as forest lands all public lands of the United States more valuable for their timber than for agricultural purposes. It institutes the office of Commissioner of Forests, and authorizes the appointment of four assistant commissioners. The commissioner is instructed to form the forest land into what are designated as forest reserves. He is given power to frame rules and regulations for the government of these reserves, and to appoint rangers to see that the rules are observed. No forest lands are to be sold, but the stumpage on them may be disposed of in the discretion of the Commissioner of Forests."

A HEAVY FLOUR SHIPMENT.—The steamship *Abyssinia* sailed from Vancouver March 6th, for Yokohama, with 44 passengers aboard and a cargo of 1600 tons of freight, including 38,600 sacks of flour.

NEW SYNONYM FOR ORANGE.—Luther Burbank, the well-known Santa Rosa nurseryman calls the orange "a boom fruit."

HORTICULTURE.

Importance of Thorough Cultivation.

Gen. N. P. Chipman of Red Bluff, who is doing excellent service for his part of the State by his precept and practical example in horticultural matters, prepared the following timely article for the Red Bluff *Sentinel*. It should be carefully read by all new-comers to California, or by those who have but little experience in the growth of orchard and vineyard in this State:

I wish now to emphasize the necessity of thorough cultivation. Assuming that your orchard is planted and your first steps all well taken, your ground well plowed, and your trees well planted and cut back to the proper height, you are now to confront the question of cultivation. I know that many of you think there is nothing to be said on this subject that you don't know; that all there is in it can be said in a word; that anybody knows enough to cultivate the ground.

Let us see. Why do you cultivate at all? How often do you intend to stir the ground this summer? How deep will you stir it? In what condition will you keep the surface as to pulverization of the soil? At what time will you cease cultivating? How many are prepared to answer these questions? I have watched with great interest the tree-planting that is going on in this vicinity. Generally it is being better done than ever before; this is a good sign. But all this fine work will go for naught if you do not follow it up by good and thorough cultivation.

We all know the tree cannot grow in dry earth; that its food must first be dissolved and given to it through the aid of water. Water is the vehicle by which the nutriment is carried into the circulation of the tree. The importance of water to plant life is seen when we remember that growing plants contain from 70 to 95 per cent of water, and of trees it is quite large. The food must be taken through the roots, and is not absorbed by the leaves. Whatever of growth we are to expect of our trees must depend, therefore, upon the condition of the soil as to moisture. It becomes, then, vitally important to retain all the moisture possible, inasmuch as we do not irrigate, and are obliged to rely wholly on the rainfall.

We cultivate the soil often in great ignorance of the reason, and being ignorant of the reason we do not cultivate properly. I once ceased cultivating my vineyard at a critical time upon the advice of an ignorant gardener, who told me the weather was too hot, and that the more I exposed the earth the more the sun would evaporate the moisture, and I would in a short time blow all the moisture out. A slight crust had formed on top. "There," he said, "leave it now; and depend upon it, the moisture will not come out." My vines soon began to beg for drink. It was plain that something was wrong. My gardener said we had better haul water to them, and I rigged a portable tank and hauled water a mile. I was not satisfied and wrote Professor Hilgard. He made the whole matter plain. He said if I would put a dry brick on a wet sponge, the brick would soon absorb all the water; but if I would put a dry sponge on a wet brick the sponge would not absorb the water. My crust on the top of my ground was the dry brick on the wet sponge, and was rapidly taking up the moisture and giving it off by evaporation. Keep the tilth of your ground good, he said, and you will have no trouble.

I didn't know in those days exactly what he meant by tilth, but I went to Webster and found out that it meant the condition of the cultivated soil. I began to ask myself why the uncultivated ground outside grew dry for several feet deep, why summer-fallow land dried out, too, and lost its moisture, and why well-cultivated patches of garden and vines, and many vegetables, got along without rain or irrigation. A man came along with watermelons raised on similar land without irrigation, while I was in the act of wetting my vines, whose roots were two feet down under ground. I felt humiliated at my ignorance, discharged my gardener, put my hoe and cultivators at work, and managed to arrest the evaporation in time to save my vines.

Now, then, let us see how this great mystery is to be explained. If you break up your land in large lumps and leave it, you know it dries out rapidly. First the clods will grow hard and lose their moisture; then the general surface bakes, and then begins the fatal work of sapping the ground below. In proportion as you pulverize the lumps, you reduce the evaporating surface, and if you reduce these lumps to fine powder, this evaporating surface is all gone except the fine particles forming the surface.

Now, by keeping any crust from forming among these particles or beneath them for a few inches, you break and destroy the 10,000 capillaries that suck up and pass off the moisture. The finer the grain of the soil, the better it retains moisture, and the more nearly you can reduce your soil to dust or fine powder, the better it will retain moisture. If it were possible to give our orchards the treatment we do our gardens, we would be amazed at the tree growth. If your soil is coarse, it needs all the more working. I doubt if there is in the United States any soil superior to the slate soil of Thomas creek, and its value, in my judgment, lies in its

excessive fineness. It is rich in plant food, but it is richer in its capacity for retaining moisture and conveying its food to plant life. We must then pulverize, and keep pulverized, the soil of orchards.

Again, this top pulverization is like a woolen blanket thrown over ice; it also becomes a sort of mulch, and by its non-conductive quality holds the moisture in the soil below, whose vapors enter the root system, and thence into the tree circulation, carrying the life-giving properties of the soil. It isn't the water that sustains the tree any more than it is the frying-pan that gives you a supper; it is simply the vehicle by which plant food is prepared and given.

How often you are to cultivate cannot be answered. Once in two weeks, after the rainy season is over, is not too often, and it should not cease before August. Three or four inches is deep enough after your spring plowing, although deeper won't do any harm, and may help.

I want to warn you against the seductive spring shower. It falls and freshens everything, and probably soon after you have cultivated your ground. You think, how fortunate! But the fact may be (and you must look to see if it is not) just rain enough has fallen to wet the top of your ground, now in lovely tilth, and immediately this desiccating crust begins to form, and if left to remain it will pump out moisture—a great deal; more than fell to form it, and unless you break it with a harrow or cultivator that shower had better never been born. The spring showers must be followed up with your cultivator (unless they come close together) and all summer long you must not weary of this work, for you will have a rich reward in leaf and bud and limb and tree. All weeds must come out at once, for every one of them lives at the expense of your tree. Weeds are so many pumps working night and day to draw out the life sources of your tree. Next to a pestiferous insect feeding upon the leaf is the pestiferous weed feeding upon the tree roots.

Northern California, with its copious rainfall, needs no irrigation (however much tree growth would be promoted by it), but it does need thorough cultivation, and without that we will have failure, and only failure.

If I were to sum up in one word the secret of success in tree-growing, it would be—*cultivate*.

Orchard Cultivation.

EDITORS PRESS:—Methods of cultivating orchards are almost as diversified as methods of pruning, but thorough cultivation is, in my opinion, the more important. It will probably be admitted by all that the object of cultivation is to store the moisture that falls as rain or is put on the land by artificial irrigation, so as to sustain the tree during our rainless season. To do this a variety of implements are used, all aiming to accomplish the desired result, but with varying success. No one implement is capable of doing this, and different soils require different makes to reduce them at least expense of time and power.

After 15 years of experience in cultivation of fruit trees planted on the sandy sediment land in the section known as "The Willows," near San Jose, I am tempted to express an opinion as to the best method of cultivation and the tools used. The first work to be done is directly after the first fall rains, when the entire surface of the soil should be broken up. The object of this first cultivation is to open up the soil so that it may the more readily receive the rains and to destroy any weeds that may have started. A good implement for this work is a two-horse cultivator of about seven "teeth." The machine made by the San Jose Agricultural Works is a good one for this work, or some similar machine. When sufficient rain has fallen to wet the ground six inches or more, the orchard should be plowed to the depth desired, and not less than five inches. If heavy rains fall and vegetation starts rapidly, two plowings will be found beneficial.

The earth is now thoroughly broken up, but is full of clods which must be reduced to mellow earth or the moisture will rapidly evaporate, the clods acting as evaporating tubs. To do this two cultivators are necessary—one to bring the clods to the surface and the other to crush them. The seven-toothed cultivator mentioned above is excellent for drawing out the clods, and the "Acme" is the best machine that I have ever seen for finishing up.

By using these machines alternately, and running them about as deep as the ground was plowed, our "willow" land may be made "as mellow as an ash heap."

I may state here that I have tried the Lubin pulverizer, which is intended to accomplish the above result at one operation, but do not think that it can successfully compete with the two machines mentioned in our orchards. However, it is open to improvement and may yet prove a valuable implement.

H. G. KEESLING.

San Jose, March 31, '88.

EUROPEAN FRUITS.—It is telegraphed from New York that shippers of imported oranges and lemons to that port are making a strong effort to get additional advantages. Chicago and other Western markets where California oranges go expect to accomplish this by means of the adjustment of freight rates by the trunk lines' Classification Committee, which has been memorialized, but which has returned no answer. There is, however, some controversy among the large and small shippers. Large

shippers want the classification changed so that oranges and lemons shall be fixed at fourth class in carload lots and in second class for less than carload lots. Small shippers say that this plan virtually amounts to the continuation of the old rebate system in favor of larger shipments. Small shippers regard the delay in answering the petition as indicative of the trunk lines' uncertainty as to the approaching decision of the Interstate Commerce Commission regarding the legality of the carload and less than carload classification distinction now made by the roads.

Santa Clara Fruit Interests.

At the March meeting of the Fruit-Growers' Association of the Willows, S. R. Cushing, E. J. Delaney and Geo. A. Fleming were appointed to prepare a protest against the removal of the present duty on prunes, plums and other dried fruits, as provided by the Mills Tariff Bill, and forward it to Hon. C. N. Felton, member of Congress from the fifth district.

In their letter discharging that duty, under date of March 24th, the committee say: "There are at present more than a million prune trees planted in Santa Clara county, and only about 20 per cent of these are yet bearing. Twenty-five hundred families are engaged in growing prunes, and depend on its success for their support. Many of these have expended their all in planting and caring for young orchards which have as yet yielded no returns. We estimate that the trees now planted will within five years produce an annual crop of 35,000,000 pounds of dried prunes in Santa Clara county alone."

"The Willows" claims to be the birthplace of the California prune business, and the fruit-growers there appear to be unanimous in opposing any reduction of the low duty on prunes and dried fruits, as tending to crush a rising industry which promises ere long to supply the entire country with an article far superior to that produced abroad.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

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Who sent us a postal note from Middletown, Lake county, without sending his name?
Who did the same thing from Selma, Fresno county, some time ago?
It is impossible to give proper credits unless people will send their names with the remittance. Let all subscribers take notice.
P. S.—If people wonder why their letters are not answered or the paper stopped when they omit the postage stamp on their letters, or misdirect them, or give them to parties who never mail them, whose fault is it?

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to anyone who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

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T. A. SLOCUM, M. C., 181 Pearl St., New York.

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AGRICULTURAL NOTES.

CALIFORNIA.

El Dorado.

FRUIT SPRAYING.—Placerville *Republican*: Last year two El Dorado horticulturists tried the experiment of fruit-spraying with most satisfactory results. L. M. Davis, Sr., sprayed 500 or 600 Bartlett pear trees with a solution of one pound of Paris green to 160 gallons of water. He found that this solution killed the pear slug and produced no visible effect upon the fruit or foliage, and, although he only sprayed the trees once, he found it very beneficial to the fruit. Spraying with this solution costs about three mills to the tree, besides the labor and expense for a pump. Earl Norton and his sister, Mrs. L. D. Delany, sprayed, last year, about 2000 pear and apple trees, using a solution of Paris green, one pound to 100 gallons of water. Although they only sprayed the trees once, yet the results were very satisfactory. One orchard that they sprayed yielded 600 pounds of good pears, while the year before it only yielded 11 boxes. An apple orchard that was sprayed yielded 150 boxes, and the year before, without spraying, only 29 boxes.

Fresno.

A SINGULAR WELL.—Rev. DeMundrum, who has resided on the West Side for several months, has given the Selma *Irrigator* some interesting points as to a gas well on Cantua creek. Not far from his ranch some sheepmen sunk a six-inch well for water for their sheep. They found water at a depth of 135 feet, which at once rose about 75 feet from the surface. The water is very hot and unfit for use until it has cooled off and certain gases escape. When free from heat and from the gaseous matter, it is pure and pleasant to the taste. Periodically a current of gas is emitted with such force that it can be heard at times for a distance of two miles, and actually shakes the house in which he lives, though several hundred yards away. It seems as if the gas vein had been passed through in boring the well, and that the reservoir is above the lower end of the tubing in the well, and that it is only when the pressure becomes great enough to move a column of water 60 to 70 feet in height that it escapes periodically and with great force.

WILD HONEY.—Fresno *Republican*, March 30: Joel Halbert, an old bee-hunter, living in Aubrey valley in the foothills, was in the city yesterday, en route home from a trip on Kings river. While down on the river, Mr. Halbert went bee-tree hunting, one afternoon, and in an hour and a half found seven trees. Three of these he cut down, and from them over 300 pounds of honey was taken.

Humboldt.

CHAMPION SOWER.—Eureka *Standard*: We are informed that William Griffin, an employe on John McNaughton's farm at Table Bluff, sowed 32 acres of ground from 7:30 A. M. to 5:30 P. M. Griffin says he has \$500 to wager that he can sow 40 acres in the same time.

CROP PROSPECTS.—Eureka *Standard*, March 24: Geo. W. Meek is in from Elk river to-day. He reports that the wet condition of the soil has prevented some farmers from getting their crops in up to the present date. The same report comes from some other portions of the Eel river valley. Wm. L. Collins, who lives on Eel river, below the Dungan farm, says the crop prospects in that section were never better. At his place the water was not so high by 3½ feet during the late flood as he has known it to be in former ones. Generally speaking, instead of being an injury, it was a benefit to land, because of the rich sediment which was deposited while it lasted.

Inyo.

ENLARGING HIS APIARY.—Inyo *Independent*, March 24: Mr. Muth-Rasmussen is building a storage-room for honey at his apiary at Camp Independence. The building will have double walls, so as to secure an even temperature as nearly as possible. It will be provided with shelves, where many thousands of pound-sections filled with honey can be stored. When the shelves are filled, sulphur will be burned in the room; two fumigations will be given, and then the honey will keep in a perfect condition for an indefinite time. Mr. Muth-Rasmussen is making a large addition to his apiary and will have much more honey for market than ever before.

Kern.

SIGHTS OF SPRINGTIME.—Bakersfield *Echo*, March 29: He is a strange man indeed who does not admire Kern at this season of the year. The alfalfa is fully boot-top high and as green as emerald. Other crops are coming forward rapidly, wheat and barley being about as high as the alfalfa, and fruit trees are well set with fruit. Not the least enchanting part of the picture, beheld during a ride through the country now, are the irrigating canals booming full of clear, sparkling water. The warm days recently have been unlocking the storehouse of snow in the high Sierras on the headwaters of Kern river, and the swelling tide that is coming down to gladden the fields tells of the abundance still in store up there. One sees less activity in the fields here than in the East at this season of the year. One reason for this is that the fields are devoted chiefly to perennial crops, alfalfa and fruit; but another important reason is that the farmer has the whole 12 months in which to do his year's work. He

has had since last October at least to sow his grain, and hence he is not crowded early and late now to "get his crop in."

BEE BUSINESS.—Geo. C. Doherty has established another bee ranch about three miles west of town. Our apiarists say but little about their profits, but it is noticeable that they continue to enlarge their operations.

Lake.

A FOOTHILL ORCHARD.—Lakeport *Avalanche*, March 29: The orchard planted last year at the foot of Uncle Sam mountain by Clendenin Bros. and Laughlan of Kelseyville, is in a flourishing condition. They now have 25 acres cleared, fenced and planted to trees, of which there are 2300. These gentlemen are entitled to considerable credit for their perseverance in proving that our chemical hill lands are valuable for fruit-raising. Of 750 trees planted last year they lost only about 30, all the rest being thrifty and flourishing. There is no doubt that this class of lands will prove more valuable for fruit-raising than some of our valley lands, the soil being better adapted to apples and prunes. There is a good deal of this same kind of land in Lake county that is open to location. But a man to take up such land must have money enough to clear off and plant his land to fruit trees, and also enough to live on until his fruit begins to bear.

AGRICULTURAL ASSOCIATION.—Ukiah *Press*: The directors of the 12th District Agricultural Association will meet at the courthouse in Lakeport April 14th, at 1 o'clock P. M., for the purpose of reorganizing the board and to make preparations for the next annual fair, President Long having notified the members to that effect.

Mendocino.

MORE ABOUT ARTESIAN BORING.—Dispatch and Democrat, March 23: Oscar Danton of Lake county has done a good work for Mendocino during the past three weeks, in that he has demonstrated that artesian water can be had for the boring. Some time ago Mr. J. B. McClure entered into a contract with Mr. Danton, by which the latter undertook to find water on McClure's ranch east of Russian river, and about three miles from Ukiah. The Rockford drill, worked by horse-power, was put in operation, and at the expiration of the three weeks a distance of 134½ feet was reached. After three weak streams or veins of water had been passed through and closed up by the pipe, a flow of clear water was struck strong enough to carry the water ten feet above the surface, and at the rate of about four gallons of water per minute. On Monday last the boring was resumed, and by Tuesday afternoon, when we visited the well for the second time, a depth of 154 feet had been reached, but without any perceptible increase in the flow of water over that secured on Friday last.

Merced.

RABBIT-DRIVE.—C. A. P. dispatch, Merced, March 29: The Merced people to-day enjoyed another great rabbit-drive. All the business houses in town were closed early this morning, and all who could procure conveyances repaired to the Lone Tree schoolhouse, where they formed a line inclosing several sections of ground, driving the rabbits into a corral, where at least 2000 were slaughtered, while hundreds were taken alive, and many more slain upon the plain while attempting to break through the line of vehicles and men and boys on foot and on horseback. Other drives are being arranged for the next two weeks in the southern part of the county. The farmers submit willingly to long trains of carriages passing abreast over their grain-fields, and pay out their money freely to defray the expense of corrals, considering themselves fully reimbursed by the destruction of the rabbits.

Monterey.

GOOD DAIRYING.—A Salinas *Index* reporter, who lately visited the ranch of Hiram Corey across the river, says that Mr. Corey milks over 300 cows now and makes about 15 boxes of butter, weighing 130 pounds each per week. He employs 19 white men and several Chinamen. Walter Emery, from "away down in Maine," superintends the dairy and makes the butter. The dairy-house is large and unusually neat, and the butter commands fancy prices in the San Francisco market.

Napa.

PRUNES.—Calistogan, March 28: Wm. Spiers now has prune trees growing on 11 acres of vineyard, every third vine each year having been removed for this purpose. Thus he can depend in a few years for a crop either upon the vines or trees, and whichever promises the greater profit he can retain and let the other go. H. L. Gibbs called the other day and took us out to his prune orchard, which, like others in this vicinity, is in full blossom and looks beautiful with its dress of snowy whiteness, while the air is redolent with perfume. A view of it at this time will well repay one for making a visit there. There are 35 acres of the orchard, though on a portion of it are growing small trees. Mr. Gibbs will have 50 tons of dried prunes this year, if unfavorable weather does not interfere. The prune orchards of John Walker and C. W. Lane, near Mr. Gibbs', also look very inviting and promise to yield bountifully. Garnett, Eastman, Hauge, Butterfield, Teales and others have orchards that will bear very well this year, and increase the yield of prunes in the Upper Napa valley to an extent worthy of consideration.

TALL BARLEY.—Napa *Register*, March 30: This morning S. B. Merrell brought to the of-

fice of the Napa Land Co. several stalks of tall barley, two feet eight inches tall. The seed was sown just before the rains in December last, on land one mile north of town. The grain was sown for hay, and the first crop will be ready to cut next month.

FINE HORSES.—A *Register* reporter visited Wm. McGraw's training stables and saw some fine stock. Chas. Scott's new Kentucky-bred horse, "Wilkes Pasha," is attracting much attention. He is of fine form and muscle and is in color a beautiful mahogany bay. Mr. Scott is also the owner of two Norman horses, "Tony Oakes" and "Henry Clay." The former was imported direct from France and is a dappled gray; the latter is one of the largest horses near Napa and is in color a bright bay. "Alcona," a handsome Hambletonian chestnut, belongs to Fred. W. Loeber of St. Helena. He is the sire of some of the finest carriage animals in the valley, stands 16½ hands in height, and weighs 1300 pounds. "Napoleon" is the property of Frank Fruehauf. He is 16 hands high and weighs 1600 pounds. As a draft horse, he is hard to beat.

Nevada.

ALFALFA.—Grass Valley *Tidings*, March 28: Mr. S. H. Dikeman of Rough and Ready was in this morning and left with us a specimen of Rough and Ready alfalfa, a stalk measuring two feet and six inches in length. This is early in the season for such a growth, but that is the way clover does in these foothills when given half a chance. The alfalfa crop of Rough and Ready township is valuable always, and we judge it is to be big this year.

Placer.

STATEMENTS AMENDED.—Loomis Cor. Bee: In your issue of March 22d you refer to the purchase of 30 acres from J. P. Whitney by A. T. Hatch, president of the State Board of Trade, and Washington Porter and J. K. Ormsby of Chicago, to be planted this spring in oranges exclusively. You state that this land is located between Newcastle and Rocklin. But these two places are more than ten miles apart! The point we wish to have clearly stated is that the choice citrus land, so selected by the above-mentioned noted fruitmen, immediately adjoins our town of Loomis. Again, the enormous reservoir of 40,000,000 gallons in course of preparation by Mr. Whitney on the ridge between Loomis and Rocklin would seem to be an excessive water-supply for the sole use of Mr. Whitney's raisin vine yard as left to be inferred by the Newcastle *News*. The fact is, it is designed to supply the large citrus slope lying between Mr. Butler's magnificent orchard near Loomis, and the town of Rocklin.

San Benito.

THE HORSE MARKET.—Hollister *Free Lance*: The next regular monthly horse market will be held at Kent's stable on Saturday, April 7th. The Hollister Board of Trade suggests to the owners of stallions that they give an exhibition of their horses the same day.

San Bernardino.

ON COLTON TERRACE.—Semi-Tropic, March 27: We noticed that Dr. Fox is taking up some of his deciduous trees and replacing them with citrus. He stated that the latter were far more profitable and a much better fruit to handle. The Navel, Mediterranean Sweets and seedling varieties of orange trees, and hundreds of lemon trees, occupy a good share of the doctor's 40-acre tract. The trees are in a healthy and well-kept condition. This year's crop has mostly been gathered. Some of the trees, however, are still loaded and present a pretty appearance. Many of them are breaking into bloom and are setting quite thick, promising a good crop for next year.

San Diego.

WINTER MELON.—San Jacinto *Register*, March 22: Last week we were shown a fine large watermelon which had been kept in Green, Ashenfelter & McLaren's office all winter. The melon was in a remarkable state of preservation, and apparently as sound as it was the day it was pulled off the vines; but then it was a little too ripe to taste good.

GRAIN ACREAGE.—Cor. San Diego Union: Your correspondent has endeavored to obtain an approximate estimate of the San Jacinto grain crop. Those who are best fitted for knowing make various estimates, from 12,000 to 15,000 acres, for the San Jacinto neighborhood, while the whole country to Perris, 20 miles away, is an immense barley-field. Look out for hay this fall, San Diego.

San Joaquin.

GOPHER SCALPS.—Stockton *Independent*, April 1: This is the season of the year when the farmer's boy takes advantage of the supervisors' offer of five cents apiece for gopher-scalps to rid the country of the "pesky varmints," and by so doing increases his little surplus at the expense of the county. Yesterday a youth brought 1000 gopher-scalps into the county clerk's office. These scalps were the remnants of a colony of gophers that made their headquarters on Union island. During the afternoon three bright boys, who, according to their own statement, "live on the Calaveras, a few miles out of town," brought in three separate bundles of gopher-scalps. The total receipts for the day were 2000 scalps.

San Luis Obispo.

COLT SHOW PLANNED.—Through the *Leader*, Shackelford & Steinbeck invite all owners of colts sired by "Young America" to participate in a colt-show to be held at Paso Robles, the

first Saturday in June, 1888. A premium of \$40 will be given the owner of the best colt with a dam weighing 1200 pounds and over, and \$40 premium to the owner of the best colt with dam weighing less than 1200 pounds—the exhibitors to select the judges.

THE STALLION SHOW.—Tribune: There were plenty of good horses, offering an ample guarantee of the future of the animal in the county. Mr. Shackelford sent over from Paso Robles his Suffolk Panch, somewhat of a novelty in the county, a splendid animal and one that will be of great service. Electro, another new arrival, a son of the great horse Electioneer, came up from Santa Maria. Mr. Arza Porter sent in Dagobert, a French coacher, recently imported and a very valuable horse. Alcona was there, gaily bedecked with ribbons, the chief of the party. So were his worthy sons Alallen and Toona Stewart. We noticed also Com. Nutwood, Fred Arnold, Duke McClelland, Dante, and a number of others, making a really splendid show, well worth the attention of breeders and horse fanciers.

Santa Barbara.

FARMERS ASTIR.—Santa Maria *Times*, March 24: There is more stir among the farmers of Santa Maria valley this season than ever before in the way of making improvements and brightening up their minds as to how to mix farming. They have found by long experience that raising grain at present prices with our present shipping facilities is not going to make any farmer rich; consequently they have concluded in connection with grain-growing to give attention to somewhat of a variety crop. As for fruit trees, there has been a greater number planted this season throughout this section than all previous seasons combined.

FROM CARPENTERIA.—Cor. Press, March 31: Many artesian wells are being bored in different parts of the valley, and water is found in almost every instance. A large flow has been struck at the depot. It flows a two-inch stream constantly. At the hotel is another large well. ... The farmers are busy plowing. A larger area of beans will be planted than for several years past, the increase in the price of that commodity encouraging the farmers to grow more beans. All fruits and walnuts promise an enormous crop. Grains and feed look better than ever before at this time of year. The honey crop will be very large.

MONSTROUS MUSHROOM.—A mushroom, perhaps the biggest ever seen in California, raised within the city limits, was yesterday shown to a *Press* reporter. It was 12½ inches in diameter; the stem, four inches from the ground, was three and one-fourth inches in diameter, and it weighed 21 ounces. The pulpy part was two and three-fourths inches thick. The mushroom was of an edible variety, and perfectly free from blemishes or parasites.

Sonoma.

POISONED BY WILD FLAX.—Petaluma *Courier*: A gentleman living near Stony Point, in this county, a few days since turned a flock of about 70 sheep into his orchard to eat down the wild flax and other grasses growing therein. He let them stay in all of one day, and at night 40 of them were down, 27 of which died. The wild flax bloated them and was evidently the cause of their sickness and death. Sheep-raisers should make a note of this.

A PRUNING BEE.—Republican, March 22: C. W. Winkler, who lives near Sebastopol, is prostrated by a severe attack of rheumatism; his wife lies seriously ill with pneumonia; his daughter has a badly sprained ankle, and his son a broken leg. As may be surmised, work on the Winkler farm has been sadly neglected of late. On Friday a number of neighbors organized a "pruning bee" and devoted their attention to the afflicted family's orchard. Over 1000 peach trees were trimmed. All the Green Valley farmers are orchardists, and each one an expert on the subject of pruning; but each one has a different style. The orchard which was pruned Friday will afford a good field for a comparison of these styles and a decision as to which is the best.

Tulare.

BIG FIG TREES.—Visalia *Times*: In 1857 J. W. Williams and others brought from Fort Tejon, Kern county, a number of fig cuttings, which were stuck in the ground on what is now known as the old Indian reservation on Tule river, four miles east of Porterville. These cuttings lived and thrived, and now there are 11 of the trees, the smallest one measuring four feet four inches in circumference, or 1½ feet in diameter; and the largest measuring eight feet three inches in circumference, or two feet and nine inches in diameter. Two other trees have a circumference of seven feet and one inch each.

Ventura.

EDITORS PRESS.—California's boom may have vanished in air, as some Eastern journals delight in asserting, but the interest turning toward Ventura county has but just begun. Until recently transactions in real estate have been chiefly between residents; prices have steadily increased, and now the tide of Eastern home-seekers turns this way; 100 good families from near Chicago are expected during the summer. These people will locate on a portion of the fine tract of land known as the Simi rancho. No one complains greatly at the prices asked for land, but all new-comers, and old residents as well, grumble at the exorbitant charges for some of our staple products. Where, pray, can beef be raised more cheaply or of better quality than in Ventura county? Yet our beef is not

good, and we pay from 10 to 18 cents per pound for it. The farmer gets 3 cents for pork and the consumer pays 18 to 22 cents for ham and 15 cents for lard. Butter ranges from 30 to 90 cents per roll, according to the season, but we have never paid less than 25 cents per gallon for milk, and regular "old blue" at that.—MAX, San Buenaventura, March 28th.

Yolo.

SCARING OFF COYOTES.—Rock Cor. Yolo Democrat, March 25: Feed on the hills is good and our cattle are "in clover." Sheep are doing well, and the loss, notwithstanding the strangely cold winter, has been very small. W. Levy of Madison owns a very large sheep-range here and his sheep are looking finely under the vigilant care of Mr. Hopkins, who has had several men employed to look after them and build fires on the range to frighten off coyotes and other vermin. A dozen or more fires may be seen any night burning at various points over the range. George says he expects to mark 2000 lambs this spring from 2600 ewes.

A HORSE'S LEG.—Davisville Cor. Democrat, March 26: A valuable horse belonging to Andrew Martin broke its leg about a week ago, and rather than see it shot Mr. Dunfred, a neighbor, agreed to take the animal and attempt a cure. Under the advice of Dr. Bates, the wounded leg was incased in a strong red-wood box and filled around with plaster. By this arrangement the leg is held firmly in position, and there is every prospect that the animal may yet live to do good service. Yesterday, in order to afford the animal some rest, it was swung up by means of broad belts beneath the body, and even while the operation was going on the poor worn-out brute had sunk heavily on the side of his stall, and slept soundly.

A VETERAN MULE.—Winters Express: E. J. Englehart showed us a large mule the other day that he said was his standby; he got her when he first commenced farming on the creek. The mule, he said, was brought across the plains in 1865, when she was five years old, and is yet able to do her share of the farm-work.

OREGON.

FRUIT-RAISING.—Oregonian: A. Fleckinstein, who resides on Columbia slough, began about 12 years ago by putting 20 acres in German prunes, Bartlett pears, etc. He always succeeded in getting a good crop. The secret of his success was in the fact that he was both careful and saving; and having a drier on his ground he wasted nothing. When he got a full crop his trees were so heavily loaded that it required five or six props to keep the limbs from being broken. Two years ago he cut away the limbs of the German prunes and grafted with Italian prunes. He makes a specialty of prunes and small fruits. The neighbors say he makes more from his 20 acres than they do from their hundreds. It is related of him that when a hog gets in his orchard he chases it out.

SWEET POTATOES.—Mark Levy makes the original remark, "Oregon agin the world!" and deposits a couple of very handsome, rather large and very yellow and natural-looking sweet potatoes, a sample of 1300 pounds just shipped to him from Medford, Jackson county. These are certainly good and merchantable tubers, and if Oregon can grow plenty of such—and she certainly can—it will be a valuable item of production, as well as much to the credit of the country. They can be grown with care in parts of the Willamette valley and along the streams of the upper country that have sandy shores and loam benches; they do remarkably well. When the business of production is fully developed, sweet potatoes won't be brought here from abroad, except as southern lands can produce them earlier than they can be grown thus far north.

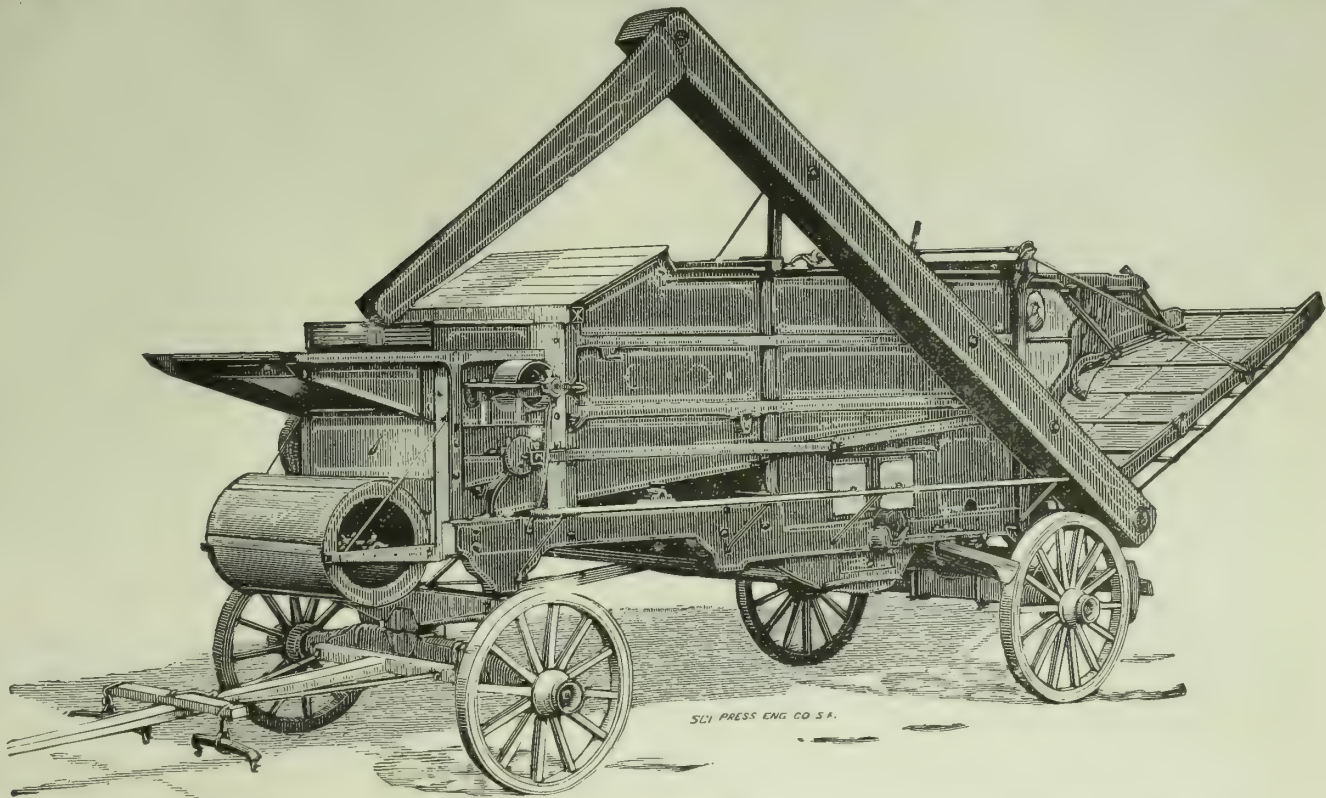
MONGOLIAN PHEASANTS.—Portland News, March 20: Passengers on yesterday's California express report that many Mongolian pheasants are to be seen along the line of the road, particularly a short distance above Albany, in Linn county. The birds are usually in pairs, although sometimes a half dozen are seen at a time, and in some localities they are reported to be quite tame. During the cold weather, when snow was on the ground, these pheasants were not at all backward in taking a place in the barnyards along with domestic fowl, and even contesting with them for supremacy. From a Lane county farmer comes the story that a cock pheasant persisted in remaining among the chickens on the place after the snow was gone, but in this was stubbornly opposed by the recognized gallinaceous leader, and a number of bitter fights took place between the two birds. The difficulty was ended one morning by the pheasant striking his antagonist dead, and now the stranger rules the yard.

BERKSHIRE SALES.—Phil. M. Springer, Springfield, Ill., secretary of the Berkshire Association, sends us notes of the following sales of registered swine by Andrew Smith of Redwood City, Cal., to the following parties: Prince Albert 17981, Peggy 18081 and Queen Bess 18082, to Chas. A. Stowe, Stockton; Eden Boy 18137, and Eden Belle 18138, to Henry P. Mohr, Mt. Eden, and Cornear 18060, to J. S. Dodge, Redwood City, Cal.

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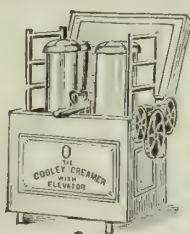
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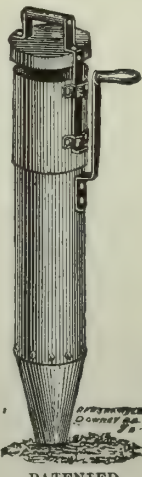
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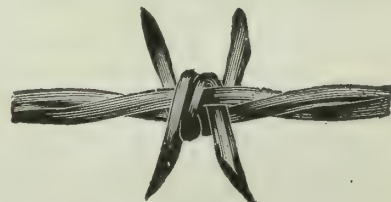
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University of California.

A great university may aptly be compared to a great mountain. From its central reservoir flow the perennial streams that gladden and freshen the whole country of literature, art and industrial activity. Such an educational center is the University of California. No institution of the kind more truly deserves the title of Alma Mater. It is the consort of the State and the foster-mother of its sons and daughters. Its blessings, like the beams of the sun, fall alike on the high and low, the rich and poor. None are excluded from its classes on account of age, sex, or condition. It is ample in scientific attainments, comprehensive in literary culture, and by its practical devices reaches every department of life.

This seat of learning, now quite as wide in scope as the best German Universities, was born of the Morrill Act that in 1862 donated as California's pro rata a magnificent domain of 150,000 acres, for the purpose of establishing Schools of Agriculture and the Mechanic Arts. In accepting of this royal gift the Legislature of California laid the foundation of a State University. In accordance with the organic Act, the Board of Regents was composed of twenty-two members, of whom the following were ex-officio: the Governor and Lieutenant-Governor of California, the Speaker of the Assembly, the State Superintendent of Public Instruction, the President of the State Agricultural Society, and the President of the Mechanics' Institute of San Francisco. Of the remaining sixteen, eight are appointed by the Governor with the approval of the State Senate, and eight are honorary members chosen from the body of the State by the official and appointed members. The following cluster of colleges constitute this university: A College of Letters, comprehending a classical course, literary course, or course in letters and political science; College of Agriculture; College of Mechanics; College of Mining; College of Civil-Engineering; College of Chemistry; College of Law; College of Medicine; College of Dentistry and a College of Pharmacy.

The University Buildings.

The buildings are sufficiently spacious and convenient for the present needs of the university. The two largest stand on a terrace more than 300 feet above tide-water, and command an unrestricted outlook over the bay and surrounding hills. They may be regarded as the historic structures, the nucleus of the group. The corner-stone of the Agricultural College, called South Hall, was laid in August, 1872, with public ceremonies. The corner-stone of the North Hall was laid in the spring of 1873. Both were so far completed as to permit the occupancy of most of the rooms when the university moved to Berkeley in the autumn of that year. Both buildings preserve the freshness of their first years. The architecture of South Hall is simple, but handsome. The material is brick trimmed with gray stone. In construction, it is solid and durable. It is 152 feet long by 50 feet wide, has four stories and 34 rooms, six of the rooms being 32x48 feet, and several others 20x20 feet. In it are the chemical laboratory, the agricultural department, the Secretary's office, and the instruction-rooms of the College of Chemistry; on the floor above are the lecture hall of Prof. Joseph Le Conte, the museum, and on the top floor is Prof. Jackson's department of mineralogy. The North Building is 166 feet long by 60 feet wide. It has four stories divided into 28 compartments, an assembly-room 43x58, a philosophical lecture-room 39x50, the University printing office, students' reading-rooms and various recitation-rooms. These two buildings are aligned with the main terrace. Back of them, and irregularly placed on the hillside, stand two buildings of later construction—the Bacon Art and Library Building, and the College of Mining and Mechanic Arts. The first is named from Henry Douglass Bacon of Oakland, who gave to the university his excellent collection of paintings, sculpture and miscellaneous works of art, a library of several thousand volumes, and \$25,000 to erect suitable buildings to contain these treasures, provided the State would add \$25,000 in furtherance of the project. The State appreciated the value and intelligence of the gift, and furnished the amount required. The building and its art contents will increase the facilities for study, and pave the way to a finer culture. Its outside is prepossessing, being of brick unobtrusively ornamented with stone. The architectural style followed within and without is the later forms of Gothic. There are, properly, two buildings in one. That fronting the west is rectangular; the rear building

is semi-circular. The front portion is 88x38 feet. The center of the facade rises into a tower 102 feet in height. The interior arrangements are well designed. There are broad lobbies and stairways, an elevator, reading-rooms, committee-rooms, store-rooms, and a large art gallery well lighted from the top. The rotunda of the library portion is 69 feet in diameter and 57 feet in height. It will hold 90,000 volumes. When the collection exceeds this, the capacity of the building can be increased without altering its proportions, by rectangular additions at the north and south ends. We give on another page a very good view of these respective buildings.

The University Grounds.

Perhaps no college or university was ever envied by such natural beauties. The groves of the Academe sifted through with dust from the ill-kept thoroughfares of Athens and overlooked by imposing temples of faultless architecture, were not half so rich in natural charms or so brilliant in foliage and color as these grounds. The University domain includes 200 acres of surpassing rich land. The west line is low down upon the plateau, the east line far up the hills. The contour of the ground is formed by Strawberry creek and its main branch, which issues from romantic canyons behind the buildings and runs some distance in front of them. They are bordered with oaks, laurels, willows, and the coast vegetation common to such localities. Near the angle formed by their confluence is an open space—the campus proper—used by the students for their games and *al-fresco* exercises. The grounds were laid out by William H. Hall, under the direction of the Regents.

The design is simple, involving winding drives, with entrances on the south, north, and west, serpentine walks, and a rather sharply defined terrace for the main buildings. The grounds have also been surveyed by Professor Soule with special reference to the water supply. The open portions, dotted with fine specimens of live oak, have, though untouched, a finished park-like appearance, and are gay with wild poppies, buttercups, primroses, and blue lilies through winter and spring. The improved places are filled with evergreen and deciduous trees, shrubs, plants and flowers from every quarter of the globe. A conservatory occupies one of the warmest nooks. The fields of the agricultural department are near the western entrance, and are, with their specimens of imported fruits, grains, and trees, undergoing a process of experimental culture, of the greatest interest to the farmer and botanist. No modern college has grounds like these. The German universities are usually in crowded cities, and without external attractions. The English universities have lawns that are ill-kept, and a few trees poorly cared for. The American colleges have not found it easy to cultivate handsome surroundings, on account of a severe climate and ungrateful soil. Cambridge has a lawn and trees. Yale has its elms and public green. Trinity college at Hartford has limited grounds which it is trying to improve. The New York colleges are much the same, except Cornell, which has a large domain still new. All is being done at Ann Arbor that can be done at a place so situated. The southern colleges might do more in their softer climate, but their grounds are neglected and forlorn. None are so favored in climate, universal capacity of production, and beauty of outlook as this. Art might do much to aid nature, but even without art nature was never more attractive.

The Presidents.

At a meeting of the Board of Regents held June 7, 1868, General George B. McClellan was elected president of the university, but being at that time in charge of the Stevens Battery, he declined the honor. Prof. John LeConte, who had a national reputation as a physicist and who had accepted a professorship in the university, was made acting president for more than a year, presided at the first commencement exercises, and conferred the first degrees on a graduating class of three who had been advanced students from the old and defunct College of California. D. C. Gilman, a tutor in Yale College, was elected president June 21, 1870, but declining, Dr. Durant was chosen and assumed the office in August. Dr. Durant retained the position until the re-election and acceptance of Mr. Gilman, July 20, 1872. When Mr. Gilman resigned the presidency in March, 1875, to take charge of the Johns Hopkins University in Maryland, he was succeeded by Prof. John LeConte, who was first chosen acting president and at the expiration of three months elected president, and who continued to occupy the position until the election of W. T. Reid, principal of the Boys' High school in San Francisco, in June, 1881. There was a general expression of satisfaction

when the Regents elected Prof. Edward S. Holden of the University of Wisconsin as president of the University of California. His brilliant reputation as a scholar and scientist caused very glowing expectations, and the public have not been disappointed; but Mr. Holden is by nature and taste an astronomer, and retired to take charge of the Lick Observatory. There his great astronomical attainments and practical knowledge cannot fail to be of distinguished service. As its director, there is every reason to anticipate for him a record of the highest order. On Tuesday, Jan. 31, 1888, the Hon. Horace Davis of San Francisco was, by unanimous vote of the Board of Regents, elected president of the University of California, and on Friday, March 23, was formally inducted into office. Mr. Davis enters upon his official duties under happy auspices. He is a graduate of Harvard College, a ripe scholar, possesses an easy, graceful address, sterling executive qualities, and is in the full vigor of his powers. His inaugural address was modest, free from pedantic scholasticism, but evinced the cultured and practical mind he is. He fully possesses the confidence of the people and the Regents, and the feeling seems generally shared that our university is about to enter upon a career of unparalleled prosperity.

The Lessons of "Unser Fritz" Case.

The greatest doctors in Europe don't seem to know what ails "Unser Fritz."

Thus are the Garfield and Grant episodes repeated, and public confidence in "expert" medical knowledge is again shaken.

The effect is a revolution.

Since the fatal days of 1883, many of the doctrines of the schoolmen concerning extensive medication have been abandoned, and all schools of practice are more and more relying upon old-fashioned simple root and herb preparations and careful nursing—the only reliances known to our ancestors.

These methods and reliances are illustrated to-day in a series of old-fashioned roots and herbs preparations recently given to the world by the well-known proprietors of Warner's safe cure—preparations made from formulae possessed by many of our oldest families, and rescued for popular use, and issued under the happy designation of Warner's Log Cabin Remedies.

"My son," exclaimed a venerable woman to the writer when he was a boy, "my son, you're yellier and pale and weak like lookin', you're needin' a good shaking up with some sas'paril'."

A jug of spring sarsaparilla was just as necessary in the "winter supplies" of 50 years ago as was a barrel of pork, and a famous medical authority says that the very general prevalence of the use of such a preparation as Log Cabin Sarsaparilla explains the rugged health of our ancestors.

While Warner's Log Cabin Sarsaparilla is an excellent remedy for all seasons of the year, it is particularly valuable in the spring, when the system is full of sluggish blood and requires a natural constitutional tonic and invigorator to resist colds and pneumonia, and the effects of a long winter. Philo M. Parsons, clerk of the City hotel of Hartford, Conn., was prostrated with a cold which, he says, "seemed to settle through my body. I neglected it and the result was my blood became impoverished and poisoned, indicated by inflamed eyes. I was treated but my eyes grew worse. I was obliged to wear a shade over them. I feared that I would be obliged to give up work."

"Under the operation of Warner's Log Cabin Sarsaparilla and Liver Pills," he says, "the sore and inflamed eyes disappeared. My blood, I know, is in a healthier condition than it has been for years. I have a much better appetite. I shall take several more bottles for safety's sake. Warner's Log Cabin Sarsaparilla is a great blood purifier and I most heartily recommend it."

A few bottles of Warner's Log Cabin Sarsaparilla used in the family now will save many a week of sickness and many a dollar of bills. Use no other. This is the oldest, most thoroughly tested, and the best; is put up in the largest sarsaparilla bottle on the market, containing 120 doses. There is no other preparation of similar name that can equal it. The name of its manufacturers is a guarantee of its superior worth.

While the great doctors wrangle over the technicalities of an advanced medical science that can not cure disease, such simple preparations yearly snatch millions from untimely graves.



THE H. H. H. Horse Liniment puts new life into the Antiquated Horse! For the last 14 years the H. H. H. Horse Liniment has been the leading remedy among Farmers and Stockmen for the cure of Sprains, Bruises, Stiff Joints, Spavins, Windgalls, Sore Shoulders, etc., and for Family Use is without an equal for Rheumatism, Neuralgia, Aches, Pains, Bruises, Cuts and Sprains of all characters. The H. H. H. Liniment has many imitations, and we caution the Public to see that the Trade Mark "H. H. H." is on every Bottle before purchasing. For sale everywhere for 50 cents and \$1.00 per Bottle.

For Sale by all Druggists.

ALILA!

The Arcadia
—OF THE—
SAN JOAQUIN VALLEY!

THERE DOES NOT EXIST IN THIS VAST extent of country a section so manifestly destined for the site of

A PROSPEROUS TOWN,

Supported by the demands of a rapidly and steadily increasing population, as ALILA, THE ENCOURAGING NUCLEUS is already there, for Alila now possesses a well-conducted and

LIBERALLY FURNISHED HOTEL,

Several well-appointed stores, and, in addition to these, that most important feature and best evidence of progress, a

Handsome and Spacious Schoolhouse, Which stands nearly, if not precisely, in the center of the town-site. Alila is envied by

A MOST FERTILE COUNTRY,

A soil of surpassing richness, with the capacity of sustaining, in comfort and prosperity,

Thousands of Industrious Settlers.

The resources of this land are illimitable. At this season, in the surroundings of Alila, the plow is busy in every direction.

MILES OF GRAIN,

Soon to wave in luxuriant beauty above the sod now decked with wild flowers, will be a most substantial ornament to

ITS BROAD ACRES.

This scene of agricultural activity and brisk and intelligent cultivation is

A GRAND ASSURANCE

Of what the future must bring forth. The Southern Pacific Railroad

PASSES THROUGH ALILA,

And the stations and sidings there are about the best on the line.

ALILA

Is in Tulare County, 22 miles south of the city of Tulare, on the main line of the Southern Pacific Railroad.

Bovee, Toy & Co.,
19 MONTGOMERY ST.,

Are now offering a limited number of lots at private sale in ALILA, and intending purchasers should not delay in making their selections, as a

SERIES OF IMPROVEMENTS

Have already been inaugurated, consisting of grading streets, planting them with shade trees, increasing the irrigating facilities, and shipping material for the

ERECTION OF BRICK STORES

Upon the main street of Alila. This is a

Superb Opportunity for Investment,

Because the time is close at hand when

Wave after Wave of Eastern Immigration

Will fill up the great San Joaquin Valley, and every dollar placed in real property there will yield a four-fold return.

There are a few facts in connection with this property to which we desire to call particular attention:

First, the extreme richness of the soil has attracted a superior class of population, who are farming the land in an intelligent and progressive manner.

Every section in the vicinity of Alila, and for miles around contains from two to four houses, presenting a prosperous and comparatively well-settled country, owing to the fact that the land is held in small holdings, and not in those immense tracts of single ownership which characterize other portions of the valley.

There is no other locality so well adapted for successful fruit and raisin culture.

Again, Alila lies in the direct line of Walker's Pass, the lowest point in the Sierras through which other overland roads coming into the valley will in all probability lead.

For maps and further particulars apply to

BOVEE, TOY & CO.,
19 Montgomery Street, S. F.

Miramonte Colony

—IN THE—

GREAT ARTESIAN BELT,
KERN COUNTY.

This tract comprises 2640 acres, all level land and ready for the plow.

In this colony is the

Greatest Artesian Well in the
World,

And a perpetual water-right goes with the land bought. Tracts of 20 acres will be sold for \$500—only one-third cash; balance, one-third in two years, and one-third in three years, with ordinary interest.

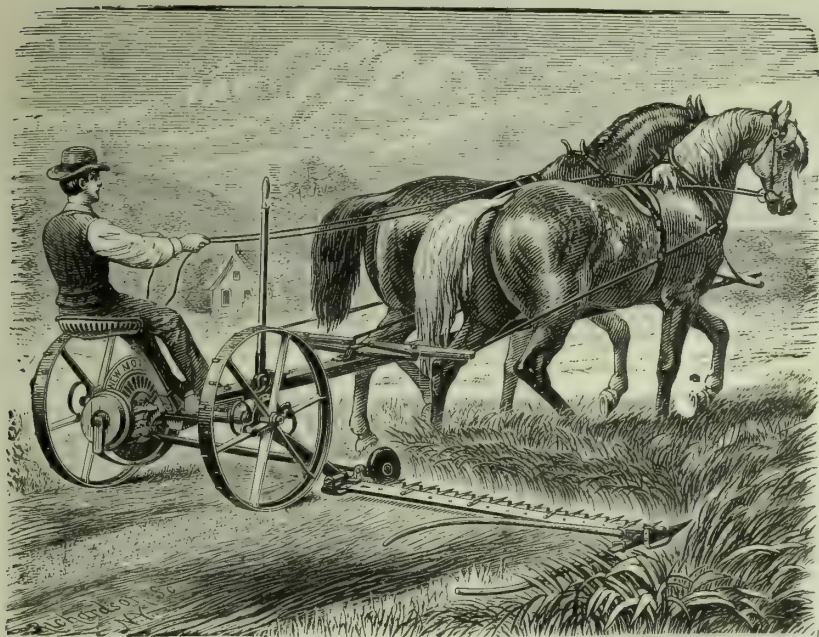
Apply at once for best selection to

C. H. STREET & CO.,

(Successors to Immigration Association of California),

415 Montgomery St., San Francisco.

Farmers Should Look to their Interests in Buying AGRICULTURAL MACHINERY TO GET THE BEST!



The Adriance "BUCKEYE" Mowers

ARE THE GENUINE, and are, as they always have been,

THE BEST IN THE WORLD!

One that will Outwear two of any other make of Machine.

One that is very Simply Constructed and the Lightest Draft.

One that will do better work than any other Mower made.

Farmers should remember that the experiment of buying inferior machines is expensive, when they can buy the "ADRIANCE BUCKEYE," and be sure of getting the best machine in the market. See that ADRIANCE, PLATT & Co. is cast in the machine.

Send for our New Catalogue for 1888, giving full Descriptions and Revised Prices of all kinds of Harvesting Implements.

HAWLEY BROTHERS HARDWARE COMPANY, San Francisco, Cal.

A Boy

—WITH—

ONE HORSE

Can Rake

20 TO 25

Acres

PER DAY.



**TAYLOR RAKE
No. 1.**

AND THE TAYLOR No. 4 SELF-DUMP RAKE

Are the only Rakes ever offered to the Farmers of America that have proved a Complete Success in all kinds of Raking.

WE ARE ALSO SOLE AGENTS FOR THE

"Reliable" Steel and Wood Wheel Rakes,
Rice's Straw-Burner Engine,
Hodges' Headers, Schuttler Wagons,
Perkins Windmills,

And a Large List of the most Improved Implements.

PALM VALLEY!

TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land?
DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10-acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State. No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

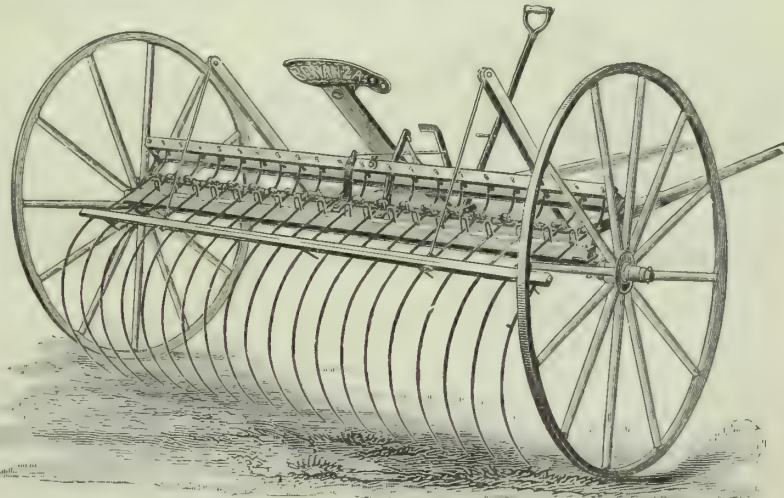
There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

BRIGGS, FERGUSON & CO., General Agents,

314 California Street, - - - - - San Francisco, Cal.

OR RIVERSIDE, CAL.

"Bonanza" Hollingsworth Sulky Rake IMPROVED.



For either One or Two Horses,

Twenty Oil-Tempered Steel Teeth,

Works on the Roughest Lands,

No More Broken Teeth.

Wood or Steel Wheels.

Overhanging cleaner in place of the old style sticks. Axles made of steel. Wheels are very strong and tires are bolted to rim of wheel. The very best of lumber is used in the manufacture of these rakes. They are painted and varnished in first class style, and are strictly first-class in every way. WE PUT ON THIS RAKE OUR

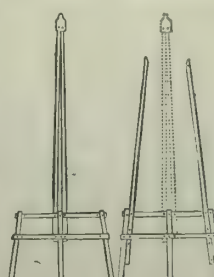
PATENT COMBINED POLE and SHAFTS.

Hay Rakes made with these shafts can be used with either one horse or two horses. The cut at left shows it arranged as a pole, or for two horses; the cut at right shows it arranged as shafts, or for one horse. The same parts are used in both cases. The farmer at all times has all the parts with the rake, to make it either a one or two-horse. The change from one to two-horse can be made in a few minutes' time.

Farmers readily see the advantage of this over other rakes, and will buy only those made with Combined Pole and Shafts.

We have had built especially for Pacific trade a 24-tooth "Bonanza" Rake, which will rake two swaths cut by a 4-foot 6-inch or 5 foot Mower.

This is a very popular size and will pay many times over in a season for its small increased price.



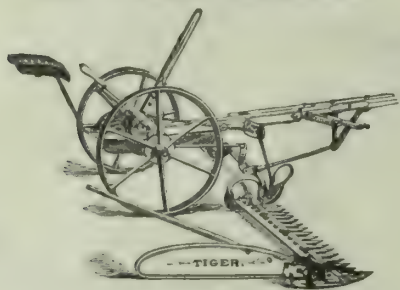
BULL & GRANT FARM IMPLEMENT CO., Sole Importers

14 & 16 Main St., San Francisco. 211, 213 & 215 J St., Sacramento.

Our New Illustrated Catalogue mailed to all inquirers.

TIGER HAYING MACHINERY.

THE TIGER MOWER.



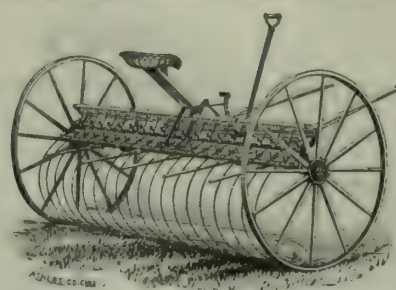
It has all the good points and none of the defects of the most perfect front-cut and rear-cut Mowers.

It has a number of most valuable improvements possessed by no other machine.

It will do the best of work in all kinds of cutting under the most trying circumstances.

It is the best in principle, best in construction, best in operation, best in durability and best in design and finish of any Mower in the market. Send for circulars.

THE HOLLINGSWORTH-TIGER RAKE



Is so called because it is a combination of the best and distinctive features which have made the "Hollingsworth" and "Tiger" Rakes the two most popular and successful hay rakes ever introduced.

It takes from the Hollingsworth its rocker frame and peculiar shaped tooth, with its spiral spring attachment and ready adjustability to every variety of work, and unites with it the iron revolving axle and dumping device of the world-renowned "Tiger."



THE TIGER RAKE



THE NEW HOLLINGSWORTH RAKE.

Belongs to that class which are termed "Self-operating" or "Horse-dump" Rakes.

The discharge is accomplished by simply pressing the foot upon a chain conveniently arranged for that purpose, and the teeth are thereby locked to the rotating axle, and, after being tilted and contents discharged by the movement of the horse, are automatically released and resume their work.

Any boy or girl that can drive a horse can rake with it as well as the strongest man, as the horse does all the hard work; and this is a very important feature, for it is a notorious fact that farm labor is always scarce and high in harvest time. Send for circulars.

The distinctive feature of the Hollingsworth Rake over all other styles of Horse Rakes that have ever been invented, is its peculiar shaped steel tooth and its ready adjustability to every variety of crop and surface. The tooth has a spiral spring attachment at its upper end, which relieves it from severe and sudden strains, and makes it especially adapted to rough work and uneven ground.

We have now to offer it with many new features and improvements as The New Hollingsworth, and these improvements will be quickly recognized and appreciated by all who are familiar with the old Hollingsworth.

FOR SALE BY

SAN FRANCISCO:
Junction Market, Pine and
Davis Streets.

BAKER & HAMILTON.

SACRAMENTO:
Nos. 9, 11, 13, and 15
J Street.

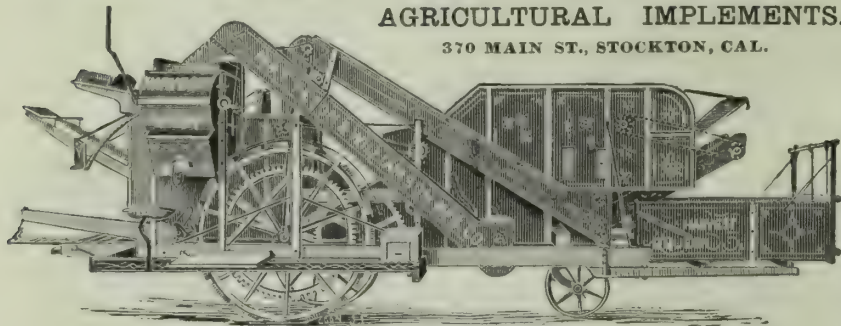
And by our Agents in the Interior.

HARVEST QUEEN

FOR 1888. THE MOST COMPLETE HARVESTER IN THE FIELD.

AGRICULTURAL IMPLEMENTS.

370 MAIN ST., STOCKTON, CAL.



OUR HARVEST QUEEN (COMBINED) HARVESTER.

Sizes—10, 12, 14 and 16-foot cut. Each Machine has Steel Shafting and Straw Dump, which saves all the Straw and Chaff. Header easily detached to ship or pass through 10 foot gate. SEND FOR PRICE LIST AND TESTIMONIALS TO

M. & W. MANUFACTURING CO.,
Stockton, Cal.

FERTILIZERS!

Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN
BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

California Bone Meal and Fertilizer Co.,

116 CALIFORNIA ST., SAN FRANCISCO.

ARMOUR PACKING COMPANY'S

(KANSAS CITY)

COOKED CANNED MEATS

ARE THE BEST,

And as a consequence have a world-wide reputation.

Neither Bone nor Waste of any kind.

EVERY CAN GUARANTEED.

We give you our positive assurance that the utmost care is taken in the selection and handling of our meats, and we guarantee you that they are as clean and wholesome as any you might prepare in your own home.

NO PICNIC, EXCURSION, HUNTING OR CAMPING PARTY

Is complete without some of the following:

CORNER BEEF, LUNCH HAM, BRAWN, OX TONGUE,
PIGS' FEET, ROAST BEEF, LUNCH TONGUE,
CHIPPED BEEF, DEVILED HAM, DEVILED TONGUE.

There is not an article named but is a feast in itself. Also

'49er Ham and Breakfast Bacon,

COVERED AND UNCOVERED.

Choice Family Lard,

Boneless Ham,

Soused Pigs' Feet, Tripe, Etc.

DON'T FORGET THE BRAND!

You will get the very best by asking for

ARMOUR PACKING CO.'S BRAND.

JAMES McCULLOUGH,

Pacific Coast Agent,

123 CALIFORNIA ST., SAN FRANCISCO

FRUIT MARKETING.

What Shall Freight Rates Be?

The Sacramento *Bee* prints the following letter, recently addressed to C. P. Huntington by the New York agents of the California Fruit Union, which will prove of interest here, as indicating the efforts being made by this Union in the matter of fruit rates to New York:

Hon. C. P. Huntington, New York City—DEAR SIR: At your request we beg to submit our desires in reference to the freight on fruit from Sacramento to New York.

The present rates are as follows: Train of 10 cars to Chicago and five cars or more out of this train forward to New York, \$400 per car, but if less than five cars come the rate is then \$525 per car; and this latter rate we find is too high for the various fruits sent us from California. We therefore request that arrangements be made by which we shall be granted the \$400 rate from Sacramento to Jersey City without regard to the number of cars which shall come forward here from Chicago, whether one car or the entire ten cars out of a train. On a single car by passenger train from Sacramento to New York we ask for a \$500 rate.

We believe your arrangements are already made up to Chicago, and think you would only have to arrange matters this side of that city; at any rate, believing this to be so, we have interviewed Mr. Chandler of the Erie Express, and explained fully to him the situation. Mr. Chandler says he made a very low rate for this business by passenger train to Mr. Stubbs and is of the firm opinion that any further reduction in rate should be made by the lines west of Chicago. I am sure, however, from his conversation, that if it comes to a question of business or no business, his express line will stand its mileage proportion of the \$25, but he would not state this positively to us, as whatever arrangements he makes for this traffic he prefers should be made with Mr. Stubbs direct.

Last season we had 97 carloads between Boston, New York and Philadelphia, while this coming season, commencing early in May, we confidently hope to see 500 carloads come forward, and believe they will come provided you will grant our request as above, and when you come to look at this matter you will find that it is not very much that we ask. This \$400-rate, Sacramento to New York, we now have, provided five cars come, which we hope will regularly be the case through the solid part of the season; so our request simply covers the very early part of the season and the very late part of the season, and we are positive that your lines will all make much more money by granting this slight reduction than by refusing it. The crops in California are enormous this season, but cannot profitably be sold here on the \$525 rate except in occasional instances. Instead of sending forward 97 cars, you can make more money by having 500 sent, even at this slight reduction.

Thanking you for your promise to consult with Messrs. Crocker, Towne and Stubbs immediately on your arrival at San Francisco, and sincerely hoping that you will give this your favorable consideration, we remain, very respectfully yours,

SGOBEL & DAY.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 250 Market St., S. F.

FOR WEEK ENDING MARCH 27, 1888.

- 380,090.—STATION INDICATOR—J. B. Clot, S. F.
- 380,247.—HEATING CARS—F. J. Crouch, Oakland, Ogn.
- 380,024.—SCRAPER—Denehy & Childs, Acampo, Cal.
- 380,250.—CURRY-COMB—G. F. Dietz, Los Angeles, Cal.
- 380,203.—SHINGLE—H. C. Henderson, S. F.
- 380,036.—BRIDGE FOR FIRE HOSE—B. E. Henriksen, S. F.
- 380,044.—CAR HEATER—P. F. McGee, Oregon City, Ogn.
- 380,049.—CAR BRAKE—A. F. Nell, S. F.
- 380,052.—PLOW—Jas. Porteous, Fresno, Cal.
- 380,218.—PROVISION BOX AND TABLE—C. B. Rice, East Oakland, Cal.
- 380,060.—ELECTRIC RAILWAY—F. M. Speed, S. F.
- 380,000.—HARVESTER—J. Trethewey, Stockton, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

WHAT CAME WITH A REMITTANCE.—"I have taken the RURAL PRESS, one way or another, ever since it was started, and it seems like an old friend. I consider it the best agricultural paper I ever saw, and always growing better. I hope it will continue in its good work."—J. R. M.

MARYSVILLE FAIR.—The directors of the 13th District Agricultural Association have fixed the date for the fair at Marysville this season for Aug. 27th to Sept. 2d.

Citrus Fair at Alhambra.

For the last two or three days in March, Alhambra—that pretty, thriving suburb of Los Angeles—was the scene of an "Industrial and Citrus Fair" which proved in every way successful.

The display was made in Pomeroy & Stimpson's new brick building, the lower hall being occupied mostly with fruit, vegetables and plants, while the industrial exhibits were gathered in the second story. A broad, canvas-covered corridor had been put up for the occasion around three sides of the building, and lined throughout with tropic palms and fragrant cedars.

Entering the main room, the visitor came upon a pyramid of the choicest Navel oranges, from G. B. Adams' orchard, planted in the Alhambra tract a dozen years ago. Upon this

representing an ancient Roman archway, used for a fruit and flower market, was much admired, and a Chinese pagoda, decked with trailing vines and many-hued blossoms, served as a bazaar of pretty things. Local artists were not backward in showing forth their skillful handiwork with brush and needle, and one old lady of 74 sent in a large and handsome afghan.

A grand march of nations, by 40 ladies and gentlemen in costume, and a concert, by Mrs. Catching Williams and assistants, made the evenings more entertaining. The attendance was large and enthusiastic, and the three days' receipts amounted to over \$1200.

Rates to Texas Raised.

A new special commodity tariff, making rates from California terminals to points in Texas on

Ladies' Toilette.

Broken-striped camel's hair suit. 1 velvet are here combined in the costume, and an elaborate effect is obtained by employing the velvet as a background for contrasting braids. The skirt is in the popular round walking style, and will hang gracefully over a large or small bustle. About its foot is a bias band of velvet a quarter of a yard deep, and upon this are arranged two rows of Kursheedt's standard president braid-passementerie of a cream shade.

The over-skirt is draped high at the sides so as to display the gores almost to the belt. It falls in pretty rounding outline and receives its graceful folds from plaits in its upper and side edges. The back-drapery falls in two deep, oval points low down on the breadth and is draped by plaits at the belt and a close gathering at its center. The edges of both front and back draperies are completed plainly.

The waist is an especially pleasing style. Its full outside back and front portions are adjusted upon a smoothly fitting lining that is shaped by double bust darts, side-back gores and a curving center seam. The outside portions are *neglige* in effect and have a cluster of lengthwise tucks at either side of the closing, and also at each side of the center of the back. The tucks extend about a third of the depth of the waist, and the fullness spreads gracefully between them and the gathers located at the lower edge. A belt confines the lower edge of the waist, and is in this instance concealed by a length of sash ribbon that is folded double and arranged in girdle style, the ends being fastened with spike-headed pins. The sleeves have the customary inside and outside seams, but their upper portions are a trifle wider than the usual coat shape. They are joined at their lower edges to velvet wristbands, the upper side being slightly gathered and the wristbands overlaid by passementerie. The pattern provides the shape for the high standing collar at the neck, but the rounding one below it is an ornamental addition. Both are overlaid by a band of passementerie, which curves gracefully in at the neck and follows the outlines of the collars.

Textures of all fashionable varieties, whether of cotton or wool, are appropriate for a toilette of this style. Batistes, linen lawns and foulards among the cotton goods are especially favored, and upon them embroideries or lace edgings may be added. A stylish costume intended for afternoon wear during the summer is of electric-blue sateen, with trimmings of garnet velvet overlaid by heavy, embroidered lace. A pretty wool costume is of cream-white serge. Its skirt is trimmed about the lower edge with a band of reddish-brown velvet upon which gold soutache embroidery has been effectively arranged, and the collar and wristbands are of velvet overlaid with the same glittering braid. Standard president braid-passementerie is obtainable in cream, black and a full line of choice, fashionable colors; the figures are detachable, and therefore may be arranged in single ornaments or in any outline desired.

The round hat has its brim faced with velvet and outlined by chenille galoon. Tips and velvet supply the crown trimming.

Awarded Gold Medals at the California State Fair, 1886 and 1887.

\$13,000 IN PRESENTS

TO BE GIVEN AWAY IN

100,000 Boxes of LE ROI DES SAVONS, THE KING OF SOAPS, During 1888.

During 1888 we will give a premium of \$25 to the person showing the best results from a bar of our Le Roi des Savons. Parties wishing to compete for this premium can obtain statements of regulations on application by letter.

LIST OF PRESENTS.

- 800 Subscriptions to the Overland Monthly.
- 100 Subscriptions to Scribner's Magazine.
- 100 Subscriptions to St. Nicholas.
- 100 Subscriptions to Fashion Magazine.
- 100 Sets of Gorham Solid Silver Tableware.
- 100 Celluloid Carver Sets.
- 100 Celluloid Toilet Sets (Plush Case).
- 200 Stamping Outfits.
- 10,000 King Cook Books.

We will also present to the consumers of our Le Roi des Savons TWO THOUSAND DOLLARS. To be distributed as follows: The 3635 persons sending us the largest number of our NUMBERED KING WRAPPERS between Feb. 1 and 15, 1888, will receive presents as follows:

- First—Five pre-ents of \$5 each.....\$ 25 00
- Second—Fifty presents of \$2.50 each..... 125 00
- Third—One hundred presents of \$1 each..... 100 00
- Fourth—Twenty-five hundred presents of 50c. each. 1,250 00

Total.....\$2,000 00
Cash presents will be forwarded March 1, 1888. No application will be received unless the senders state in writing the number of wrappers enclosed, and that the wrappers are from our King of Soaps bought for use in their own family. No wrappers received before Feb. 1st or later than Feb. 15, 1888. Write address plainly; also Post Office, County and State. All senders will be notified of the distribution of the first three lots of cash presents.

CAPITAL SOAP CO., Sacramento, Cal.



LADIES' COSTUME.

central table, and on others, which extended down each side of the long hall, the fine, clean citrus products of the fruitful San Gabriel valley were tastefully and liberally displayed.

The chief exhibits came from Alhambra, Duarte and San Gabriel. Of oranges, there were Washington and Australian Navel, Mediterranean Sweet, Paper-rind St. Michael, Konah, Malta Blood, Tangerine, and other varieties, among which the Valencia Lates—firm, thin-skinned, and of beautiful color—attracted special notice. There were Liebon, Eureka, and we know not what other varieties of lemon, besides choice canned fruits, marmalades and jellies.

To the rear of the central fruit-table were grouped potted plants from the Park nursery at Pasadena—a rare display of floral wealth and beauty.

Upstairs, in an ante-room, was a collection of curios from the South Seas, with a number of photographs from Aztec ruins in Central America and the villages of the Pueblo Indians—very interesting to antiquaries and ethnologists.

In the main hall on the upper floor were various booths containing industrial exhibits. One

the line of the Missouri Pacific and Texas & Pacific roads, has been issued by the Southern Pacific Company, and will take effect on the fifth prox. To Fort Worth, Denison and points east of Fort Worth, via Dallas to Mineola inclusive, the following rates have been made: Canned goods, carloads, \$1.40; pickled salmon, \$1.40; strained honey, \$1.40; hops, \$1.75; oranges, lemons and limes, \$1; vegetables, including potatoes, \$1.10. To points east of Mineola, via Marshall, Jefferson, to and including Texarkana, as well as to points east of Marshall to and including Shreveport, the rates will be as follows: Canned goods, pickled salmon or strained honey, \$1.50; hops, \$1.85; oranges, lemons and limes, \$1.10; vegetables, \$1.20. These rates are a material advance on those now in effect. A still greater advance is made to points to which the previously quoted interstate rates did not apply. To these points canned goods will take a carload rate of \$1.70; pickled salmon, \$1.45; strained honey, \$1.85; hops, \$2.22; oranges, lemons and limes, \$1.45; potatoes, \$1.11; vegetables, \$1.21. These rates are all much higher than those now in effect.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

EL ROBLAS RANCHO, Los Angeles, Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford Cattle. Information by mail. C. F. Swan, manager.

VALPARAISO PARK, Thoroughbred Polled Angus and Durham Cattle. Thoroughbred Berkshire Swine. Address F. D. Atherton, Menlo Park.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

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SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen-Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Geo. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choice bred strains.

JERSEYS—THE BEST HERD—All A. J. C. registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

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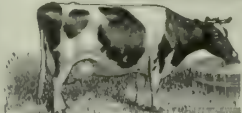
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The only Cow that has given 28,021 lbs. 2 ozs. of milk in a year. The only four-year-old that has given 23,602 lbs. 10 ozs. in a year. The only two-year-old that has given 18,494 lbs. 13 ozs. in a year. The only herd of mature cows that has averaged 17,166 lbs. 1 oz. in a year. The only herd of two-year-olds that has averaged 12,465 lbs. 7 ozs. in a year. The only two-year-old Holstein-Friesian that has made 21 lbs. 10 1/2 ozs. of butter in a week.

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A choice lot of young Cattle of the above breeds for sale at very low figures. Their breeding is A No 1 and from the BEST MILKING FAMILIES. Prices and QUALITY will suit. ELEVEN YEARS' experience on this Coast. Correspondence solicited.

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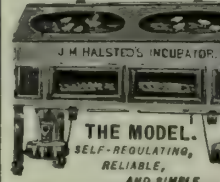
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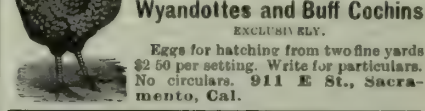
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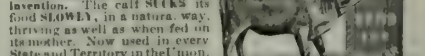
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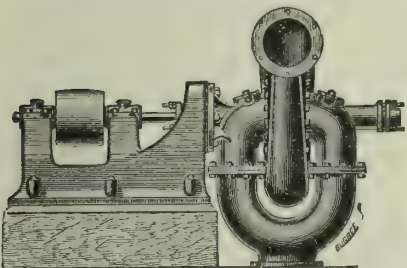
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Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Pota-h.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
BERKELEY, Nov. 20, 1886.

Dr. J. KOBIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,

E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1/2 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

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For Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and Farmers wherever used.

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Every Can Warranted.

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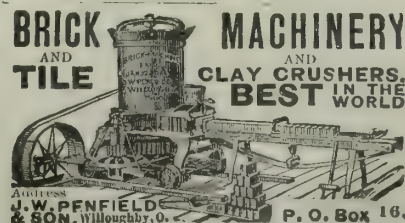
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 4, 1888.

The past week proved irregular and unsatisfactory so far as farm products are concerned. The few days' rains and the closing week of the Lenten season were taken hold of by buyers as an excuse for a bearing down in nearly all lines of produce, but Monday opened with a better feeling and more general trade. More rains are wanted by farmers to insure a good crop of grain and hay, but for fruits, vegetables, etc., the outlook is promising. The Eastern and European wheat markets have ruled fairly firm the past week. To-day's cable is as follows:

LIVERPOOL, April 4.—Wheat—Rather easier. California spot lots, 6s 4½d to 6s 7½d; off coast, 33s to 33s 3d; just shipped, 33s; nearly due, 33s; cargoes off coast, quiet but steady; on passage, slow; wheat on passage to Continent, 22s, 22s 000 qrs; wheat and flour on passage to U. K., 2,123,000 qrs; English country markets, quiet; French, steadier; wheat and flour in Paris, steady.

Foreign Review.

LONDON, April 2.—The *Mark Lane Express*, in its weekly review of the British grain trade, says: The provincial markets quote a slight decline in English wheat. In London the market was steadier under smaller deliveries. Wheat continues to look well on days, and on light lands the loss of the plant is common. The prices of foreign wheat are in buyers' favor, without quotable decline. There were large supplies of foreign flour. Corn was dull and cheaper, excepting American, which was scarce and a fraction higher.

Weather and Crops.

WASHINGTON, April 1.—The following is a synopsis of the weather and crop bulletin for the week ended Saturday: Reports from Michigan, Ohio, Indiana, New Jersey, North Carolina, Kentucky and Tennessee indicate that the weather of the past week has been favorable, although the season is reported as late and farm work is retarded. Reports from South Carolina, Alabama, Mississippi, Louisiana, Missouri, Illinois, Nebraska and Kansas indicate that the weather of the week was generally unfavorable for growing crops, although favorable conditions are reported for the latter part of the week.

California Products in Chicago.

CHICAGO, March 31.—The market for California oranges is firm and higher. Receipts from the Pacific Coast this week have been light, but heavier consignments are expected next week. The following prices ruled to-day:

Quotations are: California River-side oranges, \$3.50@3.75; do. other kinds, \$3; do. Riverside Navel, \$5.75@6; do. other kinds, \$3.50@4; California lemons, \$1.50@1.75 per box.

At the recent quotations there is a moderate business in some lines of California dried fruits. Apricots are selling very weak, and unpeeled peaches are in fair request. These are the most favored descriptions. Plums and prunes are dull, and raisins are selling moderately.

We quote: Peaches, sun-dried, in sacks, 11¢@12¢; do. evaporated, unpeeled, in sacks, 13¢@15¢; in boxes, 14¢@16¢; do. peeled, in sacks, 17¢@22¢; do. in boxes, 18¢@25¢; apricots, sun-dried, 11¢; bleached prime do., 13¢; do. evaporated, in sacks, 14¢@17¢; plums, unpitted, 10¢@12¢; pitted, 10¢@11¢; prunes, according to size, 10¢@12¢; nectarines, according to quality, 10¢@14¢; raisins, loose Muscatels, 2-crown, \$1.35@1.45; do. 3-crown, \$1.50@1.65; do. London layers, \$2.25@2.35.

While exhibiting no material change in price, hops continue to rule quiet and rather slow. The inquiry is rather limited and it is confined to choice. Pacific Coast, choice, 12¢@13¢; Pacific Coast, common to prime, 9¢@12¢.

During the last few days rather more inquiry for California beans has existed, causing them to rule firmer. Foreign beans are quiet, and there are no domestic of consequence here. California, according to quality, \$2.15@2.75.

California cabbages have been all closed out, but a carload is expected in to-day.

Wool.

NEW YORK, April 3.—Wool maintains fair strength on the best grade of domestic. Low grades are uncertain and buyers are but few. Foreign wools have had a good share of trade for the week. The sales include the following: 2000 lbs. scoured California at 50¢; 20,000 lbs. Oregon at 20¢; 50,000 lbs. Territory, 18¢@22¢; 25,000 lbs. Texas, 15¢@17¢; 5000 lbs. scoured Texas, 47¢@50¢; 10,000 lbs. quarter blood combing, 85¢@90¢; 10,000 lbs. fine Delaine, 33¢@35¢; 10,000 lbs. X and XX, 32¢.

The Philadelphia market is quiet, with sales of 600,000 pounds.

Eastern Grain Markets.

CHICAGO, April 4.—Wheat—Lower; cash, 71¢; May, 75¢. Corn, lower; cash, 47¢; May, 51¢ 13-16¢; June, 50¢. Oats, easy; May, 30¢.

NEW YORK, April 4.—Wheat—90¢@91¢ for cash, 89¢ for April, 89½¢@89¾¢ for May, 87½¢@87¾¢ for June and 86½¢ for July.

Miscellaneous.

NEW YORK, April 3.—Hops are in better shape than for a long period. Exportation has helped the market, and the best State and choice Pacifics were firm. New State is quoted at from 8¢@14¢ for common to choice; new Pacific, 8¢@10¢; German and other grades, quiet. Raisins are firmly quoted at \$1.40@1.55 for 2-crown, \$1.75@1.95 for 3-crown, with sales of 1000 boxes of Lion at extreme prices. Chicago is said to be quite drained. There is not much prompt sale for hides, but inquiry and tone maintain full rates for all desirable lots. California dried fruits well out of first hands. Lima beans are quoted at \$2.75. Bear skins from the Pacific, \$7@12. Beaver—Northern Pacific, \$4.50@5.50; Southern Pacific, \$3.50@4; other, \$5@7.

Local Markets.

BAGS—The market is more quiet, with in some quarters a disposition to shade prices, owing to the want of rains in several large wheat and barley growing sections. For June-July delivery the market is quoted at 8½¢ to 8¾¢, with some sales reported a shade lower.

BARLEY—The past week was virtually a repetition of the preceding one. The demand continues good for the actual grain, but the bears, by cross-orders chiefly on Call, have unsettled values to such an extent that large dealers are afraid to carry much stock, even at the present low prices. Unless we have heavy rains soon, the crops in several sections will begin to suffer. On Call, the reported transactions were of fair volume and only small fluctuations. At to-day's Call, the sales reported are as follows:

Morning Session: Buyer season—100 tons, 77½¢; 300, 77½¢; 400, 77½¢; 200, 77½¢; 100, 77½¢. Buyer 1888—100 tons, 86½¢; 500, 86½¢. Afternoon Session: Spot, season's storage paid—100 tons, 75¢; 200, 75¢. May—300 tons, 75½¢; 200, 75½¢. Buyer season—500 tons, 77½¢; 200, 77½¢; 300, 77½¢; 500, 77½¢. Buyer 1888—200 tons, 80½¢; 500, 80½¢; 600, 80½¢ per ctl.

BUTTER—The market cleans up daily, causing a strong market to obtain with a slight advance in quotations. The call is so large that although receipts are free, still dealers are unable to pack, and it now looks as if packed butter the coming fall and winter will be scarce.

CHEESE—Free receipts and only a fair demand have caused prices to shade off still more, with a weak market at the close.

EGGS—The market exhibits a weak and easier tone, under a light demand and increasing receipts.

FLOUR—The market is steady, with an improving call reported.

WHEAT—The local market ruled dull throughout the week, which was taken advantage of by the bears on Call to break options so as to get more cash or spot wheat. Choice grades of wheat are scarce and hard to get, even by advancing bids. The market is of a deadlock character—to force sales, lower prices must be submitted to; to buy, higher prices must be paid. At to-day's Call, the transactions reported are as follows:

Morning Session: Buyer season—200 tons, \$1.31; 500, \$1.30; 600, \$1.30. Buyer 1888—200 tons, \$1.35; 500, \$1.35. Afternoon Session: Buyer season—900 tons, \$1.30. Buyer 1888—500 tons, \$1.35; 400, \$1.35; 200, \$1.35 per ctl.

[COMMUNICATED.]

Market Information.

Cereals.

H. Kains Jackson writes to the *London Farmer* as follows: Compared with a year ago, English wheat ranges from 28s to 36s, against 30s to 38s per qr. This is a reduction is not, however, the full measure of loss to growers whose wheat is of higher average quality than last year, and should accordingly command a higher price. American wheat is also about as cheaper, red American making 35s, against 37s a year ago, Californian about the same. Australian, owing to the better crop, is quite 3s lower, 35s against 38s per qr. Indian wheat is not of much consequence so far as remains of the old crop go, but the new crop is offered at 28s to 34s and this fixes, as it were, a low level of value for the summer. Argentine and Chilean wheat are offered at 32s and 33s per qr., and are cheap at the money. The prices of Russian wheat are largely governed by expectations of the grain to be forwarded in the months of May and June by sea, and even earlier by rail if the monopolization of the railways by troops in Russia would only cease. The serious state of politics in southeast Europe, where a Russo-Turkish conspiracy against the smaller independent States is feared, has drawn public attention to the small granary reserves of the United Kingdom which, in case of a war in which any big naval power, like France, was opposed to us, would immediately constitute a national danger. The London Chamber of Commerce accordingly have arranged for a special meeting next Wednesday, when the grain-supply of England in time of war will be thoroughly discussed. If such a discussion should lead to larger stocks being kept than at present, the English farmer would probably be advantaged. Certain it is that the present manner in which millers buy simply from hand to mouth is seriously opposed to the interests of growers, as of importers of grain. The state of the American wheat and flour trade is also attracting attention. The wholesale market has been exceedingly discouraged. The visible supply of wheat is singularly small, and the weekly exports of wheat are quite moderate, yet business at New York, Philadelphia and Baltimore is, for the most part, despite occasional ripples of excitement, flat and depressed. Yet bread in New York is dearer than in London, and the tariffs of the railways are said to be dearer from Dakota to New York than from Dakota to Liverpool. At a meeting of the New York Produce Exchange, held at the end of February, it was officially declared that the rate to New York on grain produce from Chicago was 1s 4½d per ctl, whereas the through rate from New York to Liverpool was only 1s 5d per ctl, and that, bad as this was, the forward contract prices were still more outrageous, namely, 1s 1d from Chicago to New York, and 1s from Chicago to Liverpool. If these figures be true, the American is taxing himself rather heavily in order to supply the English, French and Italian consumer with cheaper bread than he, the American, can himself procure. This state of things can hardly be of an indefinite continuance, and some promise may also come to the English wheat farmer through a certain improvement discernible in the flour trade. It is an open secret that the Jubilee year was the worst ever known in the milling machinery trade, and, indeed, in the milling trade generally, for the number of mills closed at Birmingham, Glasgow and Dublin was absolutely disastrous, and, in fact, all parts of the kingdom suffered. Since 1886 came in, however, there has been a decided increase in the demand for milling machinery, and now we hear that several contracts have lately been signed for the erection of complete roller plants. Our technical contemporary, the *Miller*, has exclusive information as to the points where such erections are to take place, and from its comments we infer that this renewed activity is taking place in those very parts where the depressing

influence of American competition was most severely felt in 1886 and in 1887.

Late Australian advices report that the wheat crop did not turn out as well as had been estimated the forepart of harvest, the quantity available for export being fully one-third less than previously claimed.

Oregon crop advices are essentially unchanged, although some advices report the outlook not so flattering as at this time last year.

In this State advices coming in are far from encouraging, while the general tenor of advices report the wheat plant looking exceedingly well, but the moisture in the ground ranges only from 8 to 18 inches, which is far from enough to carry the plant through this month, and with drying winds or hot weather, the moisture will soon be drained out in the fields, having a depth of not over ten inches. What is now wanted above all, are good-soaking well-distributed rains throughout the State. The rains of last week were not general, many counties not having a drop to fall, while in those in which the rains did fall, they were not of heavy or long continuance to do a great deal of good.

The wheat market ruled dull throughout the past week. The demand was of a slow irregular character, but then holders did not exhibit any anxiety and press the market. Some parcels upon which money was loaned, are said to have been sold, and naturally buyers dictated prices. The quantity in the State is small for the time of year, and even this is mostly poor to fair grades, very little being good to choice. Considerable of that at Port Costa and in this city is held against Call Board sales. Millers continue to claim that there is a great scarcity of choice gilt-edged milling, and consequently much has to be brought from Oregon, known as Valley wheat.

There was shipped from here in last month to Europe 41,966 tons of wheat and 41,500 bbls. flour. With latter reduced to wheat, the aggregate would be 53,141 tons.

A. J. Gove, Official Inspector of the Call Board, reports the following stocks of grain on hand, in tons, in Call Board and City warehouses April 1, 1888:

IN CITY WAREHOUSES.

	Wheat.	Barley.	Oats.	Corn.	Bran.
July 1, '87	39,207	13,915	1,403	885	100
August 1st	37,654	17,803	814	415	46
Sept. 1st	56,321	27,761	701	788	....
Oct. 1st	54,760	38,618	855	274	....
Nov. 1st	53,711	43,947	954	602	....
Dec. 1st	45,048	39,551	1,464	645	97
Jan. 1, '88	46,569	38,277	1,096	487	341
Feb. 1st	29,582	35,342	2,001	478	100
March 1st	23,240	29,720	1,852	378	25
April 1st	21,190	25,656	2,103	416	215

	Receipts	Wheat.	Barley.	Oats.	Corn.	Bran.
June, '87	4,522	1,466	1,475	1,970	....	....
July	10,380	1,080	940	1,700	....	....
August	18,357	1,664	1,509	2,010	....	....
Sept.	19,165	2,381	594	2,889	....	....
Oct.	13,409	2,270	856	2,944	....	....
Nov.	8,607	2,292	1,480	8,040	....	....
Dec.	7,139	1,852	1,090	3,218	....	....
Jan., 1888	6,650	2,339	1,059	2,669	....	....
Feb.	7,308	1,433	1,016	2,662	....	....
March	6,519	2,555	947	2,900	....	....

	Receipts	Wheat.	Barley.	Oats.	Corn.	Bran.
June 1, 1887, to March 31, '88, 9 months' receipts	102,146	19,322	11,340	26,560	....	....
June 1, '85, to June 1, '88, 12 months' receipts	62,086	36,609	11,612	31,182	....	....
June 1, 1886, to June 1, 1887, 12 months' receipts	115,064	22,783	16,576	29,500	....	....

IN ALL CALL BOARD WAREHOUSES.

	Tons wheat at Port Costa	Tons wheat in city
Decrease in March	69,190	21,190
In all C. B. Warehouses	90,380	15,694

By the above it will be seen that the receipts of barley for the eight months of the present season aggregate nearly as much as they did the entire season of 1886-87, when the stock in the city on July 1, 1887, was only 13,915. It now looks as if the stock that will remain on hand on July 1 of this year will be less than at the like time last year. Adding the barley receipts, 65,616 tons, in last month, to the stock 29,720 tons, held on March 1, and taking from the amount the stock, 25,656 tons, on April 1, and it will be seen that the consumption in this city and exports hence aggregated last month 10,680 tons.

Barley is hard to report correctly, owing to so many bear influences at work. A poor gale of barley is sold and quoted to the papers as No. 1 feed, evidently to keep prices down, if for no other purpose. It is well known that choice grades are scarce and firmly held with large holders not offering to sell. Owing to the cross orders on Call being in the bears' favor, many parcels on which money was borrowed have been sacrificed. The consumption in the State is very large, while the stock is now conceded by the better informed not to be as large as at this time last year, with four months' feeding to run on before the new crop. Last year we received heavy supplies of oats from Kansas and Nebraska, but this year none will come, and consequently more barley will be used up to next season.

Oats are weak and easier for poor to fair grades under heavy supplies, but choice grades are in light supply and firmly held. Oregon advices report the market firmer.

In corn, trading the past week continued fair with some fluctuations reported. Choice corn is hard to get and commands full figures.

Rye is weak and a shade lower under freer receipts of Eastern and only a moderate inquiry.

Feedstuff.

In ground feed there are no changes to report. While the output of bran and middlings by the California flour-mills is small, yet free receipts from Oregon keep the market weak. Ground barley continues to find good custom. The tone of the market at the close is firm.

In hay the call continues good. Heavy teaming and a large increase in the number of work-horses cause a larger consumption. The market is lightly supplied with choice, that selling is chiefly coarse. Alfalfa hay is slow. The crop prospects are not any too good, but then it is claimed that unless heavy rains come soon, many fields of grain will be cut for hay.

Vegetables.

Garden truck is coming in more freely, with the varieties increasing. Prices are shading off causing

a better demand to obtain. It now looks as if the supply of all kinds will be unusually heavy, but then the consumption is larger.

Asparagus, rhubarb and peas are shading off from day to day under better supplies. Tomatoes and cucumbers come in sparingly, but then the high prices restrict consumption.

Oregon is sending large quantities of onions to the East. In one day three carloads went to distributive points west of the Missouri river. The local onion market is without change. The demand is in a small way, but as receipts are light, prices are well maintained.

New potatoes are increasing in quantity, quality and size. Fresh receipts are given the preference by buyers, and to sell those two or more days old, concessions are necessary. It is claimed that shipments to the East will soon be inaugurated. In old potatoes the market is slow, with only the more choice finding ready buyers at anything like satisfactory prices.

Owing to the backward season at the East, California cabbages are still freely shipped to Chicago and other large centers.

Fruits.

The first consignment of strawberries this year was received March 29th, from Menlo Park. It consists of six drawers of the fruit which were sold for \$45, or at the rate of \$7.50 per drawer. The crop this year is backward, but it promises to be larger, if anything, than last year, notwithstanding the severe winter through which we passed.

Advices of the fruit crop are conflicting, but the general tenor is that it will be considerably larger than last year, taking all varieties as a whole, owing to the large number of orchards that come into bearing this year. The late rains in some places are said to have done some injury to the blossoms, but not to any serious extent.

Oranges came in more freely the past week, with the larger proportion poor, and naturally they had to be sold at a lower range of values. Choice, good-keeping oranges are readily sold, and at good prices, too. The same remarks apply to limes and lemons.

Bright sun-dried fruits are scarce and wanted, but off-color are in good supply, but still these will be marketed before the new season sets in. Apples are getting scarce, and gradually creeping up in prices. The supply of plums is also growing less. There is a good demand for carload lots, but generally assorted, from the Territorial trade and also from the East.

Raisins continue to gain in strength under a steadily increasing call and depressing stocks. Choice loose Muscatels are, like London layers, very scarce.

Live-Stock.

Bullocks are offering more freely, as are mutton sheep, and as the supply of vegetables is increasing, the demand is decreasing, although those who lived on fish for several weeks past are now large eaters of meat, which causes more buying by dealers. The condition of the bullocks and sheep is good. Veals and spring lambs are only in fair supply. Hard grain-fed hogs are wanted for the block, Chinamen being the principal consumers, as the prices are against packers. In milch cows, there is nothing new to report. Last week's quotations cover this week's prices. For horses, there appears to be more inquiry, but at prices quoted two weeks ago.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed, and one-half from the price of grass-fed, that is, animals running at large).

HOGS—On foot, grain-fed, 6¢@6½¢ per lb.; dressed 9¢@10¢ per lb.; soft, 5¢@6¢ per lb.; dressed, 7¢@8¢ per lb. Stock hogs, 3¢@5¢ per lb.

BEEF—Stall-fed, 8¢@8½¢ per lb.; grass-fed, extra, 7½¢@8¢ per lb.; first quality, 7¢ — per lb.; second quality, 6½¢ — per lb.; third quality, 5¢@6¢ per lb.

VEAL—Choice, 10¢@12¢ per lb.; fair to good, 8¢@9¢ per lb.

MUTTON—Lambs, 8¢@8½¢ per lb.; ewes, 7½¢@8¢ per lb.; lamb-spring, 12¢@13¢ per lb.

Miscellaneous.

Poultry ruled fairly steady throughout the past week. Prices for the season are high, but then the consumption is larger and receipts are no larger.

Game is going out, and hardly deserving of quotation.

Choice beans are scarce, but fair to good are in good supply, but not more so than at this season of the year. The East reports an improving market.

In hops, there is absolutely nothing new to report. The effects of the heavy failures abroad which caused a further decline at the East and in Europe, are wearing off, and an improving demand and advancing prices for the better grades are reported.

In wools, there is nothing doing. Eastern advices report a strong market for medium to fine, clean well-conditioned and lively wools, owing to light supplies to draw from, and manufacturers carrying light stocks. It is thought that a higher range of values will obtain for the better grades when the new clip comes on the market. Receipts now are light and only straggling clips.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way	381,446	206,916
In port, disengaged	52,108	102,089
In port, engaged	17,605	16,820

Totals, 451,159 325,825
To obtain the carrying capacity, add 60 per cent to the tonnage.

Tonnage on the way to Oregon, 22,835; tonnage at Portland, Oregon, loading and to load, 19,572. Total tonnage, 42,407.

San Francisco, April 4, 1888.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JOHN G. H. LAMPADUS—S. Barbara Co.
G. W. INGLE—Arizona Territory.
WM. WILKINSON—Fresno Co.
A. F. JEWETT—Tulare Co.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
R. G. HUSTON—Montana Territory.
E. H. SCHAEFFLER—Sacramento Co.
F. B. LOGAN—San Diego Co.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.	
Apples, bx com.	— @
do choice.	— @
Apricots, lb.	— @
Bananas, bunch.	2 50 @ 3 50
Blackberries, ch.	— @
Cantaloupes, cr.	— @
Cherries, white	— @
do black bx.	— @
do Royal Ann.	— @
Cherry plums.	— @
Crabapples.	— @
Oranberries.	10 00 @ 12 00
Currants ch.	— @
Gooseberries.	— @
Figs, black bx.	— @
do white bx.	— @
Grapes, white.	— @
do black.	— @
do Rose Peru.	— @
do Muscat.	— @
do Tokays.	— @
Isabel.	— @
Wine, Zinfandel.	— @
do Mission.	— @
Limes, Mex.	3 00 @ 5 50
do Cal. box.	50 @ 75
lemons, Cal. bx.	1 00 @ 2 50
do Sicily, box.	4 00 @ 5 00
do Australian.	— @
Nectarines, box.	— @
Oranges, com bx.	1 00 @ 1 50
do Choice.	1 75 @ 3 00
do Navel.	— @
choice.	4 00 @ 5 00
do do com.	2 00 @ 3 50
do Panama.	— @
Peaches, bx.	— @
Crawfords, bx.	— @
do choice.	— @
Pears bx.	— @
do choice.	— @
do Bartlett, bx.	— @
Per simmons.	— @
Jap, bx.	— @
Pineapples, doz.	2 50 @ 5 01
Plums lb.	— @
Pomegranates, b.	— @
Prunes lb.	— @
Quinces bx.	— @
Raspberries ch.	— @
Strawberries bk.	45 @ 55
Watermelns, 100.	— @
DRIED FRUIT	
Apples, sliced, lb.	5 @ 6
do evaporated.	11 @ 12
do quartered.	11 @ 12
Apricots.	8 @ 10
do evaporated.	15 @ 17
Blackberries.	12 @ 15
Citron.	18 @ 25
Dates.	9 @ 10
Pigs, pressed.	5 @ 6
Pigs, loose.	3 @ 4
Nectarines.	8 @ 11

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.	
WEDNESDAY, April 4, 1888.	
BEANS AND PEAS.	
Bayo, ctl.	2 00 @ 2 25
Butter.	— @
Peas.	3 40 @ 3 65
Red.	2 20 @ 2 50
Pink.	2 20 @ 2 50
Large White.	3 40 @ 3 60
Small White.	3 40 @ 3 70
Lima.	3 25 @ 3 65
Fl'd Peas, blk eye.	2 00 @ 2 10
do green.	2 00 @
do Niles.	2 10 @
BROOM CORN.	
South n per ton.	60 @ 80 00
North n per ton.	60 @ 80 00
CHICORY.	
California.	6 @ 7
German.	7 @ 8
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. fresh roll, lb.	20 @ 22
do Fancy brands.	24 @ 25
Pickle roll.	— @
Firkin, new.	— @
Eastern.	18 @ 20
CHEESE.	
Cheese, Cal. D.	13 @ 14
Eastern style.	15 @ 16
EGGS.	
Cal. ranch, doz.	21 @ 22
do store.	20 @ 21
Ducks.	— @
Oregon.	— @
Eastern.	19 @ 21
FEED.	
Brn. ton.	13 50 @ 15 00
Feed meal.	30 00 @ 31 00
Gr'd Barley ton.	18 00 @ 19 00
Hay.	10 00 @ 11 00
Middlings.	16 50 @ 17 50
Oil Cake Meal.	32 50 @
do new process.	28 50 @
Straw, bale.	45 @ 65
FLOUR.	
Extra, City Mills.	4 00 @ 4 35
do Country Mills.	3 75 @ 4 00
Superfine.	3 20 @ 3 50
GRAIN, ETC.	
Barley, feed, ctl.	70 @ 85
do Brewing.	95 @ 1 15
Oatmeal.	1 25 @
do Oat.	95 @ 1 15
Buckwheat.	1 75 @ 2 25
Corn, White.	1 32 @ 1 35
Yellow.	1 30 @ 1 35
Small Round.	1 32 @ 1 36
Nebraska.	1 20 @
Oats, milling.	1 65 @ 1 70
Choice feed.	1 42 @ 1 50
do good.	1 42 @ 1 45
do fair.	1 35 @ 1 40
do black.	1 30 @ 1 40
do Oregon.	1 30 @
Bye.	1 90 @ 2 00
Wheat, milling.	1 40 @
Gilt edged.	1 37 @
do Choice.	1 37 @
do fair to good.	1 35 @
hipping choice.	1 35 @ 1 36
do good.	1 32 @ 1 33
do fair.	1 30 @ 1 31
HIDES.	
Dry.	11 @ 12
Wet salted.	5 @ 6
HONEY, ETC.	
Boeswax, lb.	21 @ 25
Honey in comb.	12 @ 16
Honey in comb.	16 @ 19
do fancy.	6 @ 7
do dark.	5 @ 6
do light.	5 @ 6
HOFS.	
Oregon.	6 @ 15
California.	6 @ 15
ONIONS.	
Pickling.	— @
Red.	— @
Riverside.	2 00 @ 2 50
Cut.	75 @ 1 25
NUTS—JOBBER.	
Walnuts, Cal. D.	8 @ 10
do Ohio.	8 @
Almonds, dshl.	5 @ 7
Soft shell.	12 @ 13

The big hotel on Brighton beach, Coney island, is being moved back 600 feet. The hotel weighs 8,000,000 pounds. It is being moved on iron cars hauled by locomotives. The building is 460 feet long. On the first day it was moved 117 feet.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San I.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
March 29-April 4.																																				
Thursday.....	.26	46	S	Cy.	.01	52	S	Cy.	.00	58	S	Fr.	.00	54	SW	Cy.	.1	54	SW	Cy.	.0	68	SE	Cl.	.00	60	NE	Fr.	.00	64	S	Cl.	.00	58	Nw	Cl.
Friday.....	.32	50	Nw	Ry.	.04	54	SE	Ry.	.02	52	S	Ry.	.00	56	S	Cy.	.11	53	SE	LR.	.00	66	SE	Fr.	.00	59	SW	Cl.	.00	66	W	Cl.	.00	60	Nw	Cl.
Saturday.....	.18	54	S	Cy.	.68	54	N	Cy.	.20	58	S	Fr.	.90	36	S	Cy.	.44	57	SW	Cy.	.07	64	SE	Cy.	.09	52	S	Cy.	.00	66	S	Cl.	.00	60	N	Cl.
Sunday.....	.58	52	SW	Cy.	.16	50	S	Ry.	.00	56	S	Fr.	.01	58	N	Fr.	.00	57	N	Fr.	.00	64	SE	Cl.	.07	53	W	Cy.	.00	70	SW	Fr.	.00	62	N	Cl.
Monday.....	.06	56	S	Cy.	.12	58	W	Cy.	.00	60	S	Cl.	.00	60	N	Fr.	.00	58	N	Fr.	.00	66	N	Fr.	.00	60	SE	Cy.	.00	68	SW	Cy.	.00	64	Nw	Cy.
Tuesday.....	.04	48	S	Cy.	.30	54	W	Fr.	.00	56	S	Cy.	.00	54	S	Cy.	.1	56	S	Fr.	.00	64	Nw	Cy.	.00	54	N	Fr.	.00	60	S	Fr.	.00	60	Nw	Cl.
Wednesday.....	.06	44	N	Cy.	.08	52	Nw	Fr.	.43	54	S	Fr.	.08	58	W	Fr.	.11	55	SW	Cy.	.20	60	N	Fr.	.00	52	SW	Fr.	.1	66	SW	Cl.	.00	62	Nw	Fr.
Total.....	1 51				1 39				70				99				66				27				16											

EXPLANATION.—1. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature, wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Unshiu or Satsuma.

We have seen a letter from H. E. Van Deman, U. S. Pomologist, to H. E. Amore of this city, concerning the identity of the Unshiu and the Satsuma oranges. Mr. Van Deman writes: I tested in San Francisco, in February, the Unshiu oranges, which had been brought from Japan, and gathered specimens from the trees at Riverside, Cal., the same week. When I returned here a few days ago I found specimens sent me from Japan, and all the above were one and the same variety. Then I have years ago tasted Satsuma oranges from Florida and did so last year and also this week. After carefully examining all these specimens and the trees, I pronounce the Satsuma and Unshiu identical. It is hardy and a good bearer and worthy of propagation. I am glad to know that you are selling so many trees of it. Your spelling of the name "Onshiu" is equally correct and may be better understood than "Unshiu." But the name Satsuma seems to have been attached to it in 1874. The matter of the name which should predominate is one of much importance and may be hard to determine. Your having sold so many thousands of trees under the name "Onshiu," and its being called by that name in Japan, to some extent, are arguments in favor of its retention. But the priority of "Satsuma" would seem to give it the preference. However, this question is of far less importance than the identity of the variety now propagated under the above names. In your circular I notice that you have marked out the words "not one seed in a thousand." I have seen well developed seeds in an occasional specimen, but the variety is practically seedless. When in California lately, I missed seeing you and many others whom I desired to see and converse with on Japanese fruits. Please let me hear from you at any time. Yours respectfully,

H. E. VAN DEMAN,
Pomologist.

D. M. Osborne & Co.

We have just received the 32d Annual Catalogue of D. M. Osborne & Co. It is both comprehensive and tasteful, containing a vast amount of information practically useful to the farmer, not only describing the construction and working qualities of their make of mowers and self-binding harvesters, but also hints and instructions regarding the proper care and management of harvesting machines generally, whether of their own or other's manufacture. The office and warehouse of the company is on Bluxome street near Fifth street. Their huge warehouse is already filled and running over, so that they have been forced to lease additional storage for their machines. They have engaged all the twine that Tubbs & Co. can turn out between now and July. Mr. Goddard, the local agent, will answer any inquiries made regarding their machines, quote prices, etc.

HEREFORDS IN SANTA BARBARA COUNTY.—We have recently heard from the Hereford cattle sold by Vaughan & Williams to C. F. Swan. Mr. Swan reports them as in a thriving condition, and that they take kindly to our California climate. He has them on the El Roblas rancho, Los Alamos, Cal. The growing demand for his young stock will warrant Mr. S. in believing that the Hereford is to become a favorite with our stock-raisers.

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This paper is printed with Ink Manufactured by Charles Eneu Johnson & Co., 500 South 10th St., Philadelphia. Branch Offices—47 Rose St., New York, and 40 La Salle St., Chicago. Agent for the Pacific Coast—Joseph H. Dorsety 529 Commercial St., S. F.

ORANGE CULTURE

A practical treatise by T. A. GARRY, giving the results of long experience in Southern California. 196 pages, cloth bound. Sent post-paid at reduced price of 75 cts. per copy by DEWEY & CO., Publishers, S. F.

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to some one

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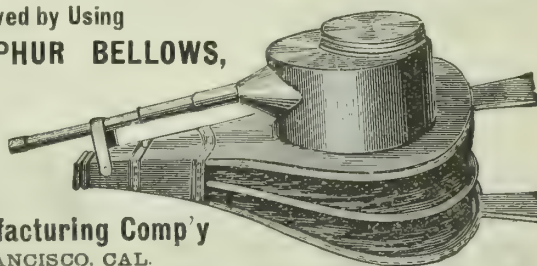
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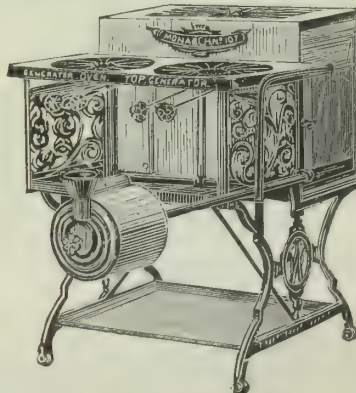
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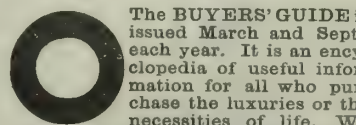
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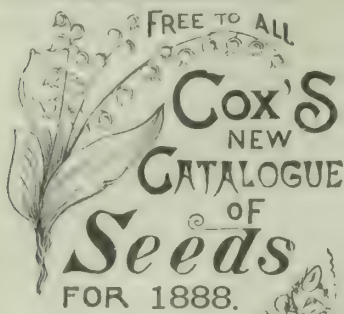
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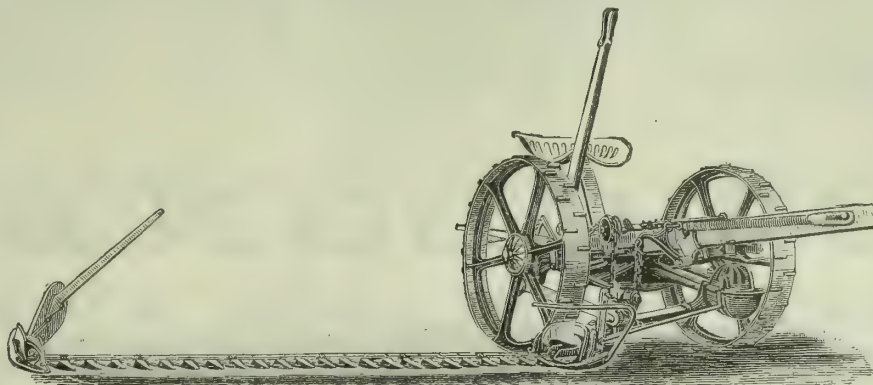
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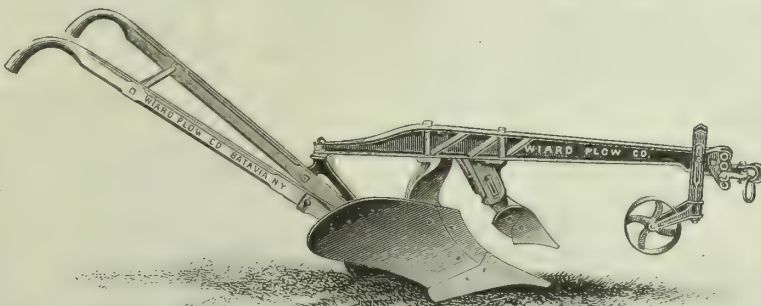
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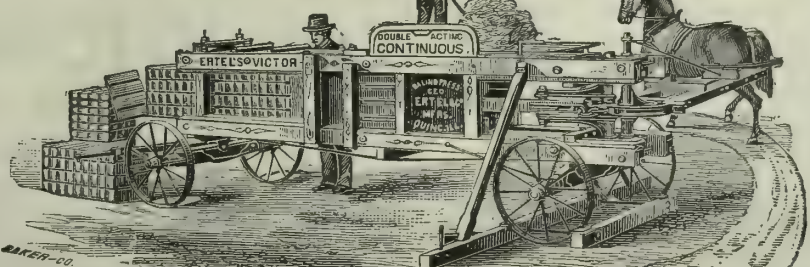
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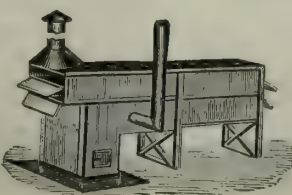
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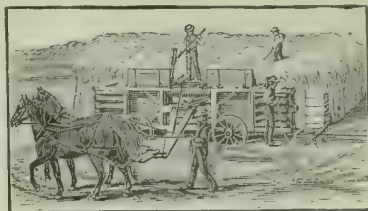
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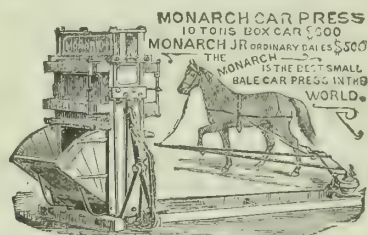
A mounted, horizontal double-ender. Size of bale,
when in the press, 17x22x40 inches. Average weight of
bale, 220 pounds. Capacity, from 16 to 25 tons per day.
Uses 4 men and works with 2 horses. Requires NO
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Price.....\$1000.

THE HURRICANE—Size B.

Size of bale in press, 22x24x46 inches. Average
weight of bale, 280 pounds. Capacity, from 20 to 35
tons per day. Uses 5 men and works with 1 or 2 horses,
at option of baler. Requires NO TRAMPING. Uses rope
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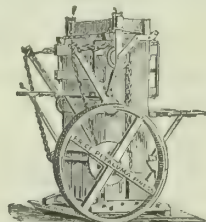
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Works with 1 or 2 horses. Uses rope or wire. Does its
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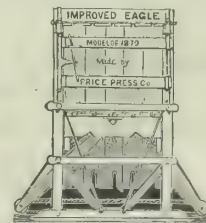
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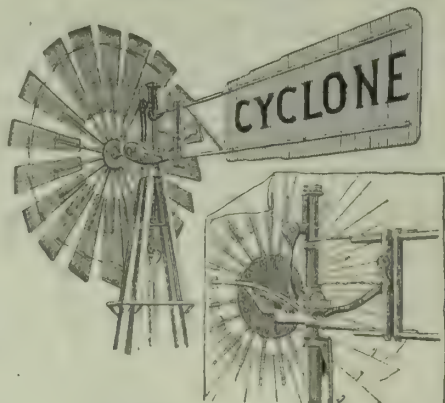
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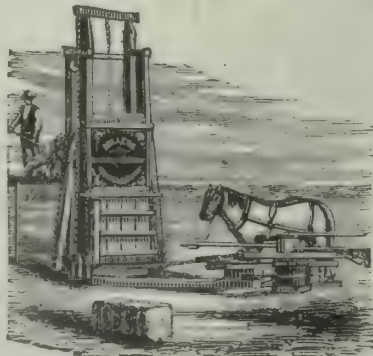
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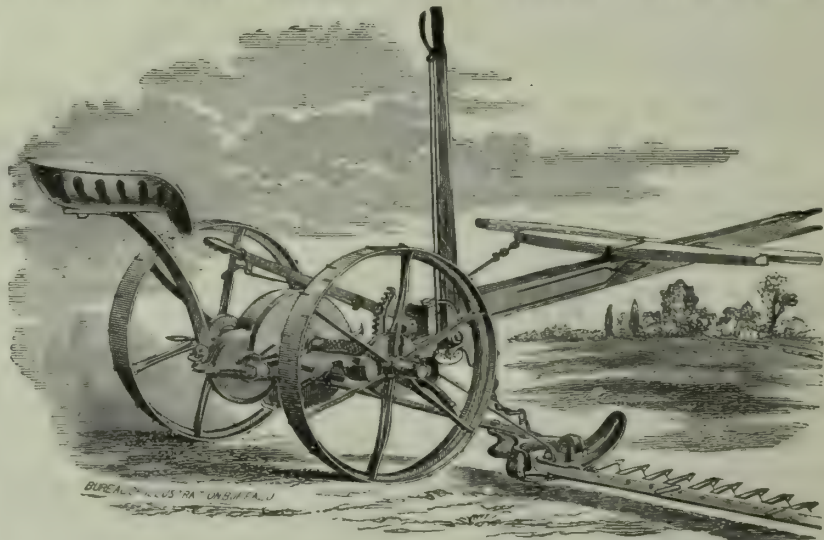
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PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 15.

SAN FRANCISCO, SATURDAY, APRIL 14, 1888.

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SINGLE COPIES, 10 Cts.

The Nursery Business.

The business of tree propagation, as might be inferred from the fact that orchards and vineyards are multiplying with such rapidity, is one of the most important lines of our horticultural industry. It has had its ups and downs, as have most productive efforts in this State, and, in fact, anywhere. The oscillations are, however, more sudden and marked in California than elsewhere, because horticultural fevers and fashions here surge higher and fall lower than in older countries. When the tree-planting fever runs high, nurserymen multiply; you can hardly fire off a gun anywhere without hitting one. When the fruit prices have been low for a time you might hunt all day for one—unless you should hunt in the advertising columns of the RURAL PRESS, and there you will always find the most enterprising of them. Growing nursery stock is very much like growing hops, except that surplus fruit trees are of no earthly account—you can't even make home-made beer out of them. As with nursery stock, however, as with hops, those who operate the business intelligently and enterprisingly and stay with it through thick and thin become well-to-do and are generally well esteemed in the community—except now and then when an order for winter apple trees is filled with cherry plums. Such incidents sometimes lead orchard-planters to think nurserymen are not honest.

One of the chief requirements of success in the nursery business is foresight. It is a business in which hind sight is remarkably clear. We doubt if a nurseryman who burned up French prunes in 1886, because he could not get \$6 per hundred for them, ever forgot how they looked while he was trying to scrape up enough to fill orders at \$25 per hundred in 1887. To be able to foresee how fruit prices are going to run a year ahead, to judge whether orders for canned and dried fruit are going to be half as large or twice as large as the supply, to be mind-reader enough to tell a year ahead what especial fruits the newspapers are going to boom, and how many orchard-planters will be brought into the State at cut rates—all these delicate problems enter into the every day thought of the nurseryman, and no wonder his forehead gets higher every year in the effort to master them. These things enter more or less into tree propagation everywhere, but are of sharpest moment in California, where every planter wants yearling trees and where trees grow so fast that if the nurseryman leaves the stock in the ground two years he has to establish a logging camp and sawmill to work up the two-year-olds into furniture or fence boards. And yet, with all such hardships, the nursery business in California to those who stay by it, and deal conscientiously, is a good one, and probably always will be so.

In view of the fact that there has been such

a draft upon tree stock during the last planting season, and the future is so promising, we have thought it fitting to give an engraving which includes views taken on the grounds of the California Nursery Company at Niles. This is the largest nursery establishment in California,

from a visit, which will require the effort to any interested horticulturist.

EXHIBITS FOR THE MECHANICS' FAIR.—Intending exhibitors at the coming fair of the Mechanics' Institute in this city will be interest-

The Experiment Stations.

Work at the Amador Culture Station of the University is progressing rapidly, a large force being engaged in clearing. A surveying party of young men from the University, under the direction of W. G. Raymond, instructor in surveying, are now at work preparing a topographical survey and map which will be used in laying off the grounds. The Amador Ledger of Saturday last stated that the Canvassing Committee had reported additional subscriptions to the extent of nearly \$500, which will bring the total up to something like \$3000, and remarks that this amount will probably be further increased somewhat. This increase will, of course, be desirable, as it will secure better buildings. Prof. Hilgard's estimated requirement of \$2000 was, of course, a minimum, and any further sum will both promote the work and make the station more creditable to the locality and generally.

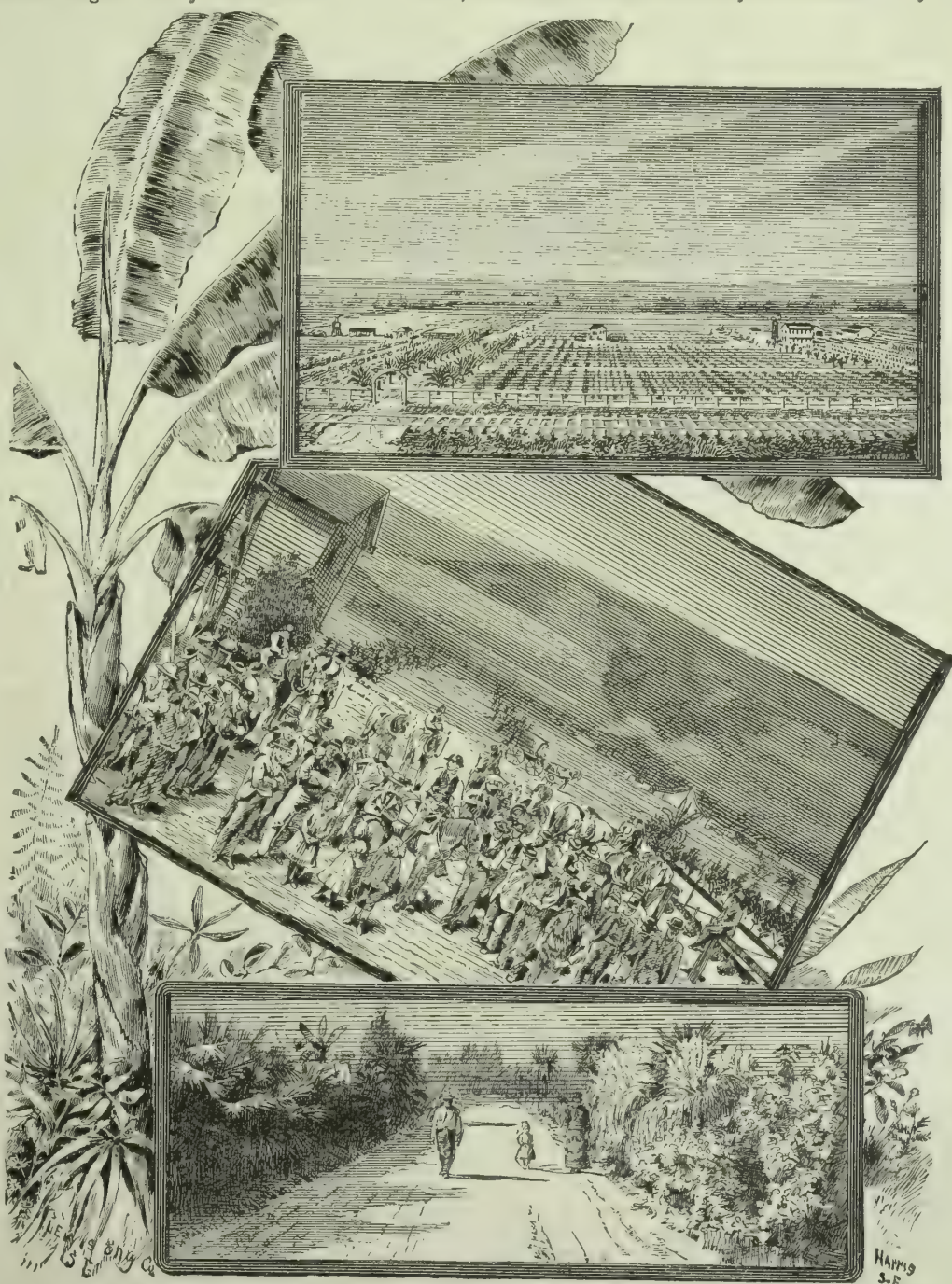
The same disposition to secure rather more than the minimum amount is reported from Tulare county, where a meeting was also held on Saturday last, under the auspices of Tulare Grange. Several offers of land were placed at the disposal of the Grange from which Prof. Hilgard can make selection, and a sum of money not to fall below \$3000 was pledged.

Several offers of land and buildings in Southern California have been made by individual and corporate enterprise. It still remains to reach decision as to which will represent the largest area or otherwise best serve the public interest.

Prof. Hilgard has gone this week to Paso Robles to definitely decide upon the station which has been provided for in that district. As early as possible next week he expects to go south, stopping first to arrange the Tulare station, and then, if possible continuing into Southern California to examine the locations offered.

Work on the central station in Berkeley is progressing, the foundations now being put in. This increased space is greatly needed, for the work is constantly extending, and with the provision for outlying stations and the larger parish of interested correspondents to be ministered to, the improved facilities will be very welcome to Prof. Hilgard and his staff of assistants. Correspondence and publications received at Berkeley indicate that the organization of Experiment Stations in other States is going forward energetically.

CHICO FORESTRY STATION.—H. Rowland Lee, Head Forester for the State Board, returned to this city on Tuesday from the experimental tree-planting station near Chico. He reports that the work of improving the tract recently donated by Gen. Bidwell is progressing rapidly, 35 acres having been plowed and harrowed, and a great number of eucalyptus, catalpa, pines and walnuts planted.



VIEWS ON THE GROUNDS OF THE CALIFORNIA NURSERY COMPANY.

and its grounds are eligibly situated near Niles, in the lower part of Alameda county, close to the track of the Central Pacific railway, which is seen crossing the foreground of one of the pictures. We need not describe the establishment in detail, for most of our readers know it from previous notices. Suffice it to say that the nursery covers something like 500 acres of excellent land and that the participants in the enterprise are the old and well-known names, John Rock, R. D. Fox, James Hutchison and Thomas Meherin. The engravings give an idea of the force of men they employ and some intimation of the general features of the establishment, more of which can be learned

in the announcement which was made at the last meeting of the directors. The San Francisco & North Pacific Railroad Company, the North Pacific Coast railroad and the Pacific Coast Steamship Company will transport exhibits free of charge; and the Southern Pacific Company will transport all perishable articles free, and will transport back all non-perishable articles, together with the stands and show-cases in which they were exhibited.

At Woodland the foundation for the woolen-mill is built, a new ice factory is under way, work on the street railway is begun, and a fruit cannery company is being formed.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Tulare Notes.

EDITORS PRESS:—The planting season just closed has witnessed the putting out of a larger acreage to fruit trees and grapevines in Lucerne than any five previous years have done. The vines planted are almost wholly of the Muscat of Alexandria variety, while the fruit trees which have found most favor are several standard varieties of the apricot, peach and prune. Pears and apples have found less favor with planters this season on account of fears entertained of losses from the codlin moth and woolly aphis.

Spraying with sulphur, lime and salt has proven quite effective in eradicating the scale in this county. I think the reason this wash has sometimes failed to give satisfaction is because of a failure to make it strong enough and neglect in spraying the trees thoroughly upon all sides. Care should also be taken to apply the wash warm, but not too hot, as it takes hold better than when cold.

This has been a good year for our nurserymen, most of them having succeeded in disposing of almost their entire stock. Among our most enterprising ones are Thorne and Douglass, who began business at Grangeville ten years ago, and who have by industry and square dealing built up a business that is a credit to the county as well as to themselves. They make it a rule, so far as possible, to be able to supply all customers, and have this year shipped many thousand trees and vines to Fresno county for planting. There are other nurserymen here who deserve especial mention, but space will not permit at this time.

The prospect for good wheat crops in Lucerne this season is favorable; but there is quite a contrast in the appearance of our valley as it now is and as it was ten years ago.

Then it was one vast uninterrupted wheat-field for miles on miles, with scarcely a panel of fence visible anywhere, while farm-houses were indeed few and far between. Now we have many well appointed cottages with flower-gardens in front, and surrounded with large orchards and vineyards, facing upon well-graded highways. Large fields of horses in which every grade and breed, from the Norman to the thoroughbred, is represented.

There are fields of cattle in which the Short-horns, Holsteins, Devons and Jerseys all find a place; and in sheep and hogs if we do not lead we certainly are not behind. But in the latter I rather think we do lead any place in the State of our acres.

To give some idea of what is being done here in the business of stock-raising, in the production of good, common grades for all purposes, I give a record of sales from one farm for the year just past as a sample.

Output of a Tulare Farm.

In 1884 A. L. Cressy of Modesto bought 400 acres of land all lying within three miles of Hanford, and placed it under the management of C. H. Howard, an experienced farmer recently from Maine.

There are now upon the ranch 275 head of cattle, which includes cows and young cattle; 60 head of brood mares, all of which are expected to foal this spring; also 80 head of colts and mules one and two years old. One hundred head of cattle were sold one month ago, bringing a little over \$4000; 60 head of calves were sold during the winter, netting \$800.

There have been sold within a year horses aggregating in value \$3700. Four of these brought \$1380, without any special trouble in breaking or training. There were also sold last fall hogs amounting in value to \$600.

Six hundred tons of alfalfa hay were cut and stacked during the year, 300 tons of which have been fed out, the remaining 300 tons being still on hand, which may be sold or kept over until another winter, as thought desirable.

The stock is turned off the fields that are cut to hay about April 1st, from which time until September 1st three crops of alfalfa hay are gathered, averaging in the aggregate about five tons to the acre. These fields then furnish green pastures for the ensuing seven months, when it is again time to clear them of stock, preparatory to the gathering of other hay crops.

No lumber is required in Lucerne to protect hay from the storms of winter, which may seem incredible to our brother farmers North and East, yet such is the fact, nevertheless.

Storing Hay.

Hay when hauled from the fields is placed in long but rather narrow stacks, built pretty high by the aid of derrick; and then covered with wheat straw to the depth of about one foot.

I believe this method of protecting hay from rain is practiced to some extent throughout the State, but not so effectively as here, from the fact that our annual rainfall is probably much less than that of any other part of the United States; this State in particular.

These haystacks become well settled by winter, when the stock is turned into them to feed at pleasure. This may seem like waste, but it is quite to the contrary. For not only is the expense of handling saved, but less hay is wasted than when feeding from a manger; as it requires some effort for a horse or cow to pull out a wisp of hay from the well-settled stack,

they are usually willing to eat it up clean before trying for more.

A New Railway.

The productions of our valley are rapidly increasing in value and in bulk from year to year, and the necessity of a competing line of railroad has long been felt by our people. For more than a decade we have been at the mercy of a monopoly, whose infamies practiced upon a long-suffering and helpless people have cast a blot upon the fair fame of our State and nation, which it will take years to eradicate. But it seems that the long-hoped-for competing line of railroad is to become a reality, and will be here in time to carry our summer's produce to the Bay City, the market of the West. Our people are much elated over the prospect, and an era of prosperity such as Lucerne has never before experienced is looked for in the near future.

Hanford.

A. F. JEWETT.

Notes on Kern County.

EDITORS PRESS:—As yet but little has been done to develop our fruit resources—enough, however, to demonstrate the fact that we have all the conditions requisite to the success and profit of this growing industry. Well-boring shows us that the soil is 30 or 40 feet in depth, and has been deposited by the action of water. A few enterprising people have been experimenting with nearly all the various kinds of fruits and the results are most happily successful.

Upon land tributary to the Kern river, which is one of the largest in this valley, are lands which will produce the finest of grapes, either for wine or raisins. We only wait the turn of the wheel of progress which shall bring us capital and men to improve these advantages which Dame Nature has arranged here with lavish hand.

Much enterprise and capital has been exhibited and expended in the various branches of stock-raising, but it has been conducted by parties who own large holdings, and who deserve much credit for the systematic and successful methods employed. The thing we are praying for is people who will come and buy a few acres of the thousands that are in the hands of individuals who will sell, and cultivate the same. We need men who are willing to work, and we assure them the pay will be amply remunerative. Stirring the soil in any line of thorough cultivation insures success.

Kern county is one of the neglected portions of the State. The tide has begun to set this way. Eastern buyers who have learned that the whole of the State of California does not lie south of the Mojave desert and that there are lands for sale at living prices, with a whole bundle of the finest kind of climate thrown in, are stopping off here and taking a look.

The Sabbath recreation of killing jack-rabbits seems to have given way, as the pressure of spring work is at hand. All are encouraged by the flattering prospects of future crops, which the good Lord seems pleased to dispense to the Sabbath-breakers as well as the balance of humanity.

Thus far rains have been rather light, yet crops are starting finely, and those who have good ditch facilities need have no fear, as yonder mountains are white with snow, which old Sol will manufacture into broth later. Snow in the East is sometimes called the "poor man's manure." As we at present have no call for fertilizer, it makes the finest kind of a cooling drink for the thirsty earth when the other sources of supply fail.

W.

Bakersfield, April 10th.

THE GARDEN.

Killing Moles, Etc.

EDITORS PRESS:—A correspondent inquires how to kill moles. He should first ask himself the question whether it is right to kill them, and whether he will not injure himself more by killing the moles than they can possibly injure him. When he has fully investigated the subject and has found proof that the moles are positively injurious in some way to his crops, that they positively do him more harm than good, then, and not until then, should he seek to destroy them. He should be careful that he makes no mistakes in his conclusions, for it is my judgment that he will find in the common garden or field mole one of the very best friends on his place.

The mole is strictly insectivorous or carnivorous in its food habits. It cannot be forced to eat any vegetable food whatever; it will starve first. In its natural wild state its food is insects, and them only. Its general or most common food is the well known angle-worm, which is, it is true, neutral or beneficial life, but it also feeds ravenously on the larvae of some of the most noxious injurious insects, particularly on what are known as wire-worms, the larvae of many very injurious caterpillars, etc., but, so far as known, it destroys none of the beneficial insects. Then why does "Old Subscriber" wish to kill this most useful rodent? We hope that he is not cursed with that desire so common among mankind, and so disgraceful to his proper human feelings, to destroy on sight every

life possible that is not domestic, such as harmless snakes, lizards, toads, frogs, skunks, birds, nearly every one of which are our very best friends; and, again, some of our very best insect friends are munched and killed without mercy or reason, without which, without their help every year, our crops might be totally destroyed.

No, we do not think this correspondent wishes to kill the moles for any such abominable reason. He thinks the mole is doing him great harm, therefore should die. Perhaps they are doing some harm, but a dead mole is worthless for destroying either neutral or noxious insects. He says of the moles: "They are giving me great trouble," but we are in the dark as to kind of trouble. I lived for many years in Illinois on a rich, sandy loam, where moles were very plenty, and grew every kind of crop that could be grown in that climate. They sometimes gave me trouble and caused me considerable damage, but bless you, I did not kill them; I simply managed them, and made them work for my good rather than to my detriment.

Moles do damage in two ways: 1. By burrowing under the sod of lawns, breaking up the roots and throwing up the grass so that it is killed by drouth. Usually when this is the case, some life is feeding on the roots of the grass, which, if not eaten by the moles, would eventually harm it much more than the moles and in the end might completely destroy it. Therefore the more the moles persist in burrowing the more grass enemies there are there to be eaten. The remedy in such cases is to roll the lawn early each morning with a heavy roller; this will replant the disturbed grass and allow the moles to finish the worms. When they accomplish this they will leave instantly, for the mole is an animal of immense muscular development and necessarily a ravenous feeder to support it, and must have plenty to eat. No known animal will perish more quickly from want of food than the mole.

Moles do injury by burrowing under young plants and in that way destroying them. This habit is often very troublesome in the spring of the year. In this way a mole will follow a row of corn or other young plants across a field and destroy every plant. He is not after the young corn or other plants, nor their seed, but the "fish wurrums" and other larvae and insects that have either found their way into the loose soil of the furrow to burrow in, or are there for the destruction of the seed or the young plants. The remedy in this case is to at once cultivate the plants with the plow, in that way making a still fresher furrow for the moles to hunt in. For I am confident in such cases the angle-worms seek the freshest, loosest ground in which to burrow, and it is usually them that the moles are feeding on.

In the light of these facts should the moles be destroyed? They are not an animal that can increase so greatly in any country as to become a very great nuisance. Their food is limited, and they must have a full and continuous supply of it or starve, therefore they can only be plenty where angle-worms and the larvae of very injurious insects are plenty. If these last were not destroyed by the moles, where would we be? This is really a very serious question.

Mole Traps.

In the rich, loose soils in Illinois, where I lived over half a century, I think the moles were as plenty as they could be anywhere. During that long period I followed all the vocations of rural life, and I and the moles never had one serious quarrel. But others have quarreled with them seriously and have invented many traps for their destruction. The best one for this purpose can be found at any first-class seedstore East, and I suppose can be here. It is founded on the well known habit of the mole in first making a burrow, catching what he finds as he forms it, and then after a time returning through the same burrow to catch the insects that have fallen into it, and the angle-worms that have sought the burrow for the fresh loosened earth. The trap is formed of two sharp points that are forced into the ground and through the mole by a strong spring, which is set by pressing the soil with the foot firmly down into the burrow, then placing the tongue of the trap on this depressed place, so that when the mole is passing beneath he will throw up the tongue or trigger, which frees the spring, which plunges the sharp points into him.

Food of the Mole.

The most general food of the mole is the angle-worm. The angle-worm has no injurious habits to us whatever. The little effect it has on man's economy is beneficial—so much so that the great Darwin wrote a book setting forth what great good it had done the world by working over and deepening the soil.

The next most general food of the mole is the very destructive larvae known as wire worms, the larvae of the curious spring or snapping beetles. These wire worms feed ravenously on seeds, plant roots, etc., and might become fearfully noxious were it not for moles.

Nature's Balance.

This question of the interaction of lives on other lives is one of the most important of problems for study, and requires the most careful thought. We should not allow ourselves or our dependents to destroy a life unless we know exactly what we are doing. Laying aside the sentiments of cruelty and the right of all life to its life, it is important to know the truth—the whole truth—for our own salvation.

Nature is about as perfectly balanced as can be, and any great interference on our part, blindly, is more apt to destroy the equilibrium of things and eventually work our injury than to do us good. Some few lives we know are against our interests in every point, like the rat, mouse, English sparrow, bark-lice (scale bugs), every species of moths and their larvae and a very few other things. Such we should kill at every chance remorselessly; but with the great mass of life we should look and study very carefully before we destroy.

D. B. W.

San Francisco, April 6th.

METEOROLOGICAL.

The Practical Prediction of Frosts.

(Written for the RURAL PRESS by XENOS CLARK.)

In the frosty counties and localities of this State there are so many nights when sufficient warning the evening before will enable vineyardists to save their vines, that a practical method of predicting frosts is highly desirable. There is such a method, one that is reliable, and much less widely known than it deserves to be.

It should be understood, in the first place, that the thermometer alone is quite inadequate for this purpose, the temperature at evening being a very unreliable guide as to the frost probabilities of the night. In two localities, for instance, that on a given night are precisely alike in all observable conditions, such as shelter, state of atmosphere, degree of cloudiness, direction and force of wind, etc., the thermometer may read alike in each at 9 P. M., and yet by 3 A. M., without any change in the weather, a heavy frost may prevail in one locality, while the other goes free. Of course there is a cause for this, which will be mentioned further on; the point to be noticed here is that the thermometer alone is a false criterion.

When, therefore, an Eastern market-gardener asks, "What is the lowest temperature at which I may safely leave the mats off my frames?" the answer is: "It is impossible to say; temperature is no guide."

And when, also, in the midst of the Eastern summer heat, some Jane night brings a frost, and all the newspapers wonder that the thermometer should have fallen so low at that season, it is in oblivion of the fact that the thermometer alone does not decide the question of frost.

What does decide the question is the dew-point, certainly one of the most interesting of natural phenomena. Dew does not fall at night until the air has been cooled to a certain point, and this is called the dew-point. It is not a fixed but a variable datum, being sometimes high and sometimes low, according to the condition of the atmosphere for the time being. If for instance there is a great deal of moisture (vapor of water) in the air, it will condense easily, say at 56°, and then the dew-point is high; if the air on the contrary contains but little moisture, this will not condense until the temperature falls considerably, say to 40°, and then the dew-point is called low. It is as if the air were a sponge from which cold squeezes the moisture—the less moisture there is, the harder must the cold squeeze to bring it out.

The most interesting and important fact about the dew-point is that when the air of night has cooled down to this stage, and dew begins falling, it cools no further. From that time forth the temperature of the night remains unchanged. This fact, somewhat difficult of explanation, is, nevertheless, one well ascertained, and its importance is evident, since if the dew-point for any given night can be ascertained the evening before, the lowest possible temperature of the night is at once known, and the question of frost or no frost decided. The instrument employed is one called a hygrometer, on whose scale, when exposed to the evening air, one can read accurately the amount of moisture present, and the consequent dew-point for the night. It is with this instrument that the predictions are made.

Returning for a moment to my initial statement, it will now be seen why temperature alone is an uncertain guide in forecasting frost. Evidently two evenings may be quite alike in temperature and all other observable conditions, while one, owing to an excess of the invisible moisture of the air, possesses a high dew-point and frost is improbable, and the other, owing to a deficiency of moisture in the air, possesses a low dew-point, and frost may be expected. It will be seen that to the observer with a thermometer, the two evenings are precisely alike, but to the observer with a hygrometer the difference is quickly revealed.

Many will remember that farmers back East are in the habit, when threatened with very cold weather, of placing tubs of water in the cellar to keep out the frost. The expedient is a reasonable one, as is now seen. The presence of water saturates the air with moisture, making a high dew-point, and thus preventing that fall of temperature which would induce frost.

To turn for a moment to some other considerations, it is well known that a windy night, or a clouded sky, prevents frost. Clouds operate in a manner similar to that employed by the gardener when he covers a choice shrub with a blanket. The effect of the blanket is to prevent the ground cooling by radiation at that spot; and the clouds are simply a big blanket

which covers the whole earth and prevents its radiating its heat. Just what gives the wind its influence it is less easy to decide, though undoubtedly one effect of wind is to prevent the accumulation of a colder stratum of air next the ground, especially in low-lying places.

The frost-predicting instrument which has been mentioned—the dew-point hygrometer—is one that requires some care and intelligence in its use; to such as can give it these it proves a valuable and reliable instrument. With its aid, and the use of mats, other coverings and smudge fires, the horticulturist, the fruit-grower and the vineyardist are fortified at their best against the damaging attacks of Jack Frost.

Those who desire may obtain this instrument of the Government Weather Bureau at Washington, which distributes it to farmers at cost price—\$7. It is accompanied by full directions for use, and by a dew-point table.

THE IRRIGATOR.

Value of Water in Fruit-Growing.

Gen. N. P. Chipman of Red Bluff, whose essay on cultivation we gave in last week's *RURAL*, continues his valuable writing in the *Red Bluff Sentinel* as follows:

I have called attention to the importance of thorough cultivation in order to retain the moisture in the soil. This importance comes from the necessity and value of water to plant life. I do not wish any one to infer from what I have now to say that there is any risk in fruit growing where we must rely wholly on the rainfall, because it is too well and firmly established in this State that in Central and Northern California we do not require irrigation of our orchards. All doubt has been removed at Vacaville and at Woodland and Davisville and around Sacramento, and all through the Sacramento valley, from Redding south. The point I now desire to bring out is that while we succeed well without irrigation, in certain departments of agriculture, we are not obtaining the highest results from the soil; much of our land that is not adapted to fruit, without irrigation, lies fallow, and our best soils are limited in their capacities, thus shutting out a wide range of profitable food products.

Water is the universal solvent, and it is chiefly in its office as a solvent that the properties of the soil essential to plant life are prepared, so that the tree or plant is nourished. The soluble properties of the soil are, by contact with water, made ready for the delicate and multitudinous mouths of the root system, and are taken into the circulation of the tree and cause it to grow. If the process of preparing this food is interfered with by drouth—by allowing moisture to escape and the ground to become dry—we immediately see the effect on the tree by its wilted foliage, and it will soon die unless water is given. Now, it is not the water alone that revives the plant and keeps it growing, because if you place the plant in a bucket of water it will revive temporarily, but it will still die. It is the plant food in the constituent elements and component parts of the soil, made available by the solvent quality of the water, that revives and sustains the plant. It must be evident to every one, then, that any method by which the greatest quantity of plant food can be taken into the circulation of the plant and assimilated, so to speak, and made to build up the tree in fiber, in leaf, in fruit, is the method we must adopt. A tree will grow, as any young of the animal kingdom, in direct ratio to the food it receives. On poor soil and with scant water you will have a tree like a skim-milk calf—puny and slow of growth. Upon what ordinarily passes for poor soil, with abundance of water you have rapid plant growth. On rich soil, with abundance of water, you have still more rapid growth.

There are some favored spots where nature supplies all the moisture necessary to reduce to fluid or vapor an adequate quantity of the life-giving properties of the soil. Sometimes this condition is brought about by sub irrigation or filtration or percolation from some reservoir of water not far below the surface, or from adjacent higher ground, or some running stream near by, or from some inherent quality of the soil, enabling it to hold almost all the moisture it receives, like the Thomas creek lands, which are phenomenal in this respect. But the great mass of agricultural lands are not thus favored. My observation and reading convince me that in a very few cases, indeed, will we ever be able to obtain the highest and best results of the soil without irrigation, and it comes of the fact that by judiciously feeding the tree it will make a correspondingly greater growth and fruitage. It seems to me that fertilization of the soils to promote growth (a thing everybody advocates) concedes the whole argument in favor of irrigation, for we irrigate for precisely the same reason.

Excessive irrigation, however, must be guarded against, and that it is not the source of most of the outcry against irrigation. The lady who is forever deluging her potted plants will have no flowers; she who intelligently observes when to give the soil water and gives the quantity needed, and no more, will be rewarded by buds and blossoms of rich color and richer perfume. The gardener understands this, as he travels among his vegetables with a watering-pot in one hand and a hoe in the

other. The farmers of the irrigated districts of Europe understand this, and the results attained are enormous. There is the best of evidence to prove that in England as high as 80 tons of rye grass have been grown upon an acre in one year. In a series of nine experiments in France it was shown that the amount of grain produced was increased largely by free use of water, showing that the measure of water consumed is the measure of the product or capacity of the soil. In England, 66 bushels of wheat are common with the best farmers.

But water is useful not only as a solvent to utilize the properties of the soil, but it is itself a fertilizer and enricher of the soil. No water is absolutely pure; the water of springs and streams holds in solution mineral and gaseous substances of great fertilizing value. You find lime, magnesia, soda, iron, sulphur, ammonia, etc., in almost all waters. The waters of our rivers and creeks are rich in fertilizing properties. The water of the Sacramento river, in times of flood, would be equal to a top dressing of rich manure to any land over which it could be passed so as to drop its load of fertilizers. A French savant estimated that each 200,000 cubic meters of the water of the Seine, employed in irrigation, will produce a quantity of alimentary substances equal to an average butcher's beef, and he estimated that the loss in the water flowing into the sea is equivalent to one fat ox every two minutes, or 262,800 in a year. Compared with the Sacramento river the Seine is very small indeed.

In the irrigated regions of the continent there are meadows, and in England also, that have yielded enormous crops for a great many years, receiving no fertilization whatever except from the water. I will not multiply instances, but it is no longer doubted that water is a valuable fertilizer in itself. We have, then, the double motive in applying it to our uses in orchards and vineyards as well as on our meadows and gardens. I cannot go into methods of application and the conditions of soil to be studied in its use, but I desire to arrest attention and lead our people to begin to think of the enormous loss they are sustaining by not applying the water, so easy to obtain, to our land. It is a large subject, but not so difficult that we may not comprehend it.

Our climate is adapted to the highest uses of water—indeed, Italy and the Indies offer no greater reward to the intelligent irrigator. In those countries great sums are expended by government in perfecting their systems. I may in the future show how we can accomplish as much with small expenditure of money, comparatively.

POULTRY YARD.

Good Care of Fowls Profitable.

EDITORS' PRESS:—Lack of proper care in the keeping of fowls always results in lack of eggs—at this season of the year, probably, less than at any other time, from the fact that apparently they can't help laying now, care or no care, but even now take proper care of them and you will find an increase in the yield of eggs that will repay you largely, and that not only in quantity but in quality and substance of your eggs.

I desire to call attention to the fact that cultivated eggs are much better in size, weight and flavor than wild eggs, because when the fowls are kept as they should be, to be profitable, they have an abundance of everything necessary to their being in first-class health and condition, as well as the needful surplus to make their eggs large, rich and full of substance.

No animal can yield a product, whether of eggs, butter, wool or whatever it may be, unless sufficiently well-kept to meet all these needs. Then, again, if one desires under such conditions to market a fowl or to kill one for his own table, he does not find it necessary to shut it up that it may not eat unclean food and so be unfit to be eaten until it is shut up and fed properly, because they are always in proper and fit condition to kill for eating. All he has to do when he desires to treat himself to a chicken pie or a broiled chicken is to kill and dress it with the certainty that it is already as good as it can be made. So both for profitable eggs and carcass, it pays to care properly for your fowls; a contrary course never pays in hens any better than it does in other stock. It is best to keep them right or not at all, and to be abundantly satisfied of this, one has only to go among those who keep fowls, observe their different methods and note results. One will say, "there's nothing in it," while the other goes on, laying by his profits and smiling to himself with satisfaction.

What do you say, Mr. Editor, to \$15 per dozen for chickens hatched in the last days of September last? That pays, I think—but common fowls, that is, fowls in common condition, won't do it. Mine did it. Plymouth Rocks, Langshans, and White Leghorns. Something, no doubt, is due to breed of fowls, as large fowls, other things being equal, will bring more than small ones, and as far as my experience goes, I prefer first Plymouth Rocks (next Langshans) as they hatch out a larger percentage, and as far as appearance in feathering is concerned are ready for market sooner than the

Langshans, although at the same age the Langshans will lead them a little in weight.

Perhaps the Brahmas or Cochins would be still better for that purpose alone, but if one desires to combine egg-raising with raising fowls for market, I decidedly recommend the Langshans or Plymouth Rocks. But while saying this I may say that one will find much difference in size in the birds of different dealers in fine stock, some breeding for certain points and others for others. Both my Langshans and Plymouth Rocks are perhaps larger than the standard size, although pure-blood fowls, but selected for size and along with size, prove excellent layers both in summer and winter, so that one may combine the two with profit.

While speaking of my own fowls, I would like to know if any one can beat this—a hatch of September pullets (Langshan) laying, that is, commencing to lay, at 4½ months of age, and laying freely at five months. Now, Mr. Editor, perhaps I am spinning this out somewhat, but my purpose has been to show that without proper attention to all the needs of your fowls it will not pay to keep poultry, while if you do attend to them closely and persistently, they will pay with any other business for the amount invested, and better than many others.

An old friend of mine not long since said to me: "I am getting too old to work or run around much now, and I think I will get a stock of fowls and keep a poultry ranch." "But," said I, "if you keep hens enough to pay you and attend to them properly, you will find that you have plenty of work to do, and some of it hard work as well, and all requiring close attention;" but he thought not. Well, if he keeps fowls his way the result will be one more added to those who don't find anything in it but loss—constant and watchful care and attention to details, however apparently unimportant, is the only way in which poultry can be profitably kept as a business. There is, perhaps, not much that is new to be written about poultry, but there is much that is necessary to be reiterated and insisted upon in order to lead people to see that there is a way and only one way to make the business a profitable and pleasant one.

T. B. GEFFROY.

Lodi, Cal.

Is Bamboo Durable for Coops and Fences?

EDITORS' PRESS:—I have become interested in the letters on bamboo fencing that have appeared in the *RURAL* of late, but have seen no mention made of its durability as compared with lath fences.

I am interested mainly because I think that very ornamental poultry-yards may be constructed of bamboo, and if it is durable and can be obtained as cheaply as laths, would doubtless come into use for such purposes and for confining many kinds of pets, pigeons, etc.

My question as to its durability is prompted by the condition of a poultry coop that I have. In 1886 I received a lot of Langshan fowls from China in a coop made entirely of bamboo. The frame was made of canes 1½ to 3 inches in diameter, the sides, ends, and top of about three-fourth-inch canes, and the bottom or floor of split canes fitting into grooves, and it was all held together by a few wooden pins in the joints of the frame. The drinking-cups were made of short sections of large canes cut off at the joints. As the coop was something of a curiosity, I placed it in a somewhat prominent position on the shady side of the barn, but not protected from the rain. I now notice that some of the bars have decayed at the ends where they enter the frame and are easily broken off.

If Mr. Sanders, who wrote in your issue of March 31st, can give any information as to the durability of the bamboo, it will please me and possibly many more of your readers.

H. G. KEESLING.

San Jose, March 31, 1888.

[It is not likely that the material used by Prof. Sanders and that received by Mr. Keesling are the same. The botanists tell us that the plant Prof. Sanders esteems so highly is a reed and not a bamboo, and that it should be called *Arundo donax* and not *Arundinææ*. The bamboos, so far as we have noticed them in the hands of the Chinese here, have a much harder and heavier stem than Prof. Sanders' reed. The question is, however, on durability rather than identity, and the subject is open for discussion.—EDS. PRESS.]

FOR SCALY LEG.—The Vacaville Reporter says: We have been requested by a lady, whose chickens are afflicted with scaly leg, to give the cause and remedy. The disease is caused by an insect which is identical with the insect causing itch in the human family, and it filth is not its prime cause it is greatly aggravated thereby, and cure may be effected by rubbing the parts with an ointment made by mixing equal parts of sulphur, lard and kerosene. An application about once a week, or two or three weeks, will be sufficient, when the substance will begin to peel off.

SUPERSTITIOUS people claim that a death is sure to follow the howling of a dog. It depends a good deal, the Quincy National thinks, on the kind of a whack one gets at the dog.

THE STOCK YARD.

Bloat in Cattle.

EDITORS' PRESS:—Bloat being very common at this season of the year, and the results often fatal, a word in reference to the same may not be amiss. Cattle that have been kept on dry hay should be given a good feed of dry hay before they are turned into green pasture. This will prevent them eating an excess of the green grass at the first. If, in addition to this, they are taken from the field early in the afternoon, very few, if any, are apt to be troubled with bloat. Some cattlemen take the added precaution of placing dry hay in the pasture, so that the cattle can have access to it at all times, and the cattlemen claim that the instinct of the animals will cause them to eat a portion of dry and green feed, and so avoid any tendency to bloat. As we are more apt to use preventives after we have met with loss than before a few simple methods that are in common use and of well-known virtue are more apt to be tried, the sooner the remedies are used the better.

The English method for simplicity is perhaps preferred; it consists in drawing a sack of some closely woven material over the cow's nose and mouth and fastening it over the horns. This compels the animal to breathe the same air and in some way gives relief very shortly. One gunnysack slipped into another, and thus doubled and then drawn on and fastened, does very well.

Another method of unknown origin, but equally effective, is to stand the animal with its front feet as much higher than the back as can be conveniently done, and if kept in that position relief soon follows.

As Americans are fond of dosing, this would not be complete without an added dose. The most simple is about 1½ pounds of all-fat salt pork cut into strips about an inch wide; to administer it, take a half hitch over the animal's upper jaw, with the hitching-rope draw the head up and force one piece at a time down the patient's throat. I can vouch for this remedy, as I have seen two as bad cases as ever came under my observation relieved in a very short time by the fat-salt pork cure. Some prefer lard of an equal quantity.

Another popular dose is from a pint to a quart of flaxseed oil; to this there is sometimes added sulphuric ether, laudanum and oil juniper. As this may suit Mr. Kill-or-cure better, I will give him the proper proportions:

Linseed oil.....1½ pints.
Sulphuric ether.....1 oz.
Laudanum.....1 oz.
Oil of juniper.....1 dram.
Mix, shake, and give at a drench.

The gunnysack, elevating the head, salt fat, lard and linseed oil remedies are preferable on account of their being always at hand.

Murphys, Cal.

E. H. SCHAEFFLE.

Shorthorn Sale at Sacramento.

Killip & Co. yesterday sold at Agricultural Park 41 head of pure-bred Shorthorn cattle, brought here recently by Joseph Combs of Linneus, Mo. There was a good attendance, the bidding was spirited, and good prices were realized for most of the animals. A 50-page catalogue had been printed containing the correct pedigree and breeding of each animal as recorded and certified by the American Shorthorn Breeders' Association. Following is a list of the cattle sold, name of purchaser and price paid:

Pauline—Heilbron Bros., Sacramento; \$95.
Rosie Lee—A. C. Dietz, Oakland; \$70.
Dixie II—Heilbron Bros., Sacramento; \$200.
Hester—Geo. A. Wiley, Danville, Contra Costa county; \$180.
Miss Leslie—J. Marzen, Truckee; \$100.
Lottie Lee II—J. Marzen, \$175.
Christiana—W. B. Gibson, Woodland; \$150.
Irene—J. Marzen, Truckee; \$110.
Virginia—D. N. Hershey, Blacks, Yolo county; \$115.
Josephine—W. B. Gibson, \$105.
Rose III—Geo. A. Wiley, \$120.
Florence II—Geo. A. Wiley, \$155.
Miranda II—Geo. A. Wiley, \$200.
Lady Oxford III—Heilbron Bros., \$90.
Mary Ann II—Heilbron Bros., \$150.
Jenny Lind—Geo. A. Wiley, \$140.
Rosette II—Geo. A. Wiley, \$200.
Lucy Jane—E. A. Bridgeford, Colusa; \$105.
Miss Prewitt II—D. N. Hershey, \$105.
Junieta—J. Marzen, \$80.
Faith—C. F. Reed, \$100.
Duke of Missouri—D. M. Reavis, \$205.
Saladin—M. D. Hopkins, \$70.
Othello—D. M. Reavis, \$150.
Young Crescent—J. Peters, Yuba City; \$105.
Pilot—J. D. Lockhart, Sacramento; \$65.
Ford—G. W. Hancock, Sacramento; \$105.
Governor Jay—M. Hopkins, Petaluma; \$95.
Elsworth—A. C. Dietz, Oakland; \$70.
Red Cloud—M. D. Hopkins, \$85.
Cheery Duke—D. M. Reavis, \$360.
Prince George—M. D. Hopkins, \$100.
Duke of Oak Grove—Heilbron Bros., \$95.
Sir Henry—D. N. Hershey, \$70.
Mason Duke—D. N. Hershey, \$70.
Sharon Ltd.—D. N. Hershey, \$75.
King John—C. Reed, Knights Landing; \$100.
Avalon—J. Turner, French Camp; \$100.
Melmont—C. F. Reed, \$225.
London Duke—D. M. Reavis, \$310.
Cleveland—Geo. A. Wiley, \$160.—*Record-Union*.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Attempt to Repeal the Oleomargarine Law.

[By Mortimer Whitehead, Lecturer National Grange.]

The fight over the question of the repeal of the oleomargarine law, and the passage of one for pure foods of all kinds, is still going on in Congress, and it is well for farmers to keep posted in the matter, and a few points here given may help. The oleomargarine people have issued an elaborate "abstract," setting forth their views on the subject, and asking for a repeal or modification of the present national law. This has been put in the hands of every Senator and Congressman, and the strong pressure exerted by the Western cattle interest has been brought to bear on the subject. In the document sent out by the oleo manufacturers it is charged that the passage of the law was obtained by fraudulent means; that bogus samples, concocted by the opponents of oleo, were submitted, and that the law destroys one industry to benefit another. They claim that the law deals a severe blow to the cattle industry of the West—the tax levied to protect the cow has killed the steer; that 38,000 dealers have been driven out of the business for selling oleomargarine; and that the Government, being in no need of revenue, has no right to tax oleo in any sum beyond the amount necessary to enforce the law. They ask that oleomargarine be included in a general Act concerning adulterated food; that the tax be reduced to one cent per pound, and that the license fee for dealers should not exceed that charged for selling liquors and tobacco.

In answer to this it has been shown on behalf of the dairy interests that the samples submitted for analysis were procured in the open market, where they were being sold for butter, and that in the manufacture of oleomargarine the substances used cannot be heated to a temperature sufficiently high to kill the germs of disease without spoiling the product. Disgusting animal substances may be deodorized and used without danger of being detected in the result. It may be made so as to be unwholesome, but no one can tell, even from a chemical analysis, what fats and oils have been employed.

The law is said to be very poorly enforced. At least 13,000,000 pounds of oleomargarine escaped taxation, and over 500 retail dealers sold the counterfeit article without paying licenses. The effect of the law has been to advance the average wholesale price of butter in some cities from 21c in 1885 to 22½c in 1886 and 23½c in 1887. The object of the law was more to prevent dishonest dealers from buying counterfeits at a low price and selling them as genuine butter, than to advance the price of the real article.

The value of the dairy product of the United States exceeds \$600,000,000 a year. A slight advance in the price of butter, cheese and milk is of great benefit to the 7,000,000 farmers who are engaged in dairy pursuits, and their interests are of greater importance than those opposed to the enforcement of the Oleomargarine law. The adulteration and counterfeiting of butter diminishes the price of dairy products both here and abroad, damages their reputation and decreases the amount exported and consumed. The result of the legislation on the subject has been to restore the reputation of butter, enlarge the markets and advance the price. The law is claimed to be satisfactory, and Congress is asked to listen to no suggestions for amendments in the interest of manufacturers of counterfeit goods.

The bill as before Congress, and introduced by the oleomargarine interest, will, if it passes, repeal the present law and do away with taxes and license fees. It provides for the sale of imitation butter in original packages of not less than five pounds, and on the outside of the package the ingredients of the mixture must be stamped in plain letters. The section is worded so as to raise grave constitutional questions, and as its enforcement is left entirely to United States District Attorneys and the general public, it would be impracticable. Another section refers to pure food, and is evidently inserted for the purpose of obtaining the support of those interested in passing a pure-food bill.

BRO. H. E. HAYES has reorganized 17 Granges in Eastern Oregon. A good illustration of what a single strong-hearted Patron can do.—*Grange Bulletin*.

BRO. AMOS ADAMS is still confined to his room by severe illness, although improving, to the gratification of many friends.

The Grange.

The *Sutter Farmer*, after commending to the special notice of farmers and Patrons an article which lately appeared in the *S. F. Bulletin* under the title, "Interchange of Industrial Experience," goes on to say:

The question of the utility of the Grange breaks out quite often; therefore it is a comfort to record such high testimony in its favor. Christ never uttered a truer saying than "Where two or three are assembled in My name, there will I be also," meaning doubtless that in union there is strength; in conference, wisdom; in harmony, success. If this be true in religious affairs, it is doubly so in the daily walks of life. Three men closely allied will vanquish thrice their numbers who do not understand each other. Industrial education of the enduring kind is not found in the books; it has to be gained by experience and comparison, and these really were the only schools open to California agriculturists. Residing isolated and far from neighbors upon our great valleys, the cultivators of the soil were suffering for intellectual food and those social ties and fellow-feelings that could render us a happy and contented yeomanry. The Grange has furnished this opportunity. Farmers' Clubs and other organizations might have done so, but they did not. The Grange has displaced no other organization, society or party. Its members, by their years of training, are able and leading spirits in all organizations for the public weal. The Grange, being open to the gentler sex on perfect equality with the lords of creation, puts it at once at the very head of all industrial and social organizations, and vastly in advance of any similar effort in the world's history. It must be seen that such an Order and their frequent intercourse must of necessity educate and enlighten its members; must kindle a fraternal spirit, and supply the greatest needs of the farmers and their families, make their lives more enjoyable, their calling more agreeable, their labors lighter, their homes more cheerful, and last, but not least, their business more prosperous.

Sacramento Pomona Grange.

EDITORS PRESS:—Sacramento County Pomona Grange met in regular session March 31st, but, it being a rainy day, only a few members made their appearance. The Master's gavel did not fall until three o'clock. The Committee on County Exhibit, through their Secretary, Bro. E. Greer, presented their report. Receipts were as follows: from old Committee, \$111.40; from Picnic Committee, by order of Pomona Grange, \$50; from Board of Supervisors, \$100; premium from State Agricultural Society, \$300. Total amount of receipts, \$561.40. The report showed 56 exhibitors participating to make our county exhibit. The total amount of expense in making the exhibit, including premium to exhibitors, was \$450, leaving balance in hands of Committee, \$111.40.

The advisability of appointing the Picnic Committee was introduced, and the W. M. appointed as follows: Bros. John Keith and D. R. Hunt of Sacramento Grange; L. H. Fassett and D. Reese of Florin Grange; Wm. Johnston and J. B. Bradford of Franklin Grange; Thomas McConnell and Dr. Caples of Elk Grove Grange; M. Toomy and A. A. Krull of Enterprise Grange; J. E. Beach of American River Grange.

After announcing the Committee, and on motion of Bro. Greer, Worthy Master Sims was added to the Committee. The personnel of this Committee insures as a fact that our coming picnic, like our past ones, will be a success, for the Grangers' picnic has got to be the picnic of the season in Sacramento county.

The next meeting of Sacramento Grange will be "Literary Day." Come one; come all. GEO. W. HACK.

Grange Work and Progress.

It is now nearly certain that two of the important measures advocated and supported by the Grange will be passed by the present Congress. One, reducing the postage on seeds, plants, etc., from the present rate of 16 cents per pound to 4 cents per pound, has already had a test vote in the House of Representatives, with a very decided majority in its favor. The other matter is the issuing of fractional currency for use in the mails in place of postage stamps and postal notes. It would be well, now that the victory is nearly gained, if Patrons and farmers would once more write personal letters to their Congressmen, urging the passage of these bills in the interests of all the people. Specially urge it upon both your U. S. Sena-

tors, as it is in the Senate that the express companies will make their greatest fight against the reduction of postage. This work cannot be done too soon.

Grange Picnics.

The several Granges of Contra Costa county will hold a joint picnic at Danville about the first or second Saturday in May. The day has not been determined on as yet. However, preparations are going on. Yuba City Grange will hold its picnic in the latter part of May at Hock Farm. Sacramento will doubtless have a rousing Grange picnic during May. It is expected the Granges of Alameda county will be represented at the Contra Costa picnic.

Now we hope to hear that San Jose is going to have a Grange and farmers' festive gathering that will prove the picnic of the season in Santa Clara county. The brothers and sisters there can excel all other organizations in that line, the same as they have in horticultural fairs. It would seem to be a good thing to increase interest in the cause, and we hope soon to hear the spirit moving for a pleasant affair.

Watsonville, Santa Cruz, Santa Rosa, Stockton, Lodi, Roseville, and Plumas and Nevada counties, and all other Granges around the circle will do well to take a day's recreation, call out their neighboring farmers and their families and have a happy, life-extending, go-as-you-please festival. If three to four weeks' notice be given there is not a Grange in this State but what will make a success of a basket picnic and rejoice in harvesting an increased interest in their Grange and calling. It not only advertises your Grange, but your whole section of country. Discuss the subject and report all announcements early for publication.

Letter Fragments.

Bro. Geo. W. Hack writes from Sacramento as follows: The farmers rejoice, we having had a welcome and much-needed rain. In some places the land was getting too dry and hard to summer-fallow, a north wind having blown quite hard for several days. But with the copious rains of the past few days all will be able to continue plowing until it is all done. Everything looks encouraging and lovely, and everybody is happy.

WOODBIDGE GRANGE.—Bro. R. G. Williams writes from Woodbridge, April 3d, as follows: Woodbridge Grange will confer the third and fourth degrees on a class of four sisters Tuesday, April 17. The Pomona Grange will occupy the forenoon session, and be present in the afternoon as a visiting body. A harvest feast will be spread jointly by both Granges.

Temescal Grange.

A goodly number of the delegation that visited San Jose Grange last Saturday morning on their return favored Temescal Grange by their presence and cheering words the same evening, including Worthy State Master Wm. L. Overhiser, I. C. Steele, D. Flint, A. L. Chandler, T. T. Hooper and S. W. Sollars. The First Degree was conferred on two lads of 16 and 14 years in a very impressive manner by Worthy Master Overhiser presiding. Characteristic and earnest speeches followed from all the visiting brothers, making it a very enjoyable occasion.

Grange Elections.

PILOT HILL.—C. S. Rogers, M.; F. S. Lovejoy, O.; Mrs. G. W. Gray, L.; S. F. Lovejoy, S.; J. E. Sumpter, A. S.; J. P. Bayley, T.; A. J. Sumpter, Sec.; Miss K. Gray, P.; Miss M. Lovejoy, F.; Mrs. M. J. Lovejoy, Ceres; Mrs. A. B. Dollas, L. A. S.; J. W. Young, G. K.; J. W. Davis, Chaplain. GALT.—Seymour Carr, M.; S. E. Wriston, O.; Lester F. M. Fowler, L.; Hiram Chase, S.; Peter Planalp, T.; A. B. Bryant, Sec.; Sister T. C. Barnhardt, C.; Alice E. Carr, P.; Esther C. Carr, F.

THE FARMERS' ALLIANCE AND THE GRANGE IN THE SOUTH.—The *State Wheel* of Jackson, Tenn., says: "The Farmers' Alliance was first organized in Texas about seven years ago, and is an outgrowth of the Grange, which it has absorbed." To this the *Southern Cultivator* answers: "The Tennessee *Wheel* is off the track, as the Alliance has not absorbed the Grange in Texas or any other Southern State, but has made its remarkable growth from the scattered farmers of the South. There is room for both the Alliance and the Grange, and each can recruit new members in nearly every county in the South."

Important Meeting.

Pursuant to the call of Worthy Master Overhiser, the newly appointed District and County Deputy Lecturers, Past Masters and officers of the State and Subordinate Granges, and members who were interested visitors, assembled at the office of the Secretary of the State Grange, 220 Market street, S. F., on the 6th inst., W. M., Overhiser in the chair, and A. T. Dewey, assisted by Don Mills, acting as Secretary.

The roll of Lecturers being called, the County Deputy Lecturers responded as follows: S. T. Coulter of Sonoma, H. J. Ostrander of Merced, S. W. Sollars of San Joaquin, W. Renwick of Alameda, G. W. Hack of Sacramento, N. Merrett of Placer and V. W. Still of Nevada. The following Deputies at Large responded: I. C. Steele, B. F. Frisbie, G. P. Loucks and State Lecturer Flint.

Among others present were Bros. Daniel Field of Maine, O. Dennis and N. Jones, and Sisters S. A. Whidden, V. W. Still, Jessie Weed, E. Kelsey, N. T. Root and S. H. Dewey.

A committee was appointed to wait upon Governor Waterman, the Warden and the Board of Prison Directors in regard to the manufacture and sale of sacks at San Quentin. [In behalf of this committee, A. L. Chandler and G. P. Loucks have reported that they visited San Quentin April 7th and met Gov. Waterman and the Warden, Gen. McComb; ascertained that they are anxious the farmers should have all the sacks manufactured there at the price already fixed—eight cents, delivered at Jackson-street wharf, San Francisco, or on board cars or vessels for the additional cost of drayage. Terms cash, check to accompany the order; also that they were willing to furnish sacks to farmers' co-operative unions, to be supplied by them to the farmers of their respective counties.]

On motion of I. C. Steele, the Executive Committee of the State Grange was requested to investigate the subject of securing more favorable facilities in the purchase of goods than are now enjoyed by Patrons of Husbandry, and, if deemed practicable, make the most advantageous arrangements that can be secured with such business houses as they may select.

D. Flint, B. F. Frisbie and I. C. Steele, with the Worthy Master, were appointed to arrange a program of field lectures and meetings, to be held in a circuit throughout the State.

On motion of J. V. Webster, the Executive Committee were requested to secure the services of a good and true Patron to travel through the State organizing and reorganizing Granges, and to canvass for the Patron.

E. W. Davis, Wm. Johnston and A. T. Dewey were chosen to confer with the W. M. of Tulare Grange, in regard to arrangements for the next meeting of the State Grange.

Bros. Coulter, Still and Flint were appointed to examine the inspection service as laid out and followed by the Mass. State Grange.

A resolution offered by Bro. Webster, inviting Lecturers and members of Pomona Granges to meet annually with the Executive Committee, between the sessions of the State Grange, was carried.

Bros. Coulter, Dewey and I. C. Steele, as a committee on Grange literature, recommended that the Executive Committee of the State Grange direct the Secretary to procure \$3 worth of printed matter per month, to be distributed by the Worthy Lecturer where it will do the most good.

The Deputy Lecturers of each county were requested to assist in raising a fund of \$1000 for the exclusive purpose of putting Lecturers and Organizing Deputies in the field throughout the State.

Many interesting speeches and remarks were made in the course of this meeting, which was generally understood to be wholly advisory in its nature, with no authoritative control over the actions of the Executive Committee, State or Subordinate Granges.

Grangers' Business Association.

The annual meeting of the stockholders of the Grangers' Business Association was held at the office of the association, 108 Davis street, S. F., April 11th. The affairs of the association were fully canvassed, and Manager Van Every's report was a source of considerable gratification to the stockholders, as the year's business was unprecedentedly large and the profits likewise flattering.

The members of the old Board of Directors were unanimously re-elected to serve for the ensuing year, viz.: Chas. Wood, I. C. Steele, S. E. Biddle, J. C. Campbell, Thos. Upton, A. D. Logan, T. E. Tynan, J. W. Mitchell, E. W. Steele, A. T. Hatch, J. C. Merryfield. Also the following list of officers: I. C. Steele, President; A. D. Logan, Vice-President; Chas. Wood, Secretary.

A dividend of ten per cent on the capital stock was declared by the directors at their meeting, after the adjournment of the stockholders, and in addition to the dividend, upward of \$25,000 was carried to the Reserve Fund of the association.

The rapid strides which this house has taken during the past few years should be a source of pleasure to all connected with the institution, and its record for fair dealing should insure it extensive patronage from the farmers of the State.

AGRICULTURAL ENGINEER

Land Reclamation.

An Immense Pumping Plant for Reclaiming Tule Islands.

In the Pearson Reclamation district, near Courtland, Sacramento county, in this State, some very extensive drainage operations have been conducted in the past few years, and they have now the most extensive pumping plant for

9 to 14 feet. The average daily consumption of coal was 3750 pounds of South Prairie screenings for a run of 24 hours.

The next season they took out the 12-inch and procured another 15-inch, making two 15-inch pumps. This was in the fall, but in the following spring an order was given to the Tool Company for a 30-inch siphon centrifugal pump to be driven by a compound condensing engine. The average of several tests conducted personally by Mr. P. J. Van Loben Sels, the agent of the Reclamation Co., showed its capacity to be 37,907 gallons per minute at a lift of 11 feet 7

They can now handle all the water that they have to contend with at any time, and it cannot get "the upper hand" of them, or catch up with the pumps.

There are two 30-inch siphon centrifugal pumps with the compound condensing engine between the two, so arranged that by the connecting couplings either one can be run independently. Each pump has two separate suction pipes issuing from the sump on the inside of the levee, and there is one 40-inch discharge pipe from each pump passing over the levee and going down an incline to the river. The

angle, the same as the cow-catcher of a locomotive, so as to direct the weeds, etc., off to the sides, and the inclined form tends to make the material rise to the upper portion of the grating. The sump proper is 30 feet wide and 12 feet deep, with bottom and sides perfectly smooth, the mouth expanding like a funnel until it is 50 feet wide, and here the grating or strainer is placed. This enlargement at the entrance is designed so that even the obstruction at the grating, in case of floating weeds, does not impede the flow of water the full size of the sump proper. As the sump has straight sides and bottom, where the water passes through the straight portion, it is easily measured, and the amount of water pumped readily calculated.

The large engine for the 30-inch pumps is a compound condensing engine, with variable expansion gear—the latter enabling the engineer, without a moment's loss of time, to change the point in the stroke at which the steam is cut off and to modify the speed and power of the engine as the change of lift or quantity of water discharged requires.

The diameter of the fly-wheel is 58 inches, that of the low and high pressure cylinders, 14 inches and 26 inches respectively. The stroke is 18 inches; the number of revolutions is from 130 to 210 per minute, according to the height the water is to be raised or the quantity desired to be discharged under any given circumstances—which can be increased from a minimum of say 10,000 gallons per minute, to a maximum of 60,000 gallons per minute for each of the two large pumps.

This engine has, like all other engines made by the San Francisco Tool Company, received the greatest possible care in its design and workmanship. The working parts are reduced to the fewest number possible without sacrificing its efficiency, and are thoroughly balanced. The bearing surfaces are of exceptionally large area, and the lubricating arrangements most perfect. The most of the forged parts are of the best hammered steel, and all the materials used in their construction as well as the workmanship are of the best description.

In a test of one of the 30-inch pumps run by the engine, the following results were shown: The total discharge of the pump was 37,907 gallons per minute, lifting water 11 feet 7 inches high, the engine developing 124.8 horsepower nominal, consuming 12,125 pounds of average Sydney coal in a run of 24 hours.

Steam is furnished for this plant by a battery of four boilers, two 48-inch by 16 feet, and two 60-inch by 16 feet. The boilers are arranged so that they may be disconnected at any time. There are two feed-pumps. The pumps are also connected with fire hydrants throughout the buildings, and connected to a tank at an elevation on the building.

In front of the boilers and on top of the levee are bunkers to hold 400 tons of coal. The floor of the bunkers inclines 30° to the furnaces, and there are sliding doors, so the supply is drawn to each furnace without handling. Schooners which come up the river hoist their cargoes of coal directly into the bunkers. The engine-house building, sleeping-rooms, etc., are artistically and substantially made. They are of rustic exterior with circular windows and other ornamental details. The interior is tastefully finished. The whole plant was made by the San Francisco Tool Company under the supervision of Mr. P. J. Van Loben Sels, for the San Francisco Savings Union, and as the largest reclamation plant in the United States, reflects credit on the designers and builders.

Live-Stock Sales.

On page 323 of this issue appears the account of sale of Shorthorns last week at Sacramento. The sale was active and quite satisfactory.

We note also private sale of 35 head of Shorthorns by Bill & Burnham of Kansas to Mr. Marsden of Truckee. Messrs. Bill & Burnham are breeders of Shorthorn cattle and Clydesdale horses at Manhattan, Riley county, Kansas. They are quite satisfied with their sale of stock to Mr. Marsden, and propose to go further in bringing choice stock to this State. If all goes well they may be expected out here again about the time of the fairs with a good lot of animals.

Col. Younger, the veteran Shorthorn breeder of San Jose, on account of advancing years, offers at private sale his whole herd of Shorthorns, which he has given so many years to building up, and with which he has secured such a fine string of awards at our State and district fairs. These cattle are so well known that there ought to be no trouble in placing them. Killip & Co., our leading live-stock salesmen, have charge of the sale of Col. Younger's cattle, and will give all desired information personally or by letter. The formal notice of the sale will appear in our advertising columns next week.

Another sale which will attract wide attention is the annual sale by J. B. Haggin of driving, work, draft and saddle horses and Shetland ponies. The annual sales by Mr. Haggin are becoming fixed events in our agricultural calendar and represent the annual crop from the valuable breeding blood which he has secured at great effort and expense. Catalogues can now be had of Killip & Co., who have charge of the sale, which will take place May 2d. The horses can be seen after April 28th at the Railroad stables, corner Turk and Steiner Sts., S. F.

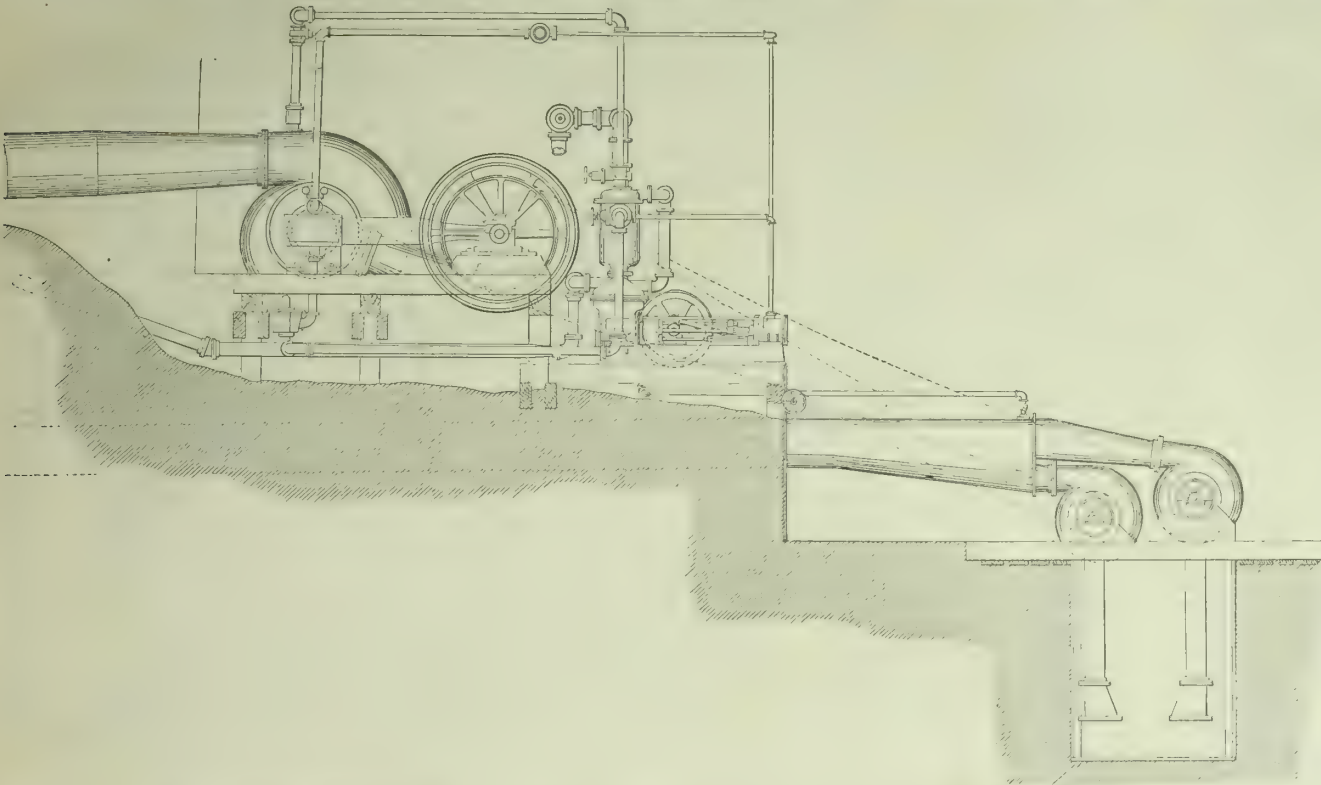


Fig. 1.—SIDE ELEVATION OF PUMPING PLANT FOR LAND RECLAMATION PURPOSES.

reclamation purposes in the United States. The Pearson Reclamation district is one of the largest on the coast. It consists of 8800 acres of very fertile land, surrounded by a well-constructed levee, of an average height of 18 feet, and some 15½ miles long.

inches, the engine indicating 156-horse power, with a consumption of 4.4 pounds average Sydney coal per actual horse-power of water raised per hour, the most satisfactory and economical showing so far made by any reclamation pumping plant.

lowest part of the discharge pipe is always submerged.

The pumps are primed from the jet-condenser, which acts as a condenser for the compound engine and the Meyers' engine, which also forms part of the plant. The pump, on being

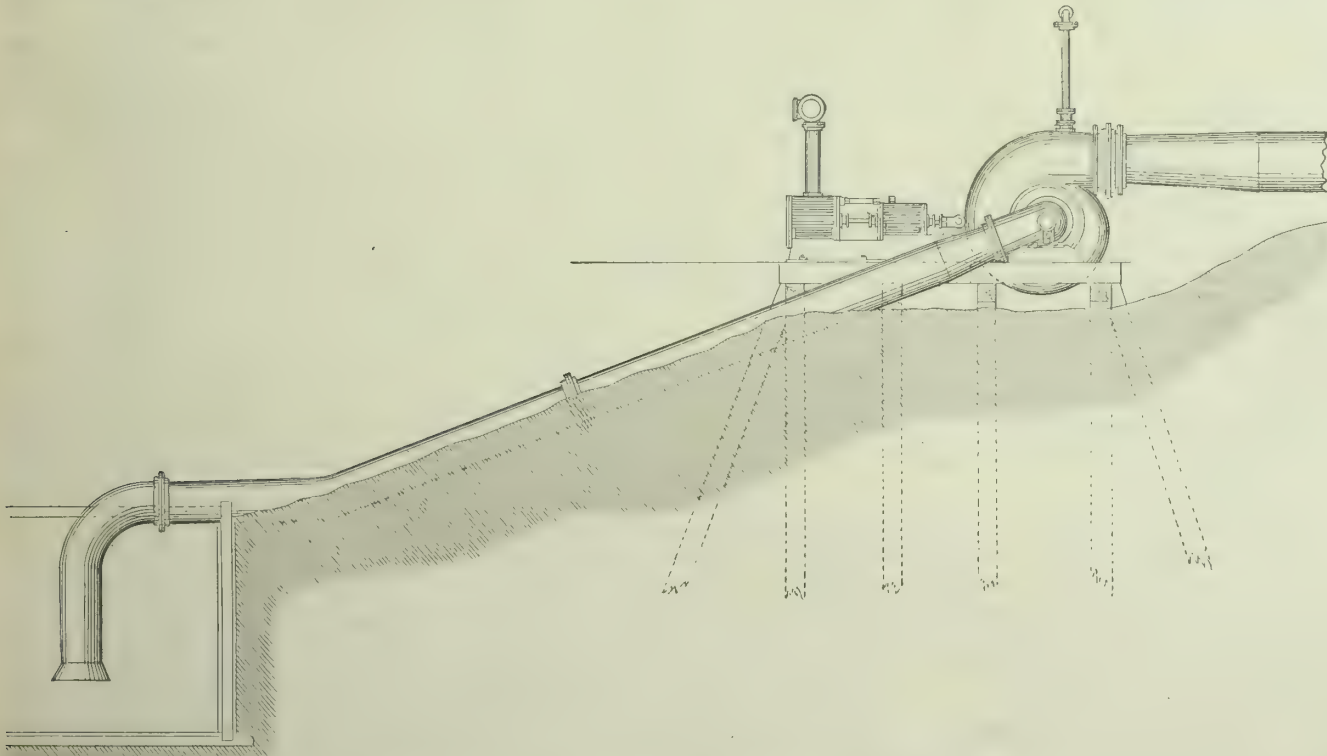


Fig. 2.—SIDE ELEVATION OF PUMPING PLANT WITH COMPOUND ENGINE.

When they first began operations there a few years ago, the San Francisco Tool Company furnished a ten-inch pump, with a capacity of 3000 gallons per minute, run by a 12x24 Meyers cut-off engine. This worked for one season, but was not sufficiently effective for the large tract it was designed to drain, being unable to cope with the seepage water. With larger pumps and the same engine, three times the work was accomplished. It was exchanged for a 12-inch Turbine pump, and a 15-inch Gwynne pump was added. These were calculated to raise at least 10,000 gallons over, if with an indicated 40-horse power, against a head of 10 feet.

The results of accurate measurements made by a thoroughly competent and disinterested civil engineer, showed that with only 88 revolutions of the engine, or 264 revolutions of the 15-inch pump, and 234 revolutions of the 12-inch pump, they were able to raise over 16,000 gallons per minute, with an indicated horsepower of about 50, against a head ranging from

At the time the 30-inch pump was ready to run there were 2000 acres of land under water, resulting from the excessive rains of spring, and by the middle of June the water was all pumped off, and there was a crop of barley in places where the water had been seven feet deep. In one part of the 2000 acres there was a lake of 350 acres seven feet deep.

In the following fall the Reclamation Co. decided to still further enlarge the pumping plant and put in another 30-inch siphon centrifugal pump. This was placed on the other side of the engine, and arranged so it could be coupled directly. The pumps are made so that at a low lift, if the outside water is not too high, both pumps are used; but if the water in the river or slough outside the levee is over 12 feet, one pump is disconnected and only one run.

With this increase of machinery they were enabled to increase the acreage under cultivation, and 3000 acres were now added, so that now the whole district is being cultivated.

primed, have the valves left partially open to the condensers, so that any air accumulating is taken up by the condenser and the siphon action is never impaired in the pumps.

The two 15 inch pumps stand directly over the sump, each having two suction pipes and discharging into one large discharge pipe. They are driven by the 12x24 Meyers' cut-off engine by belt connections. They are now used to drain the land when there is not enough water in the ditches to supply the large pumps.

Fig. 1 is a side elevation of the 12x24 Meyers cut-off engine and 15-inch pumps, condenser and 30-inch pump, looking from the boilers toward the compound engine.

Fig. 2 is a side elevation of the compound engine and 30-inch pump, also showing angle of the four 28-inch suction pipes.

The sump is arranged in a peculiar manner. The mouth is 50 feet wide, and has a grating set the full distance across for collecting floating vines, debris, etc. The grating is set at an



My Mother.

Old and wrinkled, with silvery hair,
And eyes dimmed with the touch of time,
My mother sits in her old arm-chair,
Weaving threads of gold with her autumn time.
Once my mother was young and fair,
When the wood-lark warbled her wedding chime.

And she oft times speaks of the quaint old ways
Of the long ago, and catches gleams
From the summer-land of her vanished days.
Through the mists of years, till the present seems
With scenes that gladdened her childish gaze
And forms that peopled her youthful dreams.

The old log house, with its homely cheer,
She remembers well, and how, when a child,
She stayed by her father's clearing near
O'er a corduroy road, through forest wild—
A way that grew fairer year by year
Till fields of plenty beside it smiled.

She recalls the preacher, rigidly brave
To battle with creeds and foes unseen,
The quaint old church, with its echoing nave,
Its old time choir, and Sabbath's serene;
While summer now over the preacher's grave
And the site of the church spreads a mantle of green.

She sits with her knitting and heeds not
The ways of the world that come and go,
Its murmurs of strife are scarcely caught
From the far-off tides that ceaselessly flow.
Home is her world, in a lowly lot;
Her crown was won where the daisies grow.

And I am the hero of that world,
The genius of all, whom her minstrels sing—
I, so nameless, an atom swirled
In the throng, where the deeds of the great scarce ring;

For me love's banner is gently unfurled—
I am the hero, I am the king.

Old and wrinkled! Those lines of care
Were written for me; there is wealth untold
Blossoming out from her silvery hair,
Better to me than houses and gold.
Once my mother was young and fair;
God bless her now she is wrinkled and old!

—Alfred Cole, in *Portland Transcript*.

Stick to Your Lands.

[By JOAQUIN MILLER.]

I beg of you to believe in the dignity and the high nobility which attaches to him who holds some part of this solid globe as his own. I want to repeat that the man who holds land in California, or anywhere about this Pacific Coast, is resting in the certain road of fortune. Progress is coming this way, to camp here, to stay here.

"Shake off the yoke of inauspicious stars
And here take up your everlasting rest."

For my own part, come to me when you may, my friends, you will find me on my steep and stony hills on the high sea bank, working there, waiting there, very glad, very content, very grateful that I have a little possession in the best part of the earth. And death, soon or late, shall find me there.

Ages ago there was a weak tendency, as there ever has been, and most especially is now, for the populace to forget the good green fields, the strong good mother who gives strength to all, and pour into cities. And then it must have been that some one told this pretty story, which I here briefly set down:

An old farmer and shepherd having grown very wealthy from a sudden boom in town lots, and a high protective tariff, perhaps, concluded to stop work and journey down to Athens and see Alcibiades and other young idlers about town.

And so, leaning on his staff, the goodly old shepherd king set out for the city, leaving his happy mountain home, his fertile fields, his good old mother earth that had made him strong as a lion to take a back seat in his affections. The stout and worthy old farmer king with a well-filled purse was certain he could go to the city and be a big man there. Poor old fool! He had not read the statistics which show that 93 per cent of all men in cities fail and resort to the bankrupt law for protection. He had not read that 100 per cent of all men there are more or less miserable.

Well, on his way down the mountain in a narrow path he met the champion tramp of his age, a sort of cross between John L. Sullivan and the late Mr. Samson who had his hair cut, and this champion tramp, who had a habit of tearing the jaws of lions and breaking men in two across his knee, demanded that the old farmer should get out of his road. The idea! There were seven rounds fought right there and then. The

first blood for Sullivan; and also the second, and also the third; and so on to the seventh! Once! twice! six! seven times the old farmer was driven to the ropes! caught in chancery! floored! and yet each time that he fell to the earth the good green earth gave him new strength, and he sprang to his feet stronger than ever. And so it was that at the end of the seventh round this John L. Sullivan of the ancient days gathered up his grip-sack and started back to Armenia, leaving the old farmer in full possession of the entire earth, so far as it had then been discovered.

When Augustus came to the throne of his murdered uncle he also found the people disposed to leave the fields and pour into the cities. And so the foregoing fable, in all its elaborate detail, was preached to the farmers throughout all the Roman Empire. The wise Emperor even sent for Virgil, the poet, who was born and still abode in Naples—where his statue and his tomb are still shown to the traveler—and made him almost a prince in fortune and dignities in order that he might the better teach the dignity of pastoral life. And what schoolboy to this day is not the better lover of mother earth for his *Tu Tityre*, etc.? And until we can have a new "Georgic," or at least another Virgil to make the pastoral life pleasant to men, why, let us all read Latin, if only to get this honest love of the beauty and the strength and the glory and the dignity of this great, good mother deep in our hearts.

And may I be indulged a moment if I venture to deprecate the singular action of the daily press toward all those who live remote from the great cities? Strange as it may seem, the man who lives not in these teeming, rushing centers of rottenness is a "hayseed," a "rustic," a "rural!" And yet who was the father of the poor simpleton who writes all these things of the farmer, the country editor, and all indeed who dwell not at the Capital? Why, the bright and brassy young man who writes these things was himself born among the cows. And indeed no man yet of any great account was ever either born in a city or reared in a city. The great men of earth have ever been born and reared on the grass, close to the bosom of our mother.

And yet the weak and silly young man of the daily press seems to be ashamed of his birth. How pitiful!

Perhaps not a day, certainly not a week, passes that some one does not apply to me either in person or by letter for help in getting a position as clerk in some city.

Do you remember what Webster said when a man applied to him for a place as clerk? And do you remember how thankful the young man was in after years for the snubbing Webster gave him? And do you remember above all things the first act of Webster after he got rid of his public responsibilities? Why, he bought a bit of land, a pair of oxen and a plow; and there he plowed, and there he planted; and there he died.

All honor to those who serve us well. "They also serve who only stand and wait." I have been a clerk, a cook, a waiter; been many things when not strong or able to do better. But with a bit of land under my feet and great blue skies above me I shall escape such feeble and feminine employment. I shall keep remote from the folly of the city, I shall plow, I shall plant, I shall test my sinews with the strength of the earth like the masters of old, be stronger, be better, and so be able to make one little portion of this beautiful earth still more beautiful.

Oakland, March 31, 1888.

Spring Flowers of California.

It has been a long and rainy winter, colder than usual in California, and the flowers of field and hillside are much later than for many years. In regions where the manzanitas often blossom in January, they were not to be seen until six weeks later. March began stormily, with hardly more flowers of spring than I have sometimes seen at the same season in Maryland, by the Chesapeake shores, where the white cups of the bloodroot whiten the banks, and the exquisite May-flower begins to bloom in March or April, according to the character of the season.

The beautiful pea-flowered cercis, or Judas tree, is one of the most conspicuous wild shrubs to be seen during March in the Sierra foothills. The central portions of the Coast Range show much that is worth the search; buttercups, pink and yellow, wood sorrel, early ceanothus, flame-colored eschscholtzias, tree lupines, hosiackias, a few wild roses, yellow-green chemical, golden wood violets, white-centered trillium, and superb masses of aristolochia, climbing many feet up the budding oaks. In a month there ought to be some azaleas in Santa Cruz and Marin, but March is too soon to begin a search.

leas in Santa Cruz and Marin, but March is too soon to begin a search.

The California pioneers of those free and quiet days before Mexican wars and gold fevers are never tired of describing the glorious spring apparel of the wonderful land as it lay unfenced, unplowed, unpossessed. In 1842 and 1843, when there were only two settlers in the whole Napa valley, and when the entire Upper Sacramento was a wild garden, the beauty and exuberance of the flowers and grasses impressed the rudest hunter. No one can form an adequate conception of the wealth of bloom in such valleys as Sonoma, Napa, Marin, Santa Clara, Sacramento and San Joaquin, before the herds of cattle and bands of sheep trampled the soil, and destroyed nature's great wild garden. Seas of flowers that have been exterminated, leagues of wild oats, mustard-fields in which, when in bloom, men on horseback could lose themselves, wild lilies bedded in masses extending for rods—these the few Americans who were in California before 1847 were able to see, and then the slow change came. Wild flowers that 40 years ago spread in broad carpets from mountain to mountain across great valleys have retreated to bits of rock and ravine, to sunny hill pastures and warm oak openings not yet needed for vineyard and orchard. It is the same old story that the West and the Southwest have known; herdsman and plowman destroy so fast that the botanist can hardly gather, name and place in his herbarium, before some shy, delicate species become but a memory.

When our wild flowers are almost gone, I suppose that people will begin to want them to plant in gardens. Perhaps some day the lovely California shrubs and trees will be found in public places, instead of the hideous eucalyptoids and scale covered acacias. Perhaps we may even have sacred forest reservations in the heart of the Sierras, around Mount Shasta, and in the "big basin" of the Santa Cruz region.

It is a pleasant thing to notice how California plants are appreciated elsewhere. England's best gardens are full of California wild flowers. That magnificent poppy, the *Romneya Coulteri*, queen of the whole family, and deserving a place on every Californian lawn, is the pride of English gardeners for its grand decorative effect. Last year the white and yellow azalea of our woods was taken to England, where it attracted much attention, and is being propagated very extensively. Our cercis is called better than the Japanese, and our clematis is everywhere recommended abroad. I suspect that an English nobleman would pay almost any price for a vine of our wild grape, as it grows on Alameda creek, or along the Arroyo Linda, Sonoma.

Very few of us begin to know, as yet, the garden wealth of the Pacific Coast in its own trees, vines, shrubs and annuals, but after a while we shall learn, perhaps before it is too late, to save our best species from entire destruction. Some, the botanists tell me, already appear almost lost.

But one cannot quite despair—so freshly, after all, the California spring tides still eddy each year about ravine and hill. Perhaps before the last scarlet-stemmed arbutus tree is cut down for firewood, some Western Thoreau may come to dwell among us, and give his life to teach us anew the gospel of nature, until even the sheep-herder shall be converted, and the tan-bark hunter made ashamed of himself.

Let us cease to measure California with its own flower-prime of '45, and it will still seem a paradise of spring blossoms. No matter how dark and chill the Januaries and Februaries are, March richly rewards the eye that sees; stray flowers bloom in places hid from the profane, at spring-moistened bases of vast masses of rock which project like giant fortresses from the sides of steep ravines, or on sun-warmed hand breadths of leaf-mold held in high crevices that sheep and cattle cannot reach. Here first they bloom; flowers that not until May become common over the broad pastures, and in the dark wayside grass. Always beautiful—yes; but never again quite so perfect as when first found in early March days, by one's self, after long and ingenious quest.

To find flowers a little before their acknowledged season, requires a sort of wood-craft that strongly tempts a man to be proud of his skill. A dozen clumsy people have hunted through the canyon, and they bring back only common things, plain in sight, brake, fern, willow stems, raspberry. You, wiser on the subject, skirt the southern borders of the trees, peering into oak-openings, examining nooks between the rocks, and the sharp, sheltering turns of the canyon. You study well the bases of ancient land-slides, warm and fertile; you know the ground gravel of a glacial moraine, the outcropping of volcanic soil, the steep, high shelters of the very head of the canyon, where your best results may be found. At last, turning aside, led by some instinct or training, or by the fine attraction of the flower itself, you find that hidden hand-breadth of spring perfection—that first scarlet delphinium, that mass of mimulus, or that colony of fritillarias.

And when you gather these for some pretty girl to arrange in a shapely vase, you are very careful to leave the roots undisturbed, you only harvest the surplus. Most of the young fellows who go out on the hills to gather bouquets are plant-killers, and indeed most of the girls are quite as bad. I have walked along a canyon after a party of picknickers and tracked their course by the broken shrubs, the clumps of bulbs pulled up, the rare ferns destroyed, and the trampled, uprooted annuals. When

the picknickers are shut out of a ravine, the rarer species begin to grow again, but it is slow work. I do not see why any one can wish to pull up a fern root, when the fronds are so easily picked, nor why a lily stem should be pulled up, and the bulb ruined, nor why the azalea bushes—as on Howell mountain, for instance—should be fairly broken to the ground by pleasure parties and thrown away an hour later. But then I never was a sportsman, and perhaps I do not understand these things.

April in the Elizabethan poetry is changeable, sweet, and coquettish; it is like the Februaries that we know so well in California. April here is the first radiance of the full rose-garden, the farewell of the scarlet quince and the purple lilacs. Wide open the gates of garden-land are flung, and growing vines fasten them back till December comes again. It is at last the California June-season, this April with its grass green slopes purple with dodecatheons, brown and golden with violets, snow-white with gillias, and blue with heavenly azure of memphillas. Break the chains of habit, good air; bring back the dreams of your childhood; walk abroad in the sunlight, and cease to think of how you can circumvent your neighbor.

A month ago, the most beautiful things that I could find in the foothills of Tehama, Butte, Merced and Alameda were not flowers, but branches and buds, yellow willows, purple and smoky-hued dogwood and blackberry vines, scarlet of madrone, dark green of mountain lilac. I think that no other American flora is so rich in color of buds and stems as the Californian. If the delicate pinks, scarlets, yellows, and purples that beautify the winter landscape here could only be varnished so as to retain their brilliancy, no finer decorations for rooms could be devised. But the charm of color is as evanescent as it is attractive. With the first breaking of the buds, the delicate shades disappear, and all the stems approximate to shades of green. The mysterious buds, which one could pull apart and discover to be shell-tinted and lovely, become growing leaves and flowers, or sturdy young branches which mean to be stiff and thorny by summer. The winter's purple thickets have greenened and whitened into spring-time hedges. The deep tints of the almond and apricot twigs faded long ago, and they settled down to the practical pursuit of developing what fruit the late frosts have left them.

Yet California has such varieties of climate that one can still find the rich colors of leafless wild-rose thickets by climbing far enough toward the snow-line. Beautiful, too, aside from color, are leafless shrubs, as the amateur photographer knows. His delicate bromide prints, or, better still, his negatives held up to the light; make of these dull-looking briary hills a joy forever, even if there are no flowers to speak of.

But April! This is California's fairest holiday and cheeriest season, though May and June press April hard, and not until July have we a right to say that blossom time is passing in the valleys. Even in July, on the cloudy mountain heights of the east, in the realms of quartz and granite, above the last pine and oak, the wild flowers are hardly ready to bud, and the new grass is springing in the melted snow-drifts. These April days the San Joaquin farmer can stand in his pink-blossomed apple orchard and watch such mountain rivers as the Chowchilla and Mariposa hurry past his ranch full to the brim with Sierra snow—wild torrents each afternoon, but hardly waist-deep at daybreak. Perhaps, down the river, torn from the hillside and floating heavily, come yellow-stemmed Carpinterias from 50 miles away, dark-leaved, with large, snow-white flowers; or the lilac spikes of the yerba santa, from mountain bee pastures, or the great golden blooms of the fremontia, or even as I have seen them, tree-trunks uprooted, and still bearing masses of earth high over the floods, with turf of mountain grass, starred with delicate mountain blossoms.

In the great lowland heart of the State, where slow rivers wind about tule-bordered islands, the farmers are planting their potatoes and planting their wheat-fields. But on the hills of Stanislaus the farmer's potatoes are blossoming, and his wheat is half grown. California Aprils are crowded with such contrasts. In a couple of weeks the emerald heads of chevalier barley will be bursting their pea green sheaths; and in the maples birds have rented summer lodgings.

North, in the upper Coast Range, the season is a month later, but toward the south it is a month earlier, and the roads are already dusty, though spring is still in its prime. It is the month of scarlet oak leaves in the foothills, and if one climbed far enough, the mitted school-children going by could tell you of an Eastern April.

Imagine trying to write in one paragraph about April throughout Western Europe! That would be easier than to tell what April days are like from Oregon to Mexico, from the tules of Rio Vista to the scarlet snow plants growing on Lassen.

Those who go to the woods will understand; as for the rest, they are useless for the purposes of this article until something grows from their dust. It is better to lie in the April grass while one may than to know nothing about grass until one helps against his will to nourish it. That is what a philosopher hinted to me not long ago, and on the whole the doctrine seems worth the attention of those to whom all seasons are alike, and all places.—Charles Howard Shinn, in *Overland for April*.

YOUNG FOLKS' COLUMN.

Justice.

(Parody on "A Picture from Memory"—WHITTIER.)

A picture memory brings to me,
I look o'er vanished years, and see
Myself across my mother's knee.

I feel her strong, firm hand restrain,
While whack, whack, whack, I feel again
A child's blind burning sense of pain.

But wiser now, a woman grown,
My mother's trials better known,
The justice of the blow I own.

With riper sense, I p'ainly see,
That as my mother paddled me,
So must my children paddled be.

Grass Valley, Cal.

MAUD S. PEASLEE.

How a Brave Boy Succeeded.

(Written for the RURAL PRESS by O. B. SERVER.)

"Mary," said Mr. Howard, "I think as Jerry's birthday occurs two weeks from Wednesday, we ought to get up a specially good dinner in his honor, and invite a few of his friends. He was very fortunate to obtain his place when there were so many applicants, and his employer tells me he is giving excellent satisfaction."

"Yes," said Mrs. Howard, "Jerry is a good boy, and I will prepare the best dinner that money can buy, and invite three or four of his old schoolfellows to share it with him."

John Howard lived in the suburbs of the city, in a small, neat cottage, which, by dint of the closest self-denial and economy, he had purchased a year or two previous to the above conversation. A native of New York State, in his younger days he had conducted a thriving business in one of the manufacturing towns of that great commonwealth; but the wave of "hard times" in the '70's had swept over him and he was borne down with the tide, and upon the settlement of his affairs found himself the possessor of but a few hundred dollars. At that time the children—Ellen and Jerry—were quite young, and after much thought and deliberation, Mr. and Mrs. Howard concluded to sever old ties and surroundings and try their fortunes in the Golden State.

Upon their arrival in San Francisco Mr. Howard discovered that the position of book-keeper—for which vocation he was best fitted—was not readily obtained. Several weeks elapsed ere he secured a place, and that at a nominal salary, far below that which his capabilities deserved. However, he gladly accepted the position, and the children being placed in school, the family settled in the outskirts of the city in a home of their own, bought mostly on credit, the mortgage on which was now nearly canceled.

Although desirous of giving his children a good education, Mr. Howard had yielded to their earnest entreaties, when Ellen was 16 and Jerry 14, to be allowed to leave school and go to work, that they might contribute toward liquidating the debt on the little home.

Ellen had entered the office of a wholesale firm, as stenographer, an accomplishment to which she had devoted special study while at school. Her success in the position had been so marked, and her conscientious efforts were so highly appreciated by her employers, that at the close of her first year her salary had been voluntarily advanced to what was considered a liberal remuneration for a young woman. This generosity of her employers was doubly welcome to the girl, for, besides enabling her to dress in accordance with the surroundings of her position, the increased salary became the means of gratifying her cherished ambition of aiding to cancel her father's debt on the house.

Jeremiah—or Jerry, as he was usually called—had also been fortunate in his quest of business. Through the exertions of a school-mate whose father was in affluent circumstances and wielded considerable influence, he secured a berth as boy-of-all-work in a down-town mercantile house, where, attending strictly to his duty, he had gained the confidence of his employer until he was promoted to a desk in the office as bill and invoice clerk. His salary had been slightly increased, but as the proprietor of the establishment bore the reputation of being "a close-fisted old curmudgeon," even the small "raise" was looked upon by Jerry's fellow-clerks as something extraordinary and quite at variance with the common order of things in Mr. Stillman's establishment.

Jerry was a great favorite with his fellow-employees. He was naturally courteous and obliging, and never hesitated in conferring a favor when in his power, even though doing so involved self-sacrifice. On numerous occasions he had remained at the store long after business hours engaged in labor not pertaining to his own department, but for the purpose of assisting some clerk who was "behind" in his special work.

His employer, too, evinced his confidence in the boy in the most decisive manner. In addition to his desk duties, Jerry was frequently sent to and from the bank with deposits often amounting to thousands of dollars. This mark of confidence inspired him with a proud sense of trust reposed in him, and he would no more have thought of abstracting the smallest coin than of jumping into the bay.

It was the week preceding Jerry's birthday. The winter rains had begun, interspersed with

beautiful sunny days and balmy breezes from the ocean, and the hills were putting on their coat of green. Shrub, plant, and flower, parched by the long summer drought, were beginning to assume their pristine appearance, and the whole aspect of nature was revivifying and exhilarating—such as is only seen at this season of the year in our own heaven-favored State—so pleasing a contrast to the ice-bound and stormy East, where November's blasts howl with telling effect on animate nature, freezing the lakes and rivers, and giving a foretaste of months of frigid atmosphere and blizzards.

"Father," said Jerry, as the family were at dinner one evening, "I heard Mr. Dinsmore, the assistant book-keeper, say to-day that he feared he would be obliged to resign and go South. You know his health has been poor for some time, and his cough is absolutely frightful."

"Poor man!" said Mr. Howard, "I'm afraid neither the South nor any other locality will avail him. The last time I saw him he resembled a walking skeleton. Consumption has too firm a hold on him to render change of climate available."

"I was thinking," continued Jerry, "that Mr. Stillman might give me the vacant position. You know I studied book-keeping at school, and my teacher said I made rapid progress in it."

"Don't be in a hurry, my boy," replied his father. "There are other clerks who have been in Mr. Stillman's employ much longer than you, and they will naturally take precedence in promotion. Be patient, Jerry, and advancement will come in due time."

"Well, perhaps I am too hasty," said the boy; "but I thought I might possibly get the place."

One morning, a few days subsequent to the above conversation, Jerry was sent to the bank to deposit \$1000. He started out whistling merrily, with the bag of coin thrown over his shoulder, and had nearly reached the bank, when at the corner of two streets he observed two ill-looking, shabbily-dressed men following him. Grasping the bag in both hands, he clung to it firmly and quickened his footsteps. When within a stone's throw of his destination, he glanced around and saw the men almost at his heels. Before he could avoid them his throat was encircled in a tight grasp, his arms seized, and a hoarse voice hissed in his ear:

"Hand over that sack, boy, and be quick about it!"

He was almost suffocated with the pressure on his throat, and the pain in his arms was so great that he nearly fainted; but rallying all his energies he clung to the sack and made a desperate effort to break away, shouting "Help! police!" at the top of his voice. At that moment his foot struck a projecting curbstone and down he went in the mud, gasping for breath, but still holding on to the sack.

The attention of the passers-by was by this time attracted, quite a crowd had collected, and the robber, seeing his nefarious scheme frustrated, released his hold and ran rapidly down the street, followed by his companion, and as no one attempted their capture, and an officer was not in sight, they effected their escape.

Covered with mud, bruised, half choked and with aching bones, Jerry picked himself up and proceeded to the bank, where his disordered appearance at once attracted attention. After replying to numerous inquiries and receiving warm commendations for his pluckiness in resisting the thieves, he deposited the contents of the sack.

Jerry's bright face and courteous deportment had been often remarked by the officers of the bank, but his name and address were unknown to them. The cashier, coming forward, inquired:

"What is your name, my brave boy, and where do you live?"

"Jerry Howard, sir, and I live with my father at 2743 B— street."

"Well, you had better go home at once, change your clothes, and have your mother attend to your bruises. I will send word to the store explaining the cause of your absence."

"I am not seriously hurt, sir; but I will go home for a change of clothes and return to the store," replied Jerry.

As he left the bank the cashier remarked to the teller:

"We must keep an eye on that boy. He is made of just the stuff we want, and I am inclined to offer him the first vacant position in the bank."

When Jerry's mother heard of the danger to which he had been subjected, and the stout resistance he had made to the thieves, she was greatly alarmed, but in her heart felt prouder of him than ever. Not every boy exposed to such peril, she thought, would act so bravely, but would surrender the money to escape personal injury.

Upon his return to the store, Jerry was warmly received by the clerks, who had heard of the occurrence, and who informed him that Mr. Stillman desired his presence in his private office.

"My boy," said that gentleman, "I am deeply gratified at your brave conduct this morning, and will endeavor to show my appreciation of it in a substantial way. I have long admired your manly behavior and industry, and had concluded, previous to this unfortunate event, to promote you at the first opportunity. Mr. Dinsmore's position will be vacant the first of the month, from which date you will fill it, of course at the salary he receives.

Meanwhile, to prove that I am not ungrateful, here is a check for a hundred dollars for your plucky and successful efforts to save my money."

"Mr. Stillman," replied Jerry, "I am very grateful to you, but I don't want the money. I only did my duty."

But his employer would not listen to this, and after repeated urgings the boy was induced to accept the check.

It was now within a week of the eventful day, and Jerry began to anticipate the pleasures of the occasion. He wrote and dispatched four invitations to as many of his former schoolmates, and Ellen also solicited the presence at the dinner of three of her girl fellow-pupils of a year ago.

Two evenings after that, about the time for closing, Jerry was attending to some duties at the rear of the store, when he noticed two rough-looking men standing on the corner of the alley, intently watching the premises. Their forms seemed familiar, and their attitude suspicious, but the dusk hid their features from view. Hurriedly going to the front of the store, without mentioning his suspicions to any one, he took a circuitous route, drew up his coat-collar, pulled his hat over his eyes, and soon reached the location where the men were standing. As he passed them, almost on the run, to divert suspicion, he cast a furtive glance at their faces, and at once recognized his previous assailants. Jerry was now satisfied that a burglary was contemplated by the rascals, and redoubling his steps, soon re-entered the store. Happily, Mr. Stillman was in his office, and to him the boy, in a few hurried words, communicated his suspicions.

"I am sure," he said, "that these men mean to break into the store to-night, and I feel it my duty to warn you of their intentions."

His employer manifested no surprise at Jerry's words, after learning that the men were identical with those who had attempted the robbery, but he was profuse in his thanks, directed Jerry to observe reticence in the matter, and at once sent a messenger to police headquarters, who shortly returned with four stalwart officers, fully armed. These, with the regular watchman, made preparations to give the burglars a warm reception.

The events of the preceding hour had so excited Jerry that instead of his ordinary quiet and bashful manner he became restless and loquacious, expressing a desire to remain in the store and witness the capture of the burglars if they attempted an entrance. But his wish was ungratified, for Mr. Stillman ordered all hands to leave, and soon the premises were untenanted save by the five guardians of the peace.

When Jerry reached the store next morning he was not at all surprised to learn that his suspicions were fully confirmed. Entrance to the building had been attempted shortly before midnight, and the burglars were captured after a desperate resistance and locked up to await trial.

When the case was called in the courts, a month or two afterward, Jerry was summoned to the stand as the principal witness in the assault upon him, which took precedence of the later charge. He related his story so coherently and intelligently, and when cross-examined by the attorney for the defendants adhered to his statement so persistently, notwithstanding the former's studied efforts to confuse him, that he was the recipient of lavish encomiums from the newspapers, which termed him "a young hero," "a gallant preserver of his employer's property," etc.

The men were promptly convicted on the first charge, and the evidence of the officers on the second was so conclusive that they were as readily adjudged guilty. Their combined sentences amounted to 20 years.

(To be Continued.)

Little Bits of Nature.

The Rooster's Family.

(Written for the RURAL PRESS by NATURAL.)

The queerest little bit of nature is being enacted in this great State of glorious wonders that one would wish to see. In the backyard of a beautiful residence here there is a very high fence inclosing a chicken-yard in which are hens, baby chickens, middle-aged pullets and a few old dowagers, but not one rooster—in fact it is a perfect "Sorosis" for the lady of the house has banished the only male bird outside the confines of the chicken kingdom and given him a brand-new family of little chicks to take care of.

Perhaps you think he scorns such duties, thinking it beneath the dignity of a long-tailed, beautiful red and green, loud-crowing rooster. Not a bit of it. He takes to it as naturally as if it was the whole and original duty for a rooster to scratch and "cluck" and hide the little birds under his wing, which he does with more bluster and fuss than a hen ever thought of. He does not try to scale the walls of his kingdom from which he is banished, although he can see glimpses of the joys within through the insertions between the pickets, or rather slats, of which it is composed.

No, he does his duty manfully—ahem!—womanfully, without deigning to waste a glance at his harem of beauties only separated by one inch of wire and wood, but oh so high; perhaps that is the thought that reconciles him to his present situation.

The visitors were all moralizing on the beau-

ties of accepting with resignation and enthusiasm the position in which one is placed in this world and laughing at and admiring the very charming way in which he called his little charges and would not let them wander a foot from his side, scratching and picking and clucking constantly, not taking the least notice of the visitors who were so admiring him, when a little lady broke the spell by saying with a fine scorn: "He's an old Molly Caudle!"

DOMESTIC ECONOMY.

LEMON DROPS.—Dissolve half a pound pulverized sugar in lemon juice and boil to a thin syrup. Drop on plates and harden in a warm place.

DOUGHNUTS.—To two teacupfuls each of sugar and sour milk, add one teaspoonful of soda, one teaspoonful of butter, two eggs, a pinch of salt, nutmeg to taste, and flour enough to roll without sticking. Fry in hot lard, drain well, and dust with powdered sugar while they are hot.

CURRIED BEEF.—Take slices of cold roast beef, cut them up into small bits, put a large piece of butter into a saucepan and put the meat into it, with two onions, sliced very thin, a little water, one dessertspoonful of curry powder. Let this simmer for 10 or 15 minutes. Line an earthen vegetable dish with boiled rice and pour the curried beef into it. Serve hot.

BAKED POTATOES.—Potatoes that are to be baked should be thoroughly washed and dried, then placed in a moderately warm oven, either in a baking tin or on the grate. If the oven is at the right temperature, potatoes will bake in from 40 to 50 minutes. If they cannot be served as soon as done, gently break the skin and they can be kept in tolerable condition for a short time.

SAGO CUSTARD.—Sago custard, which is both nourishing and palatable, is made by soaking two tablespoonfuls of sago in a half pint of cold water for an hour and a half, then boil it in the water until it looks clear; then add a tumbler of fresh milk, let this boil for a minute or two, add sugar to your taste, and when you remove it from the fire add one well-beaten egg and flavoring to your taste.

TO STUFF PIGEONS.—For one dozen pigeons take two cups stale breadcrumbs, two teaspoonfuls of sweet marjoram, one of pepper, two of salt, one of cloves, one onion chopped fine, a little salt pork chopped and one or two eggs. Mix this up well. Stuff the body and sew them up, then boil them slowly until tender. Brown them in butter in a frying-pan, dredge flour over them to make them brown well, and add a little liquor they were boiled in, after taking the pigeons out. This will make a nice gravy.

CHICKEN PIE.—Take boiled chicken, either freshly cooked or cold, and lay it in pieces in a deep baking dish which has been previously lined at the sides with nice piecrust. Dredge flour over the meat and add salt and pepper, then another layer of chicken, and proceed as before until the dish is filled. Pour in some of the gravy or broth, put bits of butter on top and cover with a rich paste, which may be ornamented with fanciful devices in leaves and scrolls, according to taste. Be sure that an opening is left in the top for the steam to escape while baking.

APPLE SAGO PUDDING.—Pare and core a half-dozen sour, juicy apples and arrange them in a buttered pudding dish; fill up the hollow of each apple with sugar and put a bit of butter on top. Cover the dish closely and set in oven to bake till the apples are thoroughly done. Meanwhile boil in a double kettle a scant cup of sago with two cups of water and a little salt. When done, which may be seen by the transparent, jelly-like look of the sago and by the taste, beat in lump of butter, sugar to taste, and flavoring if desired. Pour the sago over the cooked apples in the pudding dish and set back in the oven to brown on the top.

CRANBERRY SAUCE.—If cranberries are to be served with turkey or game, cook them in this way: To one pound of cranberries, after they are picked over and washed, allow one pound of granulated sugar and half a pint of water. Put the sugar and water into a porcelain kettle and let it come to a boil; then put the berries in. After they begin to boil, allow full 10 minutes for boiling. Then pour all into a mold which you have dipped into cold water. This will prevent the jelly from sticking to the mold. Let it stand all night or longer. It will turn out like jelly, and it will be found to be sweet and yet tart. A larger quantity may be prepared, as it will keep as well as any jelly.

HOMEMADE CREAM CANDY.—To coffee cup of white sugar add two tablespoonfuls of water to dissolve it, and boil, without stirring, in a bright tin pan, until it will crisp in water like molasses candy. Just before it is done, put in a teaspoonful of vanilla or lemon, or peppermint essence, and a quarter of a teaspoonful of cream tartar. When done, pour out into a buttered pan, and when cool enough to handle, work as you would molasses candy until it is perfectly white; then stretch and lay on a board, and with chopping-knife cut into mouthfuls, or you can cut with shears, and lay on buttered paper on a plate. Grease your hands with butter before working it, and it will not stick to your fingers. Granulated sugar is not as good as other white sugar.



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The Week.

The weather as we write approaches the torrid and will serve a good purpose in hastening the early fruit, which is rather tardy this year. We hear that one Vacaville grower expects to ship cherries on April 21st, which is about 20 days later than the extreme early date of March 31st which was made one year. Fruit reports are as yet somewhat uncertain. Apricots on old trees are rather lighter than usual, but younger trees are doing well generally. The peach outlook in the leading regions indicates that the driers will have their hands full again this year. Doubling, tripling, and even quadrupling of peaches is an indication of exuberance which does not delight the grower, and it seems unusually prevalent this year in some parts.

Hay crops have made great progress during the week. Some reports from grain districts speak of rather a thin and backward stand in the fields. Much depends on what rain is still

in store for the season. If but little is given, there will be some rather short fields.

General activity in real estate and improvements continues; the valleys hum and the hills resound with the music of the boomer, and the victims are the most contented martyrs living. It is reported that the Southern Pacific system did a business of two and a half million dollars in March, a great increase over the corresponding month last year. This shows that people, goods and produce are moving about at a lively rate, and this means business and prosperity.

Intermediate Sentences.

The question of punishment for crime by incarceration and restraint is very properly assuming more than usual prominence. There is no fact more patent than the unfair discriminations made in the infliction of punishment for various grades of offenses. Only recently a Kentucky sheriff conducted at the same time two prisoners to the penitentiary, one for the theft of a melon and the other for killing a man. The sentence of the thief was for three years, on the murderer but two. Now under our present judicial system it is practically impossible to prevent such a paradox of justice. It is a marvel that the ingenuity of our law-makers has not devised some plan to remedy this evil. The plan proposed at the last session of the Wisconsin Legislature is worthy of respectful consideration. It provides that the court sentence the offenders indeterminately. The judge pronounces the sentence and transmits to the prison authorities an outline of the offense and a brief biography of the convicted man. With this data those in charge of the penal institution are enabled to form an intelligent estimate of the character of the man, the probability of his reformation and gain some idea of the best way of dealing with him. If it is his first offense, every opportunity is to be afforded him to work out an honorable reformation, and to this end he is given to understand that honorable and honest conduct will not only greatly hasten the date of his discharge, but earn for him every consideration possible while confined within the walls of the prison. It is believed that such a course will induce all, or nearly all, to attempt to regain a place in their own self respect, and in the esteem and confidence of their fellow-men. It certainly appears reasonable to hope that if a spark of manhood and sense of honor remains it would be kindled into a generous glow under such conditions. If a man, through bad associates or under an impulse of great provocation, burns a house or perpetrates some act of mischief and is sent to prison for the crime, he is not made to feel that nothing but an endless disgrace remains. He is to be encouraged to make an effort to regain his lost estate, and the discipline and whole atmosphere of the prison is to be conducive to that end.

Now to develop this idea it is proposed that all sentences except those for life shall be left indeterminate. If the convicted shall evince no desire for reformation, but shall continue wicked and vicious, let the restraint continue. Society can well afford to keep such incorrigibles out of harm's way. But, on the other hand, should the criminal under these incentives show a disposition to do right, he should be met by the prison officials with every possible needed help. A system of promotion may be adopted. At a certain degree of promotion the convict should be entitled to wear citizen's clothes, and a certain degree of further promotion should entitle him to his freedom to go out of the prison, with the right to his earnings to be given him at the time of his discharge. The idea is to save every man possible to society and to his family, and at the same time effectively protect society from the absolutely depraved and vicious.

FRUIT-GROWERS' CONVENTION.—According to telegrams received, the fruit-growers are having an interesting meeting at Santa Barbara this week. We expect to begin our reports of the Convention in our next issue.

The Fruit Auction is to be Tried.

On another page of this issue we print statements from Californian and Eastern parties concerning the opposition to the auction sale of California fruit in Chicago. The statements made are interesting, though, of course, some of the points advanced are open to controversy.

We are glad to be able to announce that a meeting of the directors of the Fruit Union was held in this city on Tuesday, at which a full board was present. After a full discussion of the auction plan, the following resolution was adopted by a two-thirds' vote:

Resolved, That until further notice, all shipments of fruit made by the California Fruit Union to Chicago this season, be sold at public auction.

The trial of the auction plan thus ordered, if made in good faith, as we have no reason to doubt that it will be, will be satisfactory to the greater number of the stockholders of the Union. We understand that negotiations are pending for the securing proper facilities for holding the sales, and that it is possible that some of the competing railways from the Missouri river to Chicago may assist materially in securing desirable accommodations.

Mr. A. T. Hatch, now Eastern manager of the Union, expects to start for the East May 3d, to arrange for this year's business. It is probable that with a few exceptions the agents who handled the Union's fruit last season may act again this year.

The Beet-Sugar Enterprise.

The interest in the beet-sugar enterprise at Watsonville is shown in the fact, as stated by the *Pajaronian*, that the notification of the Western Beet Sugar Co. that it was ready to distribute seed must have reached nearly every contractor, for with less than a half-dozen exceptions they were all on hand to get their supply. The seed came in sacks, each containing 100 pounds, and was rapidly distributed. Many farmers having increased their original contracts after the seed had been parceled out, another lot of seed will be sent to supply their wants. There will be seed for all.

It is stated that about a third of the machinery ordered from Germany is on the ground. The foundation will be completed next week, and the corner-stone of the factory will be laid on Saturday, April 14th. The directors propose to have the ceremonies attending the corner-stone laying of a character in consonance with the importance and magnitude of the enterprise they are establishing. The *Pajaronian* says the directors of the company will go to Watsonville in a body, and it is desired that the citizens of Watsonville and Pajaro valley turn out in mass and participate in the ceremonies. The ceremonies will be in the hands of the directors of the company and the citizens—a simple yet impressive dedication by the projectors of this enterprise, aided by the farmers whose labors in intelligently cultivating the soil will be expected to complete the successful introduction of sugar beet cultivation and processing.

THE proposition to elect United States Senators by a direct vote of the people is not new. Hence there is nothing novel or startling in the joint resolution of the House in favor of a constitutional amendment to bring this into effect. Such a scheme as this, as well as one to have the President and Vice-President chosen by popular vote, has often been agitated by practical statesmen, and much can be said in favor of each proposition. It would be more in accordance with the democratic spirit of our institutions.

Those who have read the history of the constitutional convention know there was a strong party in it that was not fully weaned from monarchy, a party headed by Hamilton that was afraid of the people, and our Senate and the anomalous system of electing a President and Vice-President is the result. Still there does not seem to be much chance for the adoption of either scheme at present, nor is it quite certain that the country is ripe for any radical change in the system devised by the framers of the Constitution. It is possible that wrongs are often done, and that potent evil influences may find a lurking-place in our present system, but on the whole there appears to be more safety in adhering to it

than can be secured by change. In this case it may be well to remember the old adage to let well enough alone.

Wholesome Boom Agencies.

The specimens of California's products and scenery, displayed at the rooms of the State Board of Trade in this city, continue to interest many visitors from near and far. A glance at their register Wednesday afternoon showed three or four foolscap pages of names inscribed the present week, some of the persons hailing from our own State, others from Missouri and Texas, Illinois, Ohio, Pennsylvania, New York, Vermont, Massachusetts, Maine, and even Manchester, England.

The exhibits from the various affiliated counties have been gradually enlarging their bounds, until there is none too much room for guests to move about as they inspect the sheaves of cereals, the ears of maize, the spuds and squashes, the jars of grain and pulse, the cans of hermetically preserved and boxes of fine evaporated and glace fruits, and sets of photographic views, so varied in their attractions.

Since our last previous call the handsome pyramid of choice dried fruits, raisins, and nuts from Fresno, tastefully arranged under glass, with gilded frame-work, has been brought in—an elegant addition. The figs look nearly equal to the best imported Smyrna.

What with the pleasant memories and local literature carried away from these rooms by the many tourists, immigration is not likely to slacken the coming season.

At Sacramento, too, the city and county Improvement Association has just reared an exposition building of circular form and 60 feet diameter, in which they mean to keep up a sample display of the products of Central and Northern California. The site of the building is close by the passenger depot, on grounds which are being rapidly beautified with trees, shrubbery and fountains, and the association intends it shall become the headquarters where new-comers to this railroad center can procure all necessary information as to the counties in this part of the State. It is to be put in charge of a competent person, whose duty it will be to meet visitors, answer questions and impart such information as may be desired.

Sixteen interior counties, lying between the Stanislaus river on the south and Mt. Shasta on the north, have been requested to send representatives to choose and organize a board of managers for the permanent exposition, and several of them are already moving in the matter.

Such agencies as these at the metropolis and at the capital must surely prove of great service in furthering the country's healthy settlement and real prosperity.

WHAT THE CATTLEMEN WANT.—At a convention of cattlemen held recently in Denver, there were present representatives of the great range interest all the way from the Mississippi river to the Pacific Coast. Among resolutions adopted at the meeting were the following: Asking Congress to at once provide measures to secure a sea channel at some point on the Texas coast, and demanding the various railroads carrying beeves to market from the range country to give the members of the International Association the benefits of the improved stock-cars now offered, thereby reducing shrinkage as well as doing a humane act. Also a reduction of rates in proportion to the decline of the prices realized. The resolution requests every rangeman to patronize the road first adopting these cars; also a resolution urging Congress to take off all duties on cattle and beeves imported from Mexico.

A LOCAL HABITATION AS WELL AS A NAME.

We are pleased to see that an esteemed contributor of the *RURAL* has found one place in California better than all the rest. This fact, applied broadly to the surface of the earth, is, we are told, the basis of civilization. We trust the new enterprise may bring our friend much comfort. The *Placer Argus* says: "Mrs. Lillian H. Shuey, an author of repute and a former resident of this county, has just bought five acres of land from the Orisman farm, at the Junction place, for \$120 per acre. She expects to build shortly."

COUNTERFEIT DOLLARS, very well executed, but a trifle thicker than the genuine coin, are in circulation in the northern portion of the State.

The *Icerya* Not Found in the East.

[Written for the RURAL PRESS by D. W. COQUILLET, Los Angeles.]

Quite a number of different persons have remarked to me that our *Icerya* also occurs in the eastern part of this country, saying that they saw it on maple and other ornamental trees. These were clearly cases of mistaken identity, since our *Icerya* is not known to occur in any portion of the United States outside of California, although it has recently been found in Mexico. The scale insect that is thus mistaken for the *Icerya* is the maple scale (*Pulvinaria innumerabilis*), which is found in this country from the Atlantic to the Pacific, and infests quite a number of different kinds of deciduous trees and plants, such as the soft maple, osage orange, grape, etc. Like the *Icerya*, it secretes a mass of cottony matter, in which the eggs are deposited, and the resemblance between the adult females of these two species is sufficiently great to cause a casual observer to mistake one for the other, as will be seen by reference to the accompanying figures.

The differences existing between these two species, however, is so marked that a slight examination will be sufficient to distinguish the one from the other. The body of the adult maple scale has a deep notch or cleft behind, while that of the *Icerya* is destitute of such a notch or cleft, being either rounded or with numerous rounded scallops. The legs of the *Icerya* are long and well developed, while those of the maple scale are very small and hardly perceptible. But perhaps the easiest character by which these two species may be separated is to be found in the structure of the cottony egg masses or nests; that of the *Icerya* is of a firm, close texture, and is ribbed, or fluted, while that of the maple scale is loose and flossy, not ribbed or fluted, and the threads of which it is composed may be drawn out like those of a spider's web, and readily adhere to any object with which they come in contact.

While there are three or four generations of the *Icerya* produced in the course of a year, the maple scale produces only one annual generation. The eggs are deposited in early summer and hatch out in the course of a few weeks; the insects become fully grown in the autumn and hibernate on the trees to deposit their eggs early in the following summer.

The maple scale is occasionally found in this State on grapevines, and I have seen parts of vines as thickly covered with them as the piece of orange branch is with the *Icerya* in the accompanying figure. They would probably become much more numerous and destructive but for the attacks of internal parasites; I have seen whole colonies where every individual had been thus attacked and killed, and in some of them I counted as many as eight holes out of which this number of chalcid flies had escaped. Several months ago I received specimens of camellia leaves infested with a *Pulvinaria*, which quite closely resembles the maple scale, but is much smaller, and the egg-mass, or nest, is much flatter and more slender than that of the maple scale, measuring only about one-eighth of an inch in width, while that of the maple scale is fully three times as wide. This camellia scale is known as the *Pulvinaria Camellieola*, and, so far as I can learn, has not hitherto been reported as occurring in this country; it is also found in New Zealand, and appears to confine its attack to camellias.

[The too prevalent popular belief that our cottony cushion scale is often seen at the East, makes Mr. Coquillett's statement very timely. We often hear such statements. The mistake is an old one, for when Nicholas Pike, U. S. Consul, saw the *Icerya* in the Mauritius he pronounced it the same he had seen on maples in New Haven. This error occurs in a book written long before the *Icerya* became common in California. We trust Mr. Coquillett's statement and the engravings given herewith will lead to a more general understanding of the distinction between the two species.—EDS. PRESS.]

SUGAR.—It is reported that Claus Spreckels is about to spend several millions in building

the largest sugar refinery in the world in Philadelphia. It is also reported that the Sugar Trust is placing all the stumbling-blocks possible in Mr. Spreckels' way. They call him names, and say he is not honest in his intentions, etc. Mr. Spreckels has apparently gone into a hard place. The beet in the Atlantic cities are not like the sugar beets of California. Mr. Spreckels had better come home and spend his money here, where his enterprise will be appreciated.

Fatal Figures.

It is reported by telegraph that the Washington freetraders will probably succeed in unseating the statistician of the Department of Agriculture, Hon. J. R. Dodge, because he has authoritatively published figures which show



THE COTTONY MAPLE SCALE—*Pulvinaria innumerabilis*.

that American industry has flourished under protective tariff laws. The claim is that the Republicans have used Mr. Dodge's figures as a campaign document, and, therefore, Mr. Dodge must go hence. This is probably all well enough from a political point of view. Mr. Cleveland would naturally want some one in the statistical department who can figure out what a great advantage free trade will be to American industry, so it can be used as a campaign document by his party.

We utterly and indescribably tire of this matter. As we have often said, this springing

the scope and usefulness of the fair, but the proposition was voted down by a majority, who thought they had a good enough thing as it was. The result has been the organization of the new association.

MISREPRESENTATIONS CORRECTED.—We note in the *Detroit Commercial Advertiser* of March 1st a letter from J. S. Tibbits of Santa Rita, Cal., in reply to the misrepresentations of some tourist who wrote from here. We have no space to reproduce the letter nor the many others of similar tenor which we see in Eastern



THE COTTONY CUSHION SCALE—*Icerya Purchasi*.

of the tariff issue on the country on the eve of a presidential election is prompted by no desire for the welfare; it is simply a bold, and as California producers are bound to believe, a most dangerous political movement, which bodes ill by unsettling the whole business of the country.

One of the meanest manifestations of partisanship in this movement, however, is the unseating of Mr. Dodge. He has had charge of the statistical work of the Department of Agriculture for a score of years or more, and if experience is worth anything anywhere it would be in such a place. It is a sorry day when scientific places are sacrificed to partisanship. We do not think such acts will tend to gain any one popularity.

HOW TO PLANT ASPARAGUS.—In the course of a call with which Mr. E. Leedham of San Luis Obispo favored us a few mornings since, he spoke of the woody and colorless character of most of the asparagus he has noticed in the S. F. market. This he ascribes to the practice of planting it too deep, and avers that if the young plants of a year's growth be set with the crown about two inches below the surface, almost the entire shoot will be tender and better flavored, and instead of appearing in ghastly pallor it will be of a vivid and handsome color.

journals. But it is well to write such letters for Eastern publication. There seems to be a concerted movement among Eastern newspaper publishers to check the growing interest in California, and they are too apt to accept the correspondence of dyspeptic cranks who don't know a good country when they see it. To meet such statements, nothing is more powerful than for California people who may see the representations to write at once to the publishers of these papers, stating the truth, and give the reasons for the love and faith in California which is in them. In this way the correction will reach the same circle of readers before whom the untruth was paraded. Almost every one can do something for California in this regard. The truth is best, and between two truths choose a moderate one. Be sure all statements are well within the facts. A flush California fact is too strong a dose for Eastern comprehension and credulity, as a rule.

MEXICAN ORANGES.—It is reported from Nogales that a firm of fruit-dealers of Chicago have sent an agent to Sonora to purchase from 10,000 to 20,000 acres of land in the vicinity of Hermosillo and Ures. This land will be set out in orange trees.

The Oleomargarine Law Constitutional.

As our readers are aware, a most energetic warfare is being waged against the oleomargarine law before the present session of Congress. The people's representatives are being deluged with evidence of experts that oleo made as it should be is not unwholesome. This much might be taken for granted: The ideal or theoretical oleo is as wholesome as a suet pudding, probably, but what the public have to do with is the actual and the practical oleo, which we do not hear much about. It seems to be the tactics of the oleo people to make such a noise about oleo as it should be that people will take it to mean oleo as it is. We do not believe these tactics will succeed. The dairymen at the East are too wide awake to be caught napping.

The position of the pure dairy products is much strengthened by the decision of the U. S. Supreme Court rendered April 9th, which silences another fallacy of the bogus buttermen. They had set up the claim that the oleomargarine law was in conflict with the Constitution, in that it abridged liberty. In Pennsylvania the case came up and it was decided that the law was constitutional. The case was carried then by the oleo people to the U. S. Supreme Court and argued by them for all or for more than it was worth, to no purpose, for the higher court affirms the judgment of the lower.

The Pennsylvania law is one of the most radical of all the State laws on this subject. It is practically prohibitory, in that it makes it unlawful for any person to manufacture, sell or offer for sale, any butter or cheese, or article designed to take the place of these articles, produced from any compound other than unadulterated milk or cream.

This prohibitory law was first enacted in Missouri, if we remember correctly, and has been since placed in the statute-books of several States, though others, like California, were content to enact a statute that nothing of the kind could be sold without conspicuous notice stating the fact.

In the case just decided by the U. S. Supreme Court the appellant was convicted of violating the Pennsylvania prohibitory law, and took appeal to the U. S. Court, basing it on the ground that the statute was in violation of the Fourteenth Amendment to the Constitution, and that the article was an invention not deleterious to the public health. The Court holds that

it is entirely within the police powers of the State to protect the public health, and that the question whether the manufacture of oleomargarine is or may be conducted in such a way as to involve such danger to the public health as to require the suppression of its business, rather than its regulation, are questions of fact and of public policy which belong to the legislative department to determine. If all that can be

said of this legislation is that it is unwise or unnecessarily oppressive, the appeal is to the Legislature or to the ballot-box, not to the judiciary. The Court also says it cannot assent to the argument that, if this statute is sustained, then nothing stands in the way of the destruction by the legislative department of the constitutional guaranties of liberty and property. In answer to this argument, it holds that the judiciary department is bound not to give effect to statutory enactments that are plainly forbidden by the Constitution. The objection that the statute denies the equal protection of the laws is also held to be untenable, for the reason that the same penalties and burdens are imposed upon all persons engaged in the same business.

This decision of the U. S. Supreme Court will be of inestimable value to the legitimate dairy interest. If the present law in any State should be inadequate, the prohibitory law can be enacted, and if the evil should become too threatening, the United States can surely enact a general law in a line which its own highest court has already pronounced in harmony with the Constitution.

AND now the Danish Government forbids the importation of raw hog-products.

FRUIT MARKETING.

A Stockholder's Views.

We have alluded recently in general terms to the replies received from stockholders of the Fruit Union to the circular asking opinions as to the advisability of selling fruit by auction at the East. The following, which is a sort of "open letter" on the subject, is published by Gilbert Tompkins in the San Leandro Reporter of March 31st:

A circular letter has been received from the office of the Fruit Union, stating that there is some opposition to the establishing the auction system of selling California fruit in Chicago. The reasons given for the opposition are very thin, with one exception—and that is the very substantial flesh and blood personality of Washington Porter. It is also stated that the directors of the Union are unable to agree on the question, and the circular referred to is sent out largely with a view to getting an expression of opinion from members of the Union. And they will get it; for if the whole State doesn't "get up and holler" at the idea of again putting their hard-earned coin into the capacious pockets of Mr. Porter, it isn't half the State we have always considered it.

Two years ago, when the Union had just got on its feet, Mr. Porter was given the absolute control of all fruit shipped east of the Missouri river. In return he agreed to divert the cars to the best markets, select agents whom he knew to be trustworthy, and distribute the fruit far and wide. It was an awfully good bargain for Mr. Porter, and was the best that the Union could do under the circumstances. If the agreement had been carried out, the producers would have made money, and Mr. Porter would have made more in the first five years of the contract—supposing him to have treated us fairly, and thus gained a renewal of the same—than he has made or ever will make in the rest of his financially successful life.

Let us see how he kept his promises. There were two organizations in the field that year—the Union and the Fruit-Growers' Association. The last-named shipped large trainloads of fruit to Chicago. Instead of diverting the fruit sent by the Union to other markets where it would have brought at least enough to pay freight, Mr. Porter let the whole business come to Chicago, and culled out the choice packages for Dudley, Clapp & Doe of New York—letting the latter firm buy at a low uniform rate, and giving them a monopoly of the New York markets; then Porter took the fruit that remained and banged it over the heads of the agents of the rival association.

He undoubtedly made it lively for these same agents; but we furnished the ammunition and he took the scalps.

We didn't feel quite equal to fighting our old agent last year, and Porter Brothers Company again handled the fruit. The rival associations at this end of the line had buried the hatchet, and our general manager at Sacramento distributed the fruit to the best of his ability.

The business was far more satisfactory than it had been, and the auction plan, as practiced in New York and Boston, was far better than the old commission—robbery, one is almost tempted to say. The results were told at the annual meeting of the union that was held last January, and a resolution was adopted, declaring that the sense of the meeting was that the auction system should be established in Chicago during the coming season. That this will be done is now an assured fact; strange as it may seem, Mr. Porter himself has furnished the "clinch."

He seems to have forgotten that the agent of the union in one place had no right to be its enemy in another; and when he boasts that he sold Dudley, Clapp & Doe fruit to the value of \$140,000, all of which he knew would be used to break down the auction plan and give it a bad name among the members of the union, he drove a 20-penny spike into the coffin of the old highway-robbery system of selling California fruit in the Eastern markets.

What the New York Agents Think of the Circular.

The Sacramento Bee publishes the following as a letter from Sgobel & Day of New York, who were agents last year of the California Fruit Union:

Mr. Porter claims to have sold \$140,000 worth of California fruit last season at private sale to Dudley, Clapp & Doe of New York, while we sold at auction only \$50,000 worth. Our answer to that is that we sold all that was sent to sell, and could have sold five times as much at the same prices. The same people who deal in California fruit here, or nine-tenths of them, deal in Sicily fruit and are at our auctions every day at 12 o'clock, so there was no inconvenience or loss of time to them such as Mr. Porter claims against the auction system.

Mr. Porter says that "if a dealer wanted 25 or 30 boxes and went to auction to buy them, he would lose his time and then be able to buy only from a sample which might not represent the real quality of the fruit." Our answer to this is: He would have lost no time, because the dealer would have been at the auction to buy lemons and oranges, and the samples of California fruit that are brought to the auc-

tion always fairly represent the fruit left on the wharf. Buyers did not send men to the Jersey side, as Mr. Porter claims. Auctioneers sent a clerk instantly with the regular carts that carry fruit. There was no delay to the dealer in getting his fruit, and nine times out of ten it was in his store before 3 P. M., usually by 1 P. M. or 1:30 P. M.

Mr. Porter says that "under these circumstances most dealers were willing to pay more and buy at private sale." This is not so, and Mr. Porter has given a wrong idea. Dudley, Clapp & Doe, Mr. Porter's New York agents, receive their fruit by express from Chicago only; it arrived at midnight and was always in their store at 6 A. M., whereas our fruit almost always reached Jersey City between 8 and 9 o'clock, eight hours behind theirs. Now right there is a contradiction to what Mr. Porter says. The Fruit Union's fruit comes direct from California, while Dudley, Clapp & Doe's comes from Chicago, and though the express fruit reached New York at an earlier hour in the morning, yet it was a day older than ours, which came direct from Sacramento.

Look at Mr. Reed, for instance; he is no fool, but is a bright man who has been in this business for years. He came from California and attended our sales and then went to Boston and did the same, and you now see how he has decided. He is thoroughly satisfied that the auction plan is the only way to get the most money for California fruit and with the least risk.

We read this morning an interview with Washington Porter. It is very annoying to think that such views as he therein expresses are being spread over California when we are not there to contradict them. They are worded in such a manner as to convey an impression entirely different from the true state of things. "New York dealers have their men in Chicago." Why did he say that? Nobody was there but Mr. Clapp, and if the business between Porter Bros. and Dudley, Clapp & Doe was not a joint business account, then we are very much mistaken. They did not in this way often save a full day, because the fruit was bought in Chicago and it had to lie there perhaps 24 hours, while our fruit was coming on there.

We propose to do everything that can be done to make the selling of California fruits in New York a perfect success, but we know that there are only a few who understand the difficulties that we labored under last year with this infernal competition through Chicago cutting our throats the morning of every sale.

California fruit has never sold as low in the past as it was last season, and every effort was made to strangle the Fruit Union in New York in their first season. Profits were no matters of consequence; in fact, our opponents were quite willing to lose a lot of money if they could only prevent the Fruit Union from coming in here.

Dudley, Clapp & Doe sold \$140,000, did they? Well, did any of the California shippers or growers get any profits out of it? Not much. Who did? We leave that for the California fruit people to imagine.

Mr. Porter is said to be a very bright man. He talks very well, and it is quite possible for a man of his skill, in conversing with or presenting his views to a lot of fruitmen several thousand miles away from the place where their fruit is sold, to thoroughly impress upon their minds his own ideas.

If we could have the same people here for 24 hours and show them the whole thing, they would sweep away his views like cobwebs.

We have been informed from reliable authority that Dudley, Clapp & Doe received from Porter Bros., in Chicago, 35 carloads for the season, all selected choice fruit. Now allowing \$2000 per car, this would make only \$70,000. Where does the \$140,000 come in? Besides, we doubt any \$2000 average per car, as they sold lots of apricots, peaches and pears under our prices.

Population of California.

The national census of 1880 credited this State with a population of 864,694. In 1885 a State census was made by estimate, and this gave California's population to be 1,079,000. The two years since that time have shown the greatest growth and development, in nearly all parts of the State, of any of the seven completed years of the decade. United States Surveyor-General Hammond, from facts and figures secured by him, estimates that on the 1st of the present month California's population was fully 1,350,000, with a floating population in addition of at least 300,000. Taking the census is a little outside the duties of the Surveyor-General, but in making up his annual report in November and December last he saw the need of knowing, as nearly as possible, the exact present population, that measures desired of Congress might better be urged, and so he set about securing the needed facts. Statistician Rhodes, employed in the office in this district, was intrusted with the task. All county great registers for recent elections were secured and overhauled, county books of statistics were examined carefully, and besides, circulars asking for latest school census reports were sent to all county school superintendents. From these responses and from all other information accessible careful estimates were made. The result was an estimated population December 1st, last, of 1,250,000.—Evening Bulletin.

THE FIELD.

Wheat.

Wheat is the staple with which California pays for its imported goods. There are other exports, but grain in some form constitutes much the largest item. Yet wheat seems to be the one article of domestic produce which declines in price from year to year. The Liverpool price was lower last year than it had been within 100 years, and at present there does not seem to be much prospect of a better market next year. Our surplus has to go to Liverpool to find buyers. The Eastern States which do not raise their own wheat buy from the States lying between the Mississippi river and the Alleghany mountains. The Pacific Coast surplus is shut out of this market by 3000 miles of land transportation. California wheat landed in New York or Boston by sea would then have to travel into the interior. Consequently the bulk of our surplus, being sent by ship, goes direct to the English market. The depreciation in the price of wheat in the English market is, therefore, a direct loss to the Pacific Coast. We have, in effect, to pay for our European goods with a depreciated currency. While we turn our wheat into cash, and pay cash for goods, more wheat is required to bring a dollar than was the case a few years ago. This fact should be considered by legislators. If we increase our importations, and at the same time suffer a depreciation in the product with which we pay, we are doubly losers. At this period in our industrial development the leading idea should be to foster home industries.

Every case of boots and shoes we make in this State saves importing a case. The wheat that would feed the boot and shoemakers in Europe is consumed by the boot and shoemakers who work in this State. We are saved thereby from the loss consequent upon paying for our importation in low-priced wheat. At the rate manufactures are now increasing in the United States, it will not be long before the Eastern States will need all the surplus of the West. The only American wheat-sellers in the Liverpool market will then be those on the Pacific Coast. Our surplus is larger in proportion to our entire production than is the surplus of other wheat-producing States, and will appear in the foreign market after other States have ceased to export, but the low price of wheat will cause a good deal of wheat land to be given over to other crops. If the tariff tinkers will give our infant manufactures a chance, we shall from year to year import less and produce more. With the surplus of India pouring into the English market, the outlook for a rise in price is not very good. A general European war would, of course, send prices up, but in ordinary times the American wheat-grower, with all his advantages in the way of machinery, will find the cheap-labor countries of Asia and the East of Europe ugly competitors to contend against.—Call.

Wheat-Growing in China.

Wheat-growing is one of the principal industries in the northern and middle parts of China. The winter wheat is planted at about the same time that wheat is planted here. The soil, especially in the northern provinces, is so well worn that it is unfitted for wheat-growing, and the Chinese farmers, appreciating this fact and the fact that all kinds of fertilizers are excessively dear, make the least money do the most good by mixing the seed with finely prepared manure. A man with a basket swung upon the shoulder follows the plow and plants the mixture in large handfuls in the furrows, so that when the crop grows up it looks like young celery. Immediately after the first melting of snow, and when the ground has become sufficiently hardened by frost, these wheat-fields are turned into pastures, under the theory that by a timely clipping of the tops of these plants the crops will grow up with additional strength in the spring. Wheat-threshing is the principal interest in Chinese farming. Owing to the scarcity of fuel the wheat is pulled up usually by the root, bundled in sheaves and carted to the "mien chong," a smooth and hardened space of ground near the home of the farmer. The tops of the sheaves are then clipped off by a hand-machine. The wheat is thus left in the "mien chong" to dry, while the headless sheaves are piled in a heap for fuel or thatching. When the wheat is thoroughly dry it is beaten under a great stone roller pulled by horses, while the places thus rolled over are constantly tossed over with pitchforks. The stalks left untouched by the roller are thrashed with flails by women and boys.

The beaten stalks and straws are then taken out by an ingenious manipulation of pitchforks, and the chaff is removed by a systematic tossing of the grain into the air until the wind blows every particle of chaff or dust out of the wheat. Even the chaff is carefully swept up and stowed away for fuel or other useful purposes, such as stuffing mattresses or pillows. After the wheat is allowed to dry a few hours in the burning sun it is stowed away in airy bamboo bins. The milling process is very ancient. Two round, large bluestone wheels, with grooves neatly cut in the faces on one side and in the center of the lower a solid wooden plug, are used. The process of making flour

out of wheat by this machinery is called "moh mien." Usually a horse or mule is employed. The poor, having no animals, grind the grain themselves. Three distinct grades of flour are thus produced. The "shon mein," or A grade, is the first siftings; the "nee mein," or second grade, is the grindings of the rough leavings from the first siftings, which is of a darker and reddish color than the first grade; the last grade, or "mo D," is the finely ground last siftings of all the grades. When bread is made from this grade it resembles rough gingerbread. This is usually the food of the poorest families. The bread of the Chinese is usually fermented and then steamed. Only a very small quantity is baked in ovens. But the staple articles of food in Northern China are corn, millet and sweet potatoes. Wheat and rice are the food of the rich, while the middle classes of the Empire eat millet and rice. In the southern provinces the entire breadstuff is rice.

THE WHEAT CROP OF THE WORLD.—The total wheat crop of the world is 2,000,000,000 bushels, and at least 1,500,000,000 bushels are consumed in the countries in which it is grown, leaving a balance of 500,000,000 to supply countries growing no wheat or growing less than they consume. Speculation deals only with this balance that goes into general trade, and the speculators of the world in a single year will sell or transfer in their peculiar way 40 or 50 times 500,000,000 bushels of wheat. In New York a single day sometimes witnesses a sale or transfer of 30,000,000 bushels of wheat. The damage done by speculation consists in lowering the price of the whole amount of actual wheat by its enormous inflation of "paper wheat," not a bushel in a thousand of which is ever delivered.

WHEAT SHIPMENTS FROM CALIFORNIA.—Preliminary statements of foreign commerce for the month of January show that at that time more than half of the quantity of wheat exported went from the Pacific Coast. This is stated at 1,379,773 bushels, the total exports of wheat for the month from the entire country being only 2,662,097 bushels, as against over 8,000,000 bushels for the preceding month. The *Commercial Bulletin*, reviewing the wheat exports, says: "Once more the Atlantic speculators are giving the full control of the foreign markets to producers and dealers of other countries and of the Pacific Coast, and as a consequence the grain from the Atlantic States has accumulated in vast quantities unsold."

THE FLOURING INTERESTS of the country are considerably larger than the sugar interests, which has recently attracted much attention in connection with the proposed modification of the tariff. More capital is tied up in the plants, and the per capita consumption of flour is largely in excess of that of sugar. In other words, the amount of money handled in the flouring business is much larger than in the sugar trade, but it is not so concentrated.

VALUABLE PUBLICATIONS.—We acknowledge the receipt from the American Public Health Association of a set of "Lomb Prize Essays," which are the fruits of a generous offer of Henry Lomb, Esq., of Rochester, N. Y., of prizes for the following subjects: "Healthy Homes and Food for the Working Classes;" "The Sanitary Conditions and Necessities of Schoolhouses and School Life;" "Disinfection and Individual Prophylaxis Against Infectious Diseases;" "The Preventable Causes of Disease, Injury and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them." They are an admirable series of essays and should be in the possession of every one interested in the preservation of the public health. Prices: No. 1, 10 cents; No. 2, 3 and 4, 5 cents each. In book form, well bound in cloth, 50 cents. To be had by addressing Dr. Irving A. Watson, Secretary American Public Health Association, Concord, N. H. For the coming year Mr. Lomb offers two prizes on the following subject: "Practical Sanitary and Economic Cooking, Adapted for Persons of Moderate and Small Means." The first prize is \$500, second \$200.

DEATH OF L. B. ARNOLD.—Prof. L. B. Arnold, the well-known lecturer and writer upon dairy topics, died at his home in Rochester, New York, on March 7th, at the age of 74 years. The death of Mr. Arnold and that of X. A. Willard, which occurred a few years ago, remove the two men who figured most prominently in the uprising of commercial dairying in this country. Others furnished the capital and did the work, but they were the exhorters, and in many cases the advisors and guides. Mr. Arnold's teachings were received abroad with marked consideration. In 1885 he was the guest by special invitation of the British Dairymen's Association at a delegate meeting made up of representatives from all the European countries. In this country his honors were many and were merited and modestly worn. Prof. Arnold was a good friend, and his genial, sunny disposition made him a favorite among all who knew him.

A CURIOUS BIRD'S NEST.—Near the town of Soleure, in Switzerland, a bird's nest was recently found which was constructed entirely of the imperfect watch springs thrown out from the workshops. It has been deposited in the local museum.

THE LOUISIANA TRACT!

SITUATE ONE MILE FROM THE FLOURISHING

City of Sacramento,

With a Population of 30,000, and

$\frac{1}{4}$ MILE from Terminus of an ELECTRIC RAILWAY, now in course of construction.

SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. 5 ACRES IN FRUIT, well attended to, will make a handsome income. One Acre in Strawberries will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$60, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

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Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES
At \$75 per Acre,

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. One hundred and seventy-five acres at Palermo are now being set out in the choicest varieties of Florida Orange Trees. Maps and further particulars of

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T. B. LUDLUM & CO., Agents, Oroville, Cal.

SANTA YNEZ,

Santa Barbara County, California.

THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil. TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for home or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

E. de la CUESTA, Agent, Santa Ynez.

McCLUNG & PRAY, Agents, 325 Montgomery St., San Francisco.

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GRANGERS' BUSINESS ASSOCIATION, SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

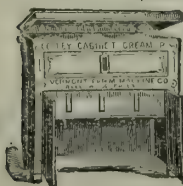
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

SEND FOR ILLUSTRATED CIRCULARS



SHOWING WHY THE COOLEY CREAMER

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PREMIUM BUTTER MAKERS.

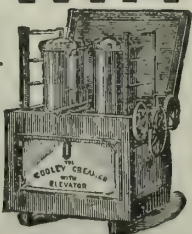
Why it makes More Butter.

Why it makes Better Butter.

It has both SURFACE and BOTTOM SKIMMERS. Is imitated in construction, but its PROCESS which gives it SUPERIORITY, cannot be legally used by others.

A Full Line of DAIRY and BUTTER FACTORY SUPPLIES.

VERMONT FARM MACHINE CO., Bellows Falls, Vermont.



PALM VALLEY!

TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land?

DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10-acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

BRIGGS, FERGUSON & CO., General Agents,

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FERTILIZERS!

Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN
BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

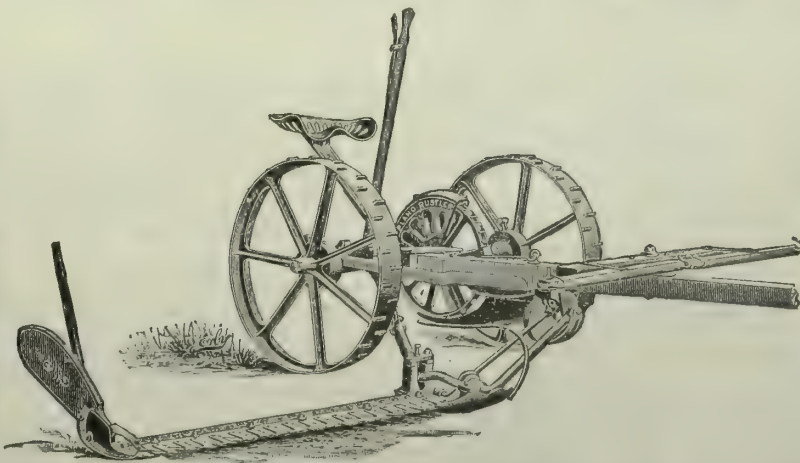
Send for circulars, with price and full information, to

California Bone Meal and Fertilizer Co.,

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THE PLANO "RUSTLER" MOWER.

POLE CENTRALLY LOCATED.



ONLY ONE LEVER.

The Plano Manufacturing Co.'s 1888 "Short Stroke" Rustler Chain Power Mower.

A coupling frame complete with only one piece of iron. A perfect floating bar and tilting lever. The best for rough ground. Never chokes or clogs in any grass. Both ends of Cutter Bar carried on wheels. The carrying spring on all 5-foot machines carries the cutting apparatus lightly over the ground and transfers its weight upon the driving wheels. Four foot 3-inch cut, price \$75; 5-foot cut, price \$85. Send for catalogue of Plano Rustler Mowers, Plano Steel Binders, Buckeye Rakes, Knowlton Mowers, Boss Sickle Grinders, etc., to

P. P. MAST & CO., 31 Market St., San Francisco.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

CROPS IN LIVERMORE VALLEY.—*Herald*, April 5: Reports from every section of this valley and surrounding country are to the effect that grain crops never looked better at this time of the year. The stand is everywhere magnificent. There are few needs anywhere, and nowhere is the grain suffering from either lack of or too much moisture. We understand that this season, the grain here is far ahead of that in San Ramon valley, or about Dublin. Many fields are already stood out, with the grain a foot or more in sight.

Butte.

PROSPECTS AT THERMALITO.—*Chico Enterprise*: In company with Col. A. F. Jones we drove over to Thermalito. We were anxious to make a thorough inspection as to the amount of damage done to the young trees in the nursery there by the frosts of last winter, but to our surprise we found the young trees coming out finely. It is true that the most of the trees were stripped of their foliage, and the loss will be about 1 in 40, but we noticed a young and thrifty growth coming out on nearly all of them, which gave us more confidence in the Thermalito orange groves than we had before. The work done at Thermalito is immense. N. W. Winton of Oakland has lately purchased 60 acres, which is being planted to oranges under his own supervision. Altogether there were 103 hands employed on the grounds, 21 cottages erected, the hotel ready for the shingles, Grand avenue and Infirmary avenue graded and planted on either side with ornamental trees. Fresno and Merced avenues, near the river, are being grubbed out, leaving the oaks and pines standing where they do not interfere with driving. A new reservoir, capable of holding 5,000,000 gallons of water, is just completed, and several miles of ditches have been dug and pipes laid. The new hotel will be a comfortable hostelry of 50 rooms.

Colusa.

IRRIGATION DISTRICT ELECTIONS.—*Colusa Sun*, April 7: On Monday there was an election in Central Irrigation district on the question of issuing bonds in the sum of \$750,000 for the construction of the proposed works. The vote at the five precincts stood for the bonds 189, and against the bonds 36—five to one, with nine to spare. Wednesday was the regular day for the election of officers to hold two years. The Directors elected were F. X. St. Louis, H. B. St. Louis, J. A. Sutton, John Durham and H. P. Eikle. The first named three were re-elected. In both the 4th and 5th divisions—Maxwell and Williams—the contest over Director was very exciting. Messrs. DeLappe and Tully, the incumbents, have been more active in the formation of the district than any other two men. After they were elected they worked hard to post themselves on all that pertained to the office, and they made enemies. We should be very sorry indeed for their defeat, were it not for the fact that their successors, Messrs. Durham and Eikle, are earnest irrigators, and men whose characters stand above reproach, and who will push ahead with all the vim and ability at their command. Of the three who were re-elected we have spoken before. They are farmers and first-class men. It is a good Board as it will be constituted. Gen. B. Harden was again elected Treasurer, P. H. Graham Collector and Robt. Welch Assessor. All these gentlemen are thoroughly competent. The district will be in good working order when the Supreme Court declares the law constitutional, and the bonds become salable.

HORTICULTURAL SOCIETY.—*Colusa Sun*, April 7: The meeting was called to order by Vice-Pres. De Jarnatt, who said that it was quite apparent that the interest in horticultural pursuits was on the increase, and that it was encouraging to see such a large number present; that the society was organized for the promotion of horticulture in all of its branches, and no pains would be spared to make each meeting more interesting and instructive than the previous one. John D. Rosenberg, John Sites and Wm. Nickerson were proposed for membership. A. A. Thayer and Shirley Sanders were elected members of the society. F. W. Willis read a paper on "Insect Pests, and Methods of Extermination." It was ordered that the secretary provide copies for publication. L. L. Hick read an interesting paper on "What to Plant," and B. F. Howard followed with a paper entitled "Wants of a Tenant." It was voted that Prof. A. M. Armstrong be invited to read an article on the subject of "Insect Pests" not already treated on by F. W. Willis.

Marina.

THE ROYS' DAIRY.—*San Rafael Journal*, March 29: At the dairy of Roy Bros., Nicasio Station, last week, the herd of cows riveted our attention. It is an open question with the butter-men of this county whether pure or graded stock is the more profitable. The Roys believe in blood. They have several animals whose names are in the American Herd-Book, and each of which cost up in the hundreds, and just as soon as possible they will weed the herd of every animal not thoroughbred. The common idea of the Alderneys is that they are small-bodied, and light but rich milkers. But in the Roy herd there are large pure-blood cows, averaging as large as grade stock, and

they are great milkers and butter-makers. Another specialty on this dairy is the large pan. Two pans hold the milk of 50 cows. Considering what an amount of work they save, it is a wonder that they are not more generally used. Mr. Roy, thinks also, that they give better and more uniform results in cream than can be obtained by the little pans. The large and elegant modern residence on this dairy ranch impresses a visitor with the substantial wealth of our industries, and the advance we have made in the few past years.

Modoc.

NEW DISTRICT TALKED OF.—*Adin Argus*, March 29: Mr. Dixon of Susanville informs us that there has been a move made in Lassen county to have a new agricultural district formed by severing Modoc and Lassen from the 11th district. There are now four counties, all large ones, comprised in the one district. That territory is entirely too large for the mutual benefit and success of the people. Modoc has never, we will say, been represented at any of the district fairs, simply because the distance between here and Quincy is too great. We feel certain that Modoc and Lassen counties will do all in their power to be formed into a separate agricultural district.

BROOM CORN.—*Alturas New Era*: Uncle James Brown, the Davis Creek broom-corn raiser, was in town last Monday. The old gentleman had a load of brooms, which he disposed of to the people. He turns out the handles himself. This is quite an enterprise and it is to be hoped he will meet with great success. He sowed 30 acres to corn last year, and the crop furnished sufficient straw for 1000 brooms, besides seed for another and larger crop.

FROM SOUTH FORK.—*Stephen Booth* of South Fork called at our office on Monday. Mr. B. is a farmer and stockraiser. He owns 160 acres of land, from 30 acres of which he last season cut 60 tons of hay. He has a young orchard, which is thriving. He raises every kind of vegetable. From a crop of cabbages he cleared a large profit last year. During a residence of nine years he has come to the conclusion that "Modoc is a good county; it is improving all the time. I can see no reason for a man of small means to make a failure here. The soil is rich and deep and our water supply inexhaustible."

Monterey.

GRAIN OUTLOOK.—*Salinas Index*, April 5: C. H. King and James Lynn were in town from Kings City, yesterday. They report the prospect splendid for a big harvest in that vicinity this year. Mr. Lynn has 1800 acres in barley and 2200 acres in wheat, all looking fine. Jas. Downing and son have 1000 acres of wheat on Mr. King's ranch, and 1000 acres of wheat on the Dunphy ranch.

Napa.

BARLEY AND WILD OATS.—*Napa Reporter*, April 6: Mrs. Pettingill of White Rock vineyard, near the Soda Springs, bought a bunch of barley stalks to this office yesterday that measured three feet and an inch in height, also a bunch of wild oats 28 inches in height.

PHYLLXERA.—A dispatch from St. Helena, April 21, spoke of there being much indignation among many leading vineyardists at the course pursued by some of their number in having vines diseased with phyllxera carried to the public highway, thence to be packed off by Mongolians. It is correctly argued that the germs of the disease are thus scattered, and serious injury produced. The better class of vineyardists burn their diseased vines on their premises.

CHESTNUTS ON OAKS AGAIN.—In reference to the grafting of Italian chestnut on black oak, by Mr. Hayford of Colfax, mentioned in our Placer county notes a month since, the *Napa Register* observes: In the Redwoods, west of Napa, Mr. Roney two years ago successfully grafted chestnut scions upon live, white and black oak trees. The grafts grew beyond all expectations the first year, but have since failed to keep pace with their promises. It is the opinion of Mr. Coates, a local authority on matters horticultural, that permanent success can never be attained in this effort to make chestnuts grow on oak trees. The one is by nature too foreign to the other to agree to this departure in nut-growing.

Sacramento.

EGGS EXTRAORDINARY.—*Bee*, April 3: A few days ago an old gentleman who resides near Freeport brought to the *Bee* office a monster egg, picked up in the coop of Plymouth Rock hens. This morning, however, N. D. Hack of Freeport brought in a still larger specimen of hen fruit, the product of a common barnyard fowl, and measuring 8½ inches the long way and 7 inches the short way. The egg weighs nine ounces.

San Diego.

THE GREAT FLUME.—*S. F. Chronicle*, April 8: After a year's residence in San Diego, Dr. G. O. Gearn, formerly of this city, arrived here yesterday from his new Southern home. He said: "The great flume enterprise is advancing toward completion rapidly. This piece of work will be 50 miles in length, extending from San Diego up in the mountains to Cuyamaca lake, a snow-water basin capable of supplying a million of people. From this supply-flume pipes will be laid, when the city and 100,000 acres of the mesa roundabout will have an abundance of irrigating facilities. For 10 miles out from the city to La Mesa pipes will be laid, and the other 40 miles will be a ditch and wooden flume. This work embraces 6000 feet

of tunneling. The longest of these tunnels—the Lankarsheim, 1900 feet—was completed last week. The expense has been enormous."

San Bernardino.

ANOTHER BEAR VALLEY RESERVOIR.—*San Bernardino Index*, April 7: Engineer Frank Brown has made several tours over the valley, and concluded that another monster reservoir can be constructed below the present one, without interference, and be the means of supplying water for a section heretofore supposed to be out of the reach of that necessity to the advancement of a country. Having interested a number of capitalists of this city in the project, he yesterday left for the place, accompanied by the gentlemen in question, and a thorough examination of the proposed scheme will be made. In case it looks feasible the work of constructing a dam for the reservoir will be begun at a very early day.

San Joaquin.

LODI MELONS.—*Sentinel*, April 7: Melon-raisers will commence planting next week, and work, from the date of planting till the last melons are picked in the fall, will be their portion. From a prominent rancher who is engaged in this business, we learned that melons will be planted this season in the vicinity of Lodi by different parties as follows: [Fourteen persons and firms named with a total of 1150 acres.] There may be others who intend planting, but our informant had not yet been apprised of the fact.

Santa Clara.

MILPITAS NOTES.—*San Jose Herald*, April 9: Potatoes and peas are now being shipped from here in abundance, two carloads daily this week, which will increase to three, four, five and six carloads the balance of the season. Wm. Murphy has added a number of pear, plum, walnut and apricot trees to his already large orchard. Charles Cropley has planted 1000 raspberries and 1000 blackberries on his ranch on the Alviso road. S. F. Ayer has planted a number of fruit trees of various species. In nearly every orchard signs of improvement and advancement are apparent.

Shasta.

ORANGE CULTURE ASSOCIATION.—*Free Press*, April 7: The stockholders of the Redding Orange Culture Association held their yearly meeting last Thursday evening and elected the following Board of Directors: R. Bostwick, S. J. R. Gilbert, D. N. Honn, J. H. Miller and Fred Grotefend. Cuts were drawn for long and short terms, and Bostwick, Gilbert and Honn were selected to serve for two years and Miller and Grotefend for one year. The Board then elected officers for the ensuing year: R. Bostwick, Pres.; J. H. Miller, V. P.; J. I. Honn, Sec.; Fred Grotefend, Treas. F. P. Primm was appointed attorney for the corporation. The report of S. J. R. Gilbert, the retiring President, was substantially as follows: That the Directors of the Association, after viewing the several tracts of land offered to the Association, decided to accept the 40 acres donated by J. W. Armstrong and the 80 by D. N. Honn. The 40 acres have been mostly cleared and fenced, 10 acres of which have been set out in nearly 1000 fruit trees, about one-half of which are Bartlett pears, and the remainder peach, French prune, apple, orange and apricot. The amount of money expended so far is \$758 70. All of the stockholders have paid their monthly assessments and the association is in a prosperous condition.

Solano.

CANNERY PROJECT.—*Vacaville dispatch*, April 7: At a meeting of citizens held here today to organize a cannery, Gen. Rusk offered to take \$20,000 worth of the stock. It is proposed to organize with a capital of \$60,000. It is thought that \$40,000 will readily be taken by the fruit-growers.

Sonoma.

FRUIT TREES PLANTED.—*Cor. Chronicle*: Luther Barbank, after a careful estimate, says the following is a fair and close approximate of the different varieties of trees planted in Sonoma county during the year 1887: Olives, 20,000 trees; apples, 12,000; pears, 30,000; plums, 6000; prunes, 15,000; cherries, 6000; apricots, 4000; peaches, 25,000; nuts, mostly walnuts and chestnuts, 15,000. These figures do not include old orchards, most prominent among which is Warren Dutton's prune orchard of 20,000 trees, situated one-half mile from Santa Rosa. The Swiss-Italian colony near Healdsburg has also a very extensive orchard. Prune trees were in such demand that the supply failed or the acreage would have been greatly increased.

Sutter.

CANNERY MEETING.—*Sutter Farmer*, April 6: The meeting of the stockholders of the Sutter Canning & Packing Co. on Monday last was largely attended, and its business was conducted with the utmost harmony, faith and enthusiasm. The venture had its beginning less than four years ago, and the stockholders paid in, all told, about \$19,000. For this outlay they have to show in money and property about \$24,000. The gain shows from six to seven per cent on the money invested since paid in, running from 2½ to four years. During the time the cannery stood idle one year for want of fruit, and the profits of two years' run were more than swallowed up by interest, experiments and other losses. The earnings of last year (1887) were so large as to raise the income for the entire period to commercial rate of interest. This is a condition of affairs most

flattering to directors, managers and stockholders.... The success and the effect are a marvel. The capacity of the cannery is being more than doubled, and another is in course of construction in Marysville. The stockholders closed their deliberations by very properly re-electing their old Board of Directors to serve another year, viz.: J. C. Gray, B. F. Walton, S. J. Stabler, R. C. Kells, H. Luther, G. F. Starr and J. B. Wilkie.

Tulare.

FIG-PLANTING ON A LARGE SCALE.—*Delano Courier*: The faith in fig culture is spreading everywhere in this vicinity, and Mr. M. F. Scott has decided to put in 160 acres of his large White River ranch in the best figs he can procure. Mr. Scott is of the practical mind and instead of inquiring from those that have trees to sell, he has gone direct to those who have made a success of the business. He has thus procured several thousand white fig trees from Downey and is now preparing the ground for the same. Mr. Scott's ranch is situated on the sink of White river, and every one acquainted with this district knows of its unsurpassed soil and choice location. The varieties chosen by Mr. Scott are principally those suitable for drying and crystallizing, and the quantity set out will necessitate an exclusive drying and manufacturing establishment in a very few years. This fig orchard is the largest so far planted in the State.

Ventura.

EDITORS PRESS.—*Montalvo* is beautifully located in the heart of the fertile Santa Clara valley, about five miles from Ventura, the county seat, at the base of a mound, placed there as if nature had intended it as a crown to the smooth, broad streets and beautiful lots of the town below. On this mound the foundation of the Methodist university is now being built. Near by a large hotel will soon be put up, commanding a view of the valley, the mountains and the ocean with its islands, and the many vessels plying up and down the coast. The Montalvo Water Co. have completed the reservoir and developed an abundant supply of water. There are several dwelling-houses in course of construction, and the place already has a printing-office, a railroad depot, and post-office. Last Saturday a public auction sale of lots took place. Many from Los Angeles and neighboring towns availed themselves of the low fare to visit Ventura and attend the sale. About \$20,000 worth was sold that day. Montalvo bids fair to become a beautiful little city in the near future.—*D., April 4th.*

Yuba.

DISTRICT ASSOCIATION.—*Sutter Farmer*, April 6: The directors of the 13th Agricultural District held their annual meeting in Marysville last Monday, and the following officers were elected for the ensuing year: D. E. Knight, Pres.; C. A. Glidden, V. P.; T. J. Sherwood, Sec.; J. J. Shaffer, Treas. John H. Kimball was elected a director in the place of N. D. Coombs, deceased. A Finance Committee was appointed as follows: From Sutter county—Directors Littlejohn and Kimball; Yuba county—Treasurer Shaffer and Directors Cutts and Glidden. The fair will begin Aug. 27th and end Sept. 2, 1888.

OREGON.

SHEEP-KILLING DOGS.—*Oregonian*: A short time since a dog killed one of R. Scott's fine Cotswold lambs at Milwaukie. The carcass was sprinkled with arsenic and the dog and lamb repose in one grave, the lamb inside the dog principally. Then came another dog and killed six more lambs and a ewe, and also killed six for Mr. Lewelling. The latter tracked the dog home and shot it by its own kennel. It was found that the owner owned nothing else but the dog, so it was impossible to recover any damages. The wonder is that he did not have several dogs, as such fellows generally have, and that the whole flock of fine-blooded sheep had not been killed.

MECHANICS' FAIR.—The directors of the Portland Mechanics' Fair held a meeting at the First National bank, Monday evening, and approved the action of their Building Committee in awarding the contract for improvements to the pavilion to Mr. J. E. Bennett. These improvements and repairs will cost nearly \$5000, and will increase the area of the pavilion 50x200 feet, will afford the public a greater seating capacity, a finer promenade, and a large increase of space for exhibits.

WASHINGTON TERRITORY.

GREAT IRRIGATION SCHEME.—*North Yakima Cor. Oregonian*, March 22: An incorporated company, representing a half million dollars capital, has been organized to construct and operate a canal 52 miles long, 20 feet wide and 40 feet bottom, from this city through the Sunny Side region in the Yakima valley to the mouth of the river at the Columbia. There are five trustees named in the charter of the Yakima Valley Land and Irrigation Co. for the first six months, consisting of Chester A. Congdon and Henry P. Barbour of St. Paul; Roland B. Kinne of North Yakima, and F. A. Sear and T. C. Sears of Tacoma. The principal place of business is North Yakima and the duration of the incorporation is 50 years. This canal will reclaim the finest body of land in the Territory, nearly 400,000 acres, which will be open to immediate settlement, so far as the government lands are concerned. Work will begin at once.

SHAMEFUL!



Last week one of the Cyclone Agents took down an old mill and put up a Cyclone. The old mill required 24 hours to fill the Tank. The Cyclone started off in good shape and filled the Tank and FLOODED THE CELLAR; all in TWO HOURS.

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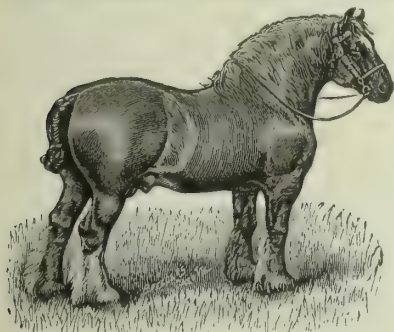
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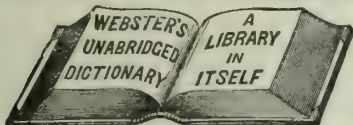
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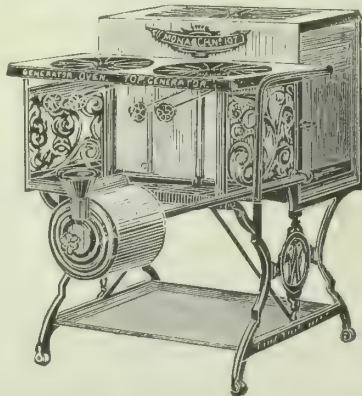
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HORTICULTURE.

Bananas in California.

EDITORS PRESS:—Your note of April 7th is at hand, with the article from the Yolo Weekly Mail of Woodland headed "A Curiosity." The article is more of a "curiosity" than the bananas growing in California to any person who has devoted any attention to this subject. There were banana plants—not trees, it is not a tree—growing in this State as early as 1870. I had them in Sacramento experimenting with them at that time to get a variety suited to the climate, as there are as many varieties as of any other fruit. I hoped to succeed, and have done so, having raised ripe bananas in Sacramento city without any more protection from the inclemencies of the weather than an orchardist would bestow on a pear or peach tree, for three successive years past. The banana was planted in Los Angeles and Santa Barbara and they raised fruit there, for I have seen the fruit myself; but the plants look and do better here, for we have less wind in the warm season and warmer nights.

I had one variety 20 feet high with fruit on last season—three bunches in one hill in my front yard. My choicest and best variety, I suppose, had as many as six or eight, the flavor finer than any imported bananas. If, however, A. D. Porter of Woodland has raised a bunch of bananas this season (which, of course, would have to grow during our late phenomenally cold winter) without any protection, he has an acquisition—a variety to be sought for. The last winter, for the first time in years, frosted mine to within five feet of the ground, and I do not expect bananas before next September. However, I had the pleasure of a ripe bunch taken off just before the great freeze.

In raising fruiting trees or plants to demonstrate the capability of the climate, not the shadow of protection should be given them, for it is then that the conservatory culture comes in play, and plants can be raised that way in the coldest climates. The editor of the Mail could have avoided the great mistake he has made on this subject if he had been more observing, for a hill of banana plants has been growing and ripening its fruits in the grounds of the Southern Pacific Company, not two minutes' walk from the depot, planted and raised under my supervision for the late general master mechanic, A. J. Stevens. These plants are a curiosity to Eastern people, and grow as finely as in any tropical country. They were, of course, set back this late winter, but are sprouting out again. Many of the Sacramento gardens have bananas also. They are greatly admired for their foliage, and have ceased to be a curiosity here in Sacramento.

SAMUEL H. GERRISH.

1517 G street, Sacramento.

In Santa Clara Orchards.

Apricots Growers and Buyers.

EDITORS PRESS:—I am glad to see one paper of this State that is not afraid to expose some of the fraud practiced on the farmers and fruit-growers. Your item from Haywards, Alameda county, in March 31st issue is a good one.

Apricots are a very light crop in the Willows, in Hamilton district, in Cambrian district, also near Los Gatos and Saratoga—in fact about all over the county. The orchards with a good crop are very scarce. As about seven-eighths of the apricot trees set in this county are of the Moorpark variety, and nearly a failure this season, and other varieties are light, if we have one-fifth as much this year as last I think we will do well.

I have heard of parties being offered three and three and a half cents per pound, but have not seen any buyers yet. Some of the orchardists are holding for four cents per pound; others say they will dry theirs, as the difference in price will not pay for hauling the few they have.

When the agents for the canneries and driers come around to buy our apricots we will probably hear how they have bought hundreds of tons near Haywards at one and a half cents per pound, but they won't be very apt to try to bluff Judge Blackwood again. They tell us of the big crops up at Vacaville, Marysville, Haywards, Gilroy and other places, and how strange it is that it happened to be light near San Jose; how they can buy hundreds of tons of apricots near Fresno and Los Angeles or Santa Barbara at \$15 to \$20 per ton.

The prospects for a large prune and cherry crop are good, but the peach crop will be lighter than last year. Most of the orchards are in fine condition, the late rain having enabled the cultivators to pulverize the soil and kill weeds. The mud has dried up, leaving the roads in first class condition, and it is just the time to show the country to Eastern visitors. Cherry trees are in bloom and the grain looks finely.

San Jose, April 8, 1888.

G. W. G.

THE 84 CANAL Co. has filed articles of incorporation. Its object is to conduct flowing water from Fowler Switch canal to supply water for irrigation. Principal place of business, Selma, Fresno county. Directors, P. Allen, E. H. Tucker, Geo. B. Otis, Silas Prather, S. B. Holston. Capital stock, \$9000.

GOOD HEALTH.

Old Age.

The Physical Changes of Advancing Years. Failing Mental Powers.

In continuation of this subject from our last issue, we subjoin the following interesting series of facts through which we may learn the methods by which longevity is attained, and also those matters which are constantly arising to interfere with reaching advanced old age:

The advance of age is indicated by signs which tell unmistakably that all the powers of life are declining. Thus the ravages of disease are repaired with less rapidity than during the more vigorous periods of life, or permanent defects are left, showing the inability of the body to restore itself completely. It frequently happens that losses of substance occasioned by disease are apparently filled up as in earlier periods, but a close examination of the replacing tissues shows them to be made of inferior stuff. The occurrence of the so-called degenerations is highly characteristic of age. Chief among them are the fatty and calcareous degenerations. Fatty degeneration is especially apt to show itself in those organs most essential to health, and whose failure interferes most directly with the phenomena of life. The muscles, especially of the heart, are most disposed to this change. Little granules of fat take the place of the contracting material essential to muscular action, and the organ becomes weakened in proportion to the number of fibers which have undergone this change. The liver, kidneys, and other glands are next most often affected by a similar deposit of fat, which takes the place of the secreting cells essential to the continuance of the performance of the important duties of these glands. Fatty degeneration may, and frequently does, attack the walls of the arteries, weakening them and leading to rupture and outflow of the blood contained therein. This is the change which usually leads to apoplexy and aneurism, quite common in the aged. Such bleeding leads to death or paralysis, mostly of one or the other side of the body. When the same process attacks the arteries of the brain, it makes them brittle and leads to the easy fracture so frequently seen in old age.

Calcareous degeneration frequently follows the fatty form. When this is the case the disposition of the arteries to break and permit hemorrhage is increased. But the most characteristic of the effects produced by this change is the mechanical interference it produces in movements of different parts of the organism, especially where flexibility is necessary to the proper performance of movements. Thus the ribs, breastbone, cartilages of the ribs and the substance between the numerous small bones of which the spinal column is composed, become stiffened and rigid from the deposits of lime salts. This renders free movements of these parts impossible and may occasion much pain. When the process extends to the valves of the heart the consequences are extremely disastrous. All the serious consequences of valvular disease of the heart present themselves the same as if they were due to inflammation, and death results from heart failure. If the coats of the arteries become calcified, they may become clogged and occluded by the formation of a clot upon their inner coat (thrombosis), or they may break with little provocation, producing, in either case, paralysis or death, after the same manner as that due to hemorrhage from fatty degeneration. A somewhat similar process of degeneration may take place in the crystalline lens of the eye, producing cataract and blindness, often curable by operation.

Calcareous degeneration attacking the walls of the arteries of the brain may produce disastrous results in two different ways—by making them brittle and thus tending to apoplexy, or by encouraging the formation of clots, which, sooner or later, shut off all blood supply in the region to which the vessel is distributed. The effect of depriving a part of the brain of its supply of blood is to cause its destruction by softening.

Softening of the Brain.

Most cases of softening of the brain occur in old age and are brought about in the manner just indicated. If the softening attacks a part of the brain whose business is to begin movements, then paralysis, or loss of the power of voluntary motion, will be an important symptom. If a part of the brain used in thinking or the formation of judgments, comparisons, etc., is attacked, then failure of the mental faculties will follow. It is a matter of common observation that softening of the brain is almost certain to show mental failure, especially loss of memory, with transitory paralysis of individual limbs at first, passing into complete and permanent loss of the power of motion in the later stages.

Not so often in occurrence, but happening without great infrequency, is "senile gangrene." This is a mortification of one or both lower extremities, which is produced in a manner exactly like softening of the brain. Thus the inner coats of the arteries become rough and rigid from calcareous degeneration. The blood deposits a clot all along the inner surface because of this roughening. Finally there comes a time when all circulation is shut off from the feet and lower part of the leg. If the veins and absorbents are open and capable of draining the dead substance of its fluids, the

parts dry up, turn black, shrivel and become mummified. This is the dry gangrene of old age. In case the drainage of the part is defective, the fluids in the dead parts undergo putrefaction, the very characteristic odor of decomposing flesh arises, sloughs occur, and the surface breaks down into foul ulcers. This is the moist form of senile gangrene.

It may be easily understood that old age is not the only cause of this condition. It may occur in early life as the result of frost-bite and other injuries greatly impairing the vitality of the tissues or of the arteries. Removal of the dead parts is the only remedy for senile gangrene. The amputation should be made through healthy tissues far above the point where the "line of demarcation" separates the dead from the living structures. This is because the arteries are always diseased a long distance from the points which are actually gangrenous.

The Period of Decline of the Bodily Powers

Is marked by a progressively increasing loss of power to develop animal heat. This is shown by the inability to resist chilly weather and the disposition for the hands and feet to become cold. There is at the same time an inability to perform muscular exertion. These two facts are closely related, for muscular contractions are the principal source of animal heat. The appetite, as a rule, remarkably lessens, while the waste materials are also diminished in amount.

The lessened activity shows itself in the mental operations also. The mind is less vigorous, as a rule, and original works of a literary or scientific character are seldom undertaken after the age of 60. Facts submitted to the judgment may be passed upon by the age with great correctness and discrimination, for the influence of the feelings is partly, if not entirely, removed by the effects of age. This may require time; but the value of the opinions of the aged who have preserved their mental faculties is proverbial. The slowness of mental action is perhaps due to the slow processes of nutrition which mark the workings of the nerve cells as well as those of every structure.

The physical change in all kinds of cells seems mainly to be a deposit of fat granules, in the first place, which is followed by absorption of the fat and the substitution of lime salts in its place. The deposit of either fat or lime in place of the structures proper to any part, of course, hinders the normal work that should be performed by the structure which has undergone this transformation.

The characteristic changes which go along with old age, and to which the final stoppage of the machinery of life is due, are seen to be mostly degenerations of structures in which the normal active tissues are replaced by materials of inferior quality. Fat and lime salts are very poor substitutes for the healthy, contractile muscles, or the transparent structures of the eye. It has been thought by some that if we could prevent the introduction of earthy salts into the body by way of food and drink, the rigid arteries and degenerations generally of age might be prevented. The plan proposed for thus forestalling age is as follows: Drink nothing but distilled water, or a drink containing phosphoric acid and the juice of lemons, of which distilled water is the basis. Eat no vegetable containing much of the earthy salts. This would exclude spinach, cabbage, etc., from the diet. No tea nor coffee. Take plenty of milk. A much more rational diet would be one containing but little albuminous food, plenty of milk, no eggs nor lean meat, but as much fat as can be taken without discomfort. It has been observed that calcareous degeneration is almost always preceded by chronic changes in the kidneys, and these are certainly hastened by a diet of lean meat, eggs and the like.

Many individuals have become aged long before the number of years they have seen would entitle them to the distinction of longevity. A glance at the prematurely aged may give some hints as to the means of prolonging life beyond its usual limit. Sir Walter Scott gathers many of the causes of precocious senility together in the following eloquent stanza:

Danger, long travel, want and woe
Soon change the form that best we know;
For deadly fear can time forego
And bleach at once the hair;
Hard toil can roughen form and face,
And want can quench the eye's bright grace,
Nor does old age a wrinkle trace
More deeply than despair. —Marmion.

Too rich a diet—rich in albuminous food—predisposes to gout, and this to kidney disease. Indulgence in strongly alcoholic drinks has the same result. The effects of "high living" are made still more serious by deficient muscular exercise, and all of these favor the development of fatty and calcareous degenerations in the heart and arteries. "Fast living," excesses of every sort, and indolence, are among the most certain hindrances to attaining longevity.

In advanced life the lungs are especially prone to inflammation. The pneumonia of old age is excessively fatal. Even an ordinary "cold on the lungs" is liable to become a very serious matter. The ribs and breastbone lose most of their elasticity, and breathing is not so deep or so free as it is in earlier years. Hence one of the reasons for the fatality of bronchitis and catarrhal pneumonia in the aged. One remarkable fact connected with the pneumonia of old age is that it may run its course to a fatal termination and give but little notice of its presence by significant phenomena. Hence this disease is very frequently overlooked. A large

number of cases of "senile debility," "senile marasmus," "deaths from old age," are, in reality, due to pneumonia. It is proper to call such cases deaths from old age, for if this factor had been absent the disease would probably have been recognized and properly treated, the element of old age having been the really important one in determining the fatal result.

It is very likely that the constitution and tendencies inherited from the ancestry have much to do with long life. Of course, leaving all accidents, epidemic diseases, etc., out of account, Hereditary tendencies include more than mere bodily form and toughness of fiber. There are mental and emotional tendencies which are equally important in determining the length of life to be attained by the possessor. Control over the passions and the ability to foresee and guard against consequences are not less important than the possession of good digestion and a nervous system perfect in all its parts.—*St. Louis Globe Democrat.*

"Didn't Know It Was Loaded."

The young man fell dead!

A friend had pointed a revolver at him.

"He didn't know it was loaded!"

We often hear it said that a man is not responsible for what he does not know. The law presupposes knowledge and therefore convicts the man who excuses crime by ignorance!

"If I had only known" has often been an unfortunate man's apology for some evil unknowingly wrought, but in a matter of general interest—as for instance that laudanum is a poison, that naphtha is a deadly explosive, that blood heavily charged with a vitriol's accumulations of the waste of the system,—it is one's duty to know the fact and the consequences thereof. Our good old grandmothers knew, for instance, that the opening of spring was the most perilous period of the year.

Why?

Because then the blood stream is sluggish and chilled by the cold weather, and if not thinned a good deal and made to flow quickly and healthfully through the arteries and veins, it is impossible to have good vigor the rest of the year. Hence, without exception, what is now known as Warner's Log Cabin Sarsaparilla, was plentifully made and religiously given to every member of the family regularly through March, April, May and June. It is a matter of record that this prudent, preventive and restorative cure saved many a fit of sickness, prolonged life and happiness to a vigorous old age, and did away with heavy medical expenditure.

Mrs. Maggie Kerchwall, Lexington, Ky., used Warner's Log Cabin Sarsaparilla "for nervous sick headache of which I had been a sufferer for years. It has been a great benefit to me," Capt. Hugh Harkins, 1114 S. 15th St., Philadelphia, Pa., says "it purified my blood and removed the blotches from my skin." Mrs. Aarea Smith, Topton, Berks Co., Pa., says she "was entirely cured of a skin disease of the worst kind," by Log Cabin Sarsaparilla. Bad skin indicates a very bad condition of the blood.

If you would live and be well, go to your druggist to-day and get Warner's Log Cabin Sarsaparilla and take no other,—there's nothing like it or as good,—and completely renovate your impaired system with this simple, old-fashioned preparation of roots and herbs.

Warner, who makes the famous Safe Cure, puts it up, and that is a guarantee of excellence all over the known world. Take it yourself and give it to the other members of the family, including the children. You will be astonished at its health-giving and life-prolonging powers. We say this editorially with perfect confidence, because we have heard good things of it everywhere, and its name is a guarantee that it is first class in every particular.

NEWSPAPERS IN 1888.—From the edition of Geo. P. Rowell & Co.'s "American Newspaper Directory," published April 2d (its 20th year), it appears that the newspapers and periodicals of all kinds issued in the United States and Canada now number 16,310, showing a gain of 890 during the last 12 months and of 7136 in 10 years. The publishers of the Directory assert that the impression that when the proprietor of a newspaper undertakes to state what has been his exact circulation, he does not generally tell the truth is an erroneous one, and they conspicuously offer a reward of \$100 for every instance in their book for this year where it can be shown that the detailed report received from a publisher was untrue.

THE Newark Machine Co. of Columbus, O., have concluded not to dispose of their business to the Victor Machine Co. as has been contemplated. Therefore, they have started up their factory with increased capital and are building their full line of Victor Clover-Hullers, Imperial Straw-Stackers, Victor Manure-Spreaders, etc., which they are prepared to furnish to the trade.

SYRACUSE NURSERIES.—Smiths, Powell & Lamb of Syracuse, N. Y., send us their illustrated descriptive catalogue of trees, vines, shrubs, roses, etc., cultivated and for sale at the above-named nurseries, which were established over half a century ago and occupy about 500 acres of the choicest land in Onondaga county, N. Y.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to anyone who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

A Rare Chance.

The Gablian Rancho, situated in Monterey county, containing 7665 acres, is offered at \$30.50 an acre, for 30 days, on long time and easy terms. Address, J. C. HOAG, 312 Van Ness Avenue, San Francisco.

Bench-Show Awards.

Following are awards at the Bench-Show of the Pacific Kennel Club, held in San Francisco April 4th to 7th:

Mastiffs, dogs—1st price, R. Scott's Dick; 2d, Mrs. Amy I. Crocker's Don; bitches—1st, Mrs. E. F. Preston's Actress.

St. Bernards, rough-coated dogs—1st, A. W. Manning's Judge; 2d, J. H. Auld's Bruce; bitches—2d, A. Hoepfner's Garda; smooth-coated dogs—2d, Robert E. Culbreth's Rector III; puppies, dogs—1st, A. W. Manning's Judge.

Newfoundlands, dogs—1st, F. A. Schule's Prince. Great Danes, dogs or bitches—1st, A. Hoepfner's Caesar; 2d, Mrs. Von Ploenn's Modoc; 3d, A. Hoepfner's Lea; highly commended, A. Hoepfner's Dora.

Deerhounds, bitches—1st, C. H. Joutet's Schula II; 2d, Joutet's Phyllis.

Greyhounds, dogs—1st, J. F. Carroll's Monarch; 2d, P. Lyman's Saturday Night; 3d, A. P. Mordant's Sir William II; very highly commended, J. F. Carroll's Dictator; v. h. c., H. Bingham's Tullamore; h. c., J. O'Shea's Ben Ali; c., Thomas Brady's Menlo Chief; bitches, 1st J. F. Carroll's Jennie June; 2d, Carroll's Mischief; 3d, A. P. Mordant's Lizzie; h. c., McDermott's Lady Emma; v. h. c., D. W. Swain's Juana and T. J. Cronin's Rose of Tralee; c., P. A. McDonald's Camelia; puppies, dogs—1st, J. F. Carroll's Benelon II; bitches—1st, M. J. Keating's Gyp; 2d, E. I. Mahoney's Lady Catherine.

Fox-hounds, dogs—1st, D. M. Murphy's Ringwood; 2d, same owner, Landlord; native fox-hound, dogs 1st, A. H. Rickett's Josh; 2d, Fritch & Staniels' Joe; 3d, S. E. Fisher's Don; v. h. c., J. Hom r Fritch's Jack; h. c., A. H. Rickett's Carlo; fox-hounds, bitches—1st, C. Ross' Kate; 3d, H. Smith's Bessie; dog puppies—1st, H. W. Heeth's Nero; 2d, John Zammitt's Music.

Pointer dogs (over 50 lbs.)—1st, J. Martin Barney's Tom Pinch, whelped in April, 1884, instead of 1882, as appeared in the catalogue; 2d, C. A. Haight's Dick H; 3d, A. B. Truman's Rush T; v. h. c., L. J. Rose's Point, L. J. Rose's Rush; h. c., R. K. Gardener's Bruce II; F. C. Chapman's Prince; bitches (over 50 lbs.)—1st, H. R. Brown's Donna Sensation; 2d, G. W. Bassford's Blossom; 3d, P. D. Linville's Roberta; v. h. c., A. B. Elford's Jessie Range and P. J. Bower's Beauty; dogs (under 55 lbs.)—1st, E. W. Briggs' Chm; 2d, H. A. Dugan's Shot; v. h. c., Dr. T. Bowhill's Jack; h. c., James F. Bonnell's Sportsman; bitches (under 50 lbs.)—1st, A. B. Truman's Patti Croxeth; 2d, G. W. Bassford's Don's Girl; 3d, W. S. Kittle and T. L. Potter's Drab D; dog puppies—1st, H. Kahn's Wade Hampton; 2d, E. J. Powers' Pat P; 3d, Wm. Schrieber's Laddie; v. h. c., H. S. Wort's Fennimore, R. M. Wymn's Tolenas; bitch puppies—1st, G. W. Bassford's Lottie B; 2d, W. D. Howe's Belle H.

English Setters, dogs—1st, James B. Barber's Pilot; 2d, E. Leavesley's Ben; 3d, T. J. Watson's Hamlet W; v. h. c., E. Leavesley's Rock; v. h. c. (reserved), George Muller's Carlo; h. c., Thomas Higgs' Rover H; c., T. J. Watson's Belmont W; bitches—1st, Chas. Kaeding's Fannie K; 2d, H. M. Gorman's Mollie Belton; 3d, C. C. Westonhaver's Queen; v. h. c., C. J. Haas' Countess and T. J. Watson's Miss Alice; h. c., F. Lacoste's Nellie; c., W. E. Lester's Dottie Dimple; dog puppies—1st, C. Kaeding's Buddie K; 2d, same, Shot; 3d, E. Leavesley's Prince Albert; v. h. c., C. Kaeding's Hunt; v. h. c. (res.), R. E. Culbreth's Rock; bitch puppies—1st, Miss Dollie Bates' Donna; 2d, Albert Peris' Pride; 3d, D. E. Goodman's Countess Lion.

Irish setters, dogs—1st, A. B. Truman's Mike T; 2d, T. R. Hart's Hero; 3d, J. Ryan's Pat; c., A. B. Truman's Dick R; bitches—1st, A. B. Truman's Lady Elcho; 2d, L. L. Campbell's Bell C; dog pups—2d, H. A. Roessler, Jr.'s Major; b. pups—1st, B. Truma's Kate T. Black and tan setters, dogs—1st, F. A. Tatt's Dorr; 2d, E. C. Koenig's Bob; 3d, E. McManus' Jack; bitches—1st, E. H. Wakeman's Hazel Kirke; 2d, W. E. Dertel's Nellie; b. pups—1st, W. R. Spalding's Lena S.

Irish water spaniels—1st, T. J. Pinder's Nora P; 2d, A. B. Elford's Irish Girl; 3d, W. S. Kittle's Brian Boru; v. h. (res.), T. J. Pinder's J-rry P; field spaniels, over 28 lbs.—1st, J. Struver's Nellie.

Cocker spaniels, over 28 lbs.—1st, Mrs. E. Leavesley's Julie; 2d, W. S. Kittle's Gift; 3d, T. Jennings' Rip; v. h. c., Louis Loupe's Sport; h. c. Fred Meyer's Tynney; cumber spaniels—1st, W. V. Helfrich's Maude; cocker spaniel puppies, d. or b.—1st, Daniel Gilroy's Jet.

Collies, dogs—H. c., Charles Cox's Jack; bitches—3d, Mrs. Patton's Fanny. Dachshunde, d. or b.—1st, E. Duplessis Beyord's The Mikado; 2d (same owner), Turbulence.

Beagles, dogs—1st, G. W. Bassford's Bannerman Jr.; bitches—1st, G. W. Bassford's Dolly; 2d, H. W. Sand bach's Nellie; puppies—1st, G. W. Bassford's Daisy II. Retrievers, dogs—1st, J. E. Watson's Roy; 2d, T. Burke's Caesar; 3d, J. H. Hall's Dan; bitches—1st, Fritch and Kr ss' Kate II; 2d, Claus Kross' Nellie; 3d, John Klein's Juno.

Dalmatians, or coach dogs—2d, Mrs. N. L. Harvey's Bessie.

Bull terriers, dogs—2d, Ramon E. Wilson's Jack; bitches—1st, Col. Stuart Taylor's Kittie; 2d, John Sparrow's Olivette; 3d, J. P. Dalton's snow; puppies—h. c., J. Martene's Kit.

Fox terriers, dogs—1st, J. B. Martin's Sly Mixture; 2d, A. L. Creswell's Flugal; h. c., James E. Watson's Jack; c., M. J. Keating's Jack; bitches—1st, Captain J. H. A. id's Daisy; 2d, J. B. Martin's Clover Fidget; h. c., J. E. Watson's Gyp and Lady; M. Platt's Topsy; c., A. L. Creswell's Sunbeam; puppies—1st, J. E. Watson's Gyp.

Fox-terriers, wire-haired—1st, John Green's Jack. Skye terriers—1st, R. Bruce's Fido; c., Mr. Fagan's Babe.

Scottish terriers—1st, Dr. A. E. Buzard's Sam; 2d, Carl S. Anderson's Punch. Yorkshire terriers, dogs—1st, F. W. Sierp's Mash. Japanese spaniels—1st, J. P. Parker's Jappy.

Pugs, dogs—1st, Mrs. J. F. B. McCleery's Fudge; bitches—1st, Mrs. L. Quint's Queen; 2d, Mrs. J. F. B. McCleery's Beauty; h. c., Mrs. J. F. B. McCleery's Mamma Shoots; under 12 months—2d, J. F. B. McCleery's Bus. Poodles, black, dog—1st, Dr. M. W. Fish's Zulu; 2d, Thomas Williams' Bijou; bitches—1st, Dr. M. W. Fish's Diane.

Miscellaneous—1st, Mrs. Zammitt's Wolf; 2d, Miss J. R. Shafter's Bruno S. (These were probably Esquimaux dogs.) J. J. Jameson's Dick (spitz).

Special prizes were also awarded as follows:

Non-Sporting Specials.

Best fox terrier—Capt. J. H. Auld's Daisy.
Best bull terrier—Stuart Taylor's Kittie.
Best Great Dane—A. Hoepfner's Caesar.
Best rough St. Bernard—A. W. Manning's Judge.
Best pug—Mrs. L. Quint's Queen.
Best mastiff—Mrs. E. F. Preston's Actress.
Best Scotch terrier—Dr. A. E. Buzard's Sam.
Best Yorkshire terrier—F. W. Sierp's Mash.
Best Skye terrier—Robert Bruce's Fido.

Sporting Specials.

Best deer hound—C. A. Joutet's Schula II.

Best greyhound—J. F. Carroll's Jennie June.

Best greyhound puppy—J. F. Carroll's Benelon II.

Best greyhound dog—J. F. Carroll's Monarch.

Best pointer—J. Martin Barney's Tom Pinch.

Best pointer (bitch)—C. R. Brown's Donna Sensation.

Best pointer (puppy)—H. Kahn's Wade Hampton.

Best English setter—James B. Barber's Pilot.

Best English setter (puppy)—C. Kaeding's Buddie K.

Best Irish setter—A. B. Truman's Lady Elcho T.

Best black and tan setter—F. A. Tatt's Dorr.

Best black or tan setter bitch (aged or puppy)—E. H. Wakeman's Hazel Kirke.

Best kennel of English setters—C. Kaeding's Fannie K.

Shot and Buddie K.

Best kennel shown of all classes and best kennel of greyhounds—J. F. Carroll's Monarch, Jennie June and Mischief.

Best kennel of pointers—G. W. Bassford's Don's Girl, Blossom and Lottie B.

Best setter in show—A. B. Truman's Lady Elcho T. The best dog in the largest class of dogs—J. B. Barber's English setter Pilot.

Best trick dog—F. A. Tatt's Gordon setter Dorr. Best greyhound with a coursing record—J. F. Carroll's Monarch.

Best kennel of Irish setters—A. B. Truman's Mike T, Lady, Elcho T, Dick R and Kate T.

Best dog exhibit by a lady—Mrs. E. F. Preston's mastiff Actress.

Best water spaniel—T. J. Pinder's Nora P.

Best beagle—G. W. Bassford's Daisy II.

Best pedigreed collie bitch—Mrs. Patton's Fanny.

There was some difficulty in awarding the prize for the best dog of the show, and at last the chance narrowed down to the pointer Tom Pinch, owned by J. M. Barney, and the mastiff Actress. As the judges differed, the referee, Mr. Winters, finally decided in favor of the former.

Suffocated in a Wine-Vat.

On the morning of March 28th, Louis Gairaud, a Santa Clara vigneron, and an old Indian in his employ known as "Santa," descended into a large wine-cask to clean it out. The Indian was overcome by the carbonic acid gas which had accumulated in the vat, fell to the bottom and died before he could be rescued. Mr. Gairaud himself was far enough up to grasp the rim of the cask, when the ladder gave way beneath him, but although somewhat faint he managed to hold on till the help he cried for came and pulled him out.

The San Jose Times remarks in this connection that asphyxiation in wine-vats is not very uncommon. Only a few years since a Mr. Dragocovich and one of his employes lost their lives in Santa Clara in like manner. Dragocovich entered the vat to clean it out preparatory to making wine, was overcome by the gas and fell to the bottom. One of his employes heard the sound of the fall and hastened to render assistance. He, too, was overcome, and fell upon the body of his employer.

In the more recent case, before Mr. Gairaud and Santa entered the vat, a candle had been lighted and lowered into it without extinguishing the flame. It is thought, however, that the light could not have been lowered to the very bottom, else it must have gone out.

A coroner's inquest was held at noon. The verdict was in accordance with the above statement, and the jury recommended that more precautions be taken to ascertain the presence of foul air in wine-vats before they are entered by workmen.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING APRIL 3, 1888.

380,416.—DEVICE FOR CLOSING PURSES—Emilie N. Ames, S. F.

380,478.—BED-PAN—Kate M. Duffey, Atria, Oregon.

380,431.—TRUNK HARNESS—W. H. Gabbs, S. F.

380,433.—HAND-PIECE FOR DENTAL ENGINES—H. S. Grace, S. F.

380,435.—ELECTRIC ARC LAMP—Aug. Harding, Oakland, Cal.

380,489.—ROTARY ENGINE—Jefferis & Thurman, Lincoln, Cal.

380,395.—ROOF-CLIMBING DEVICE—F. Kramer, Los Angeles, Cal.

380,453.—TRAVELING THRASHER—R. R. Moore, Modesto, Cal.

380,341.—STATION INDICATOR—T. W. Moproe, S. F.

380,342.—TRAVELING THRASHER—C. K. Myers, Stockton, Cal.

380,401.—VISE—E. I. Nichols, S. F.

380,463.—PRESERVING GRAPE MUST AND SKINS, F. Springmuhl, London, England.

380,612.—HAND NAIL DRIVER—J. Weichart, S. F.

380,374.—EARTH SCRAPER—Wilkinson & McCourt, Acampo, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Exoneration of State Engineer Hall.

We intended to have mentioned last week the exoneration of Wm. Hammond Hall of certain charges which were preferred against him by a San Francisco paper. The following letter from the Governor shows how complete his exoneration is:

SACRAMENTO, March 30, 1888.

Joseph D. Redding, Attorney for William H. Hall, State Engineer—DEAR SIR: I have examined with great care and attention the charges preferred against Wm. H. Hall as State Engineer, with special reference to the expenditure of money under his supervision for the publication of reports of maps, irrigation and draining surveys, and my conclusions are that he has been guilty of no malfeasance in office; but, on the contrary, he has shown unusual care and caution in using the appropriation; and I further find that all the money expended and received by him with the approval of Governor Bart before being drawn from the treasury. I take pleasure in exonerating him in every way. Yours truly, R. W. WATERMAN.

THE corner-stone of the beet-sugar factory will be laid at Watsonville on Saturday, the 14th inst., with appropriate ceremonies.

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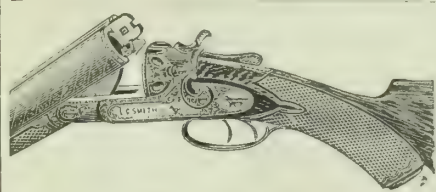
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AGENTS LOOK HERE

and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made \$18 one day. \$76.50 one week. So can you. Proofs and catalogue free. J. E. SHEPARD & CO., Cincinnati, O.

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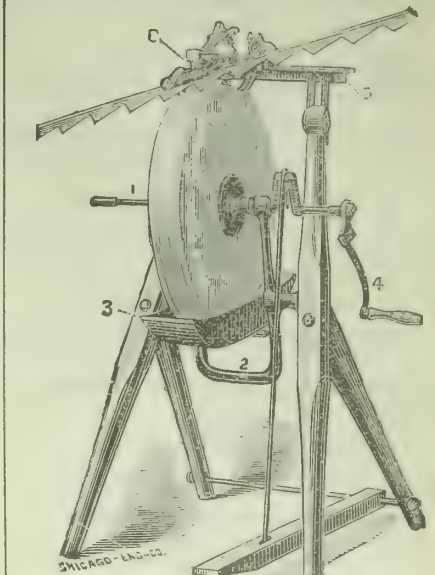
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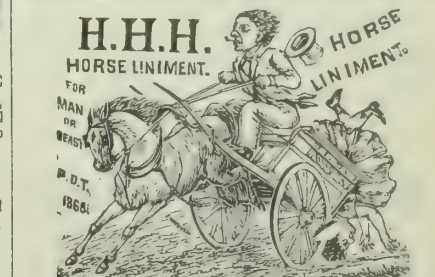
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The Arcadia

OF THE—

SAN JOAQUIN VALLEY!

THERE DOES NOT EXIST IN THIS VAST extent of country a section so manifestly destined for the site of

A PROSPEROUS TOWN,

Supported by the demands of a rapidly and steadily increasing population, as Alila. THE ENCOURAGING NUCLEUS is already there, for Alila now possesses a well-conducted and

LIBERALLY FURNISHED HOTEL,

Several well-appointed stores, and, in addition to these, that most important feature and best evidence of progress, a

Handsome and Spacious Schoolhouse, which stands nearly, if not precisely, in the center of the town-site. Alila is environed by

A MOST FERTILE COUNTRY,

A soil of surpassing richness, with the capacity of sustaining, in comfort and prosperity,

Thousands of Industrious Settlers.

The resources of this land are illimitable. At this season, in the surroundings of Alila, the plow is busy in every direction.

MILES OF GRAIN,

Soon to wave in luxuriant beauty above the sod now decked with wild flowers, will be a most substantial ornament to

ITS BROAD ACRES.

This scene of agricultural activity and brisk and intelligent cultivation is

A GRAND ASSURANCE

Of what the future must bring forth. The Southern Pacific Railroad

PASSES THROUGH ALILA,

And the stations and sidings there are about the best on the line.

ALILA

Is in Tulare County, 22 miles south of the city of Tulare, on the main line of the Southern Pacific Railroad.

Bovee, Toy & Co.,
19 MONTGOMERY ST.,

Are now offering a limited number of lots at private sale in ALILA, and intending purchasers should not delay in making their selections, as a

SERIES OF IMPROVEMENTS

Have already been inaugurated, consisting of grading streets, planting them with shade trees, increasing the irrigating facilities, and shipping material for the

ERECTION OF BRICK STORES

Upon the main street of Alila. This is a

Superb Opportunity for Investment,

Because the time is close at hand when

Wave after Wave of Eastern Immigration

Will fill up the great San Joaquin Valley, and every dollar placed in real property there will yield a four-fold return.

There are a few facts in connection with this property to which we desire to call particular attention:

First, the extreme richness of the soil has attracted a superior class of population, who are farming the land in an intelligent and progressive manner.

Every section in the vicinity of Alila and for miles around contains from two to four houses, presenting a prosperous and comparatively well-settled country, owing to the fact that the land is held in small holdings, and not in those immense tracts of single ownership which characterize other portions of the valley.

There is no other locality so well adapted for successful fruit and raisin culture.

Again, Alila lies in the direct line of Walker's Pass, the lowest point in the Sierras through which other overland roads coming into the valley will in all probability lead.

For maps and further particulars apply to

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GREAT ARTESIAN BELT,

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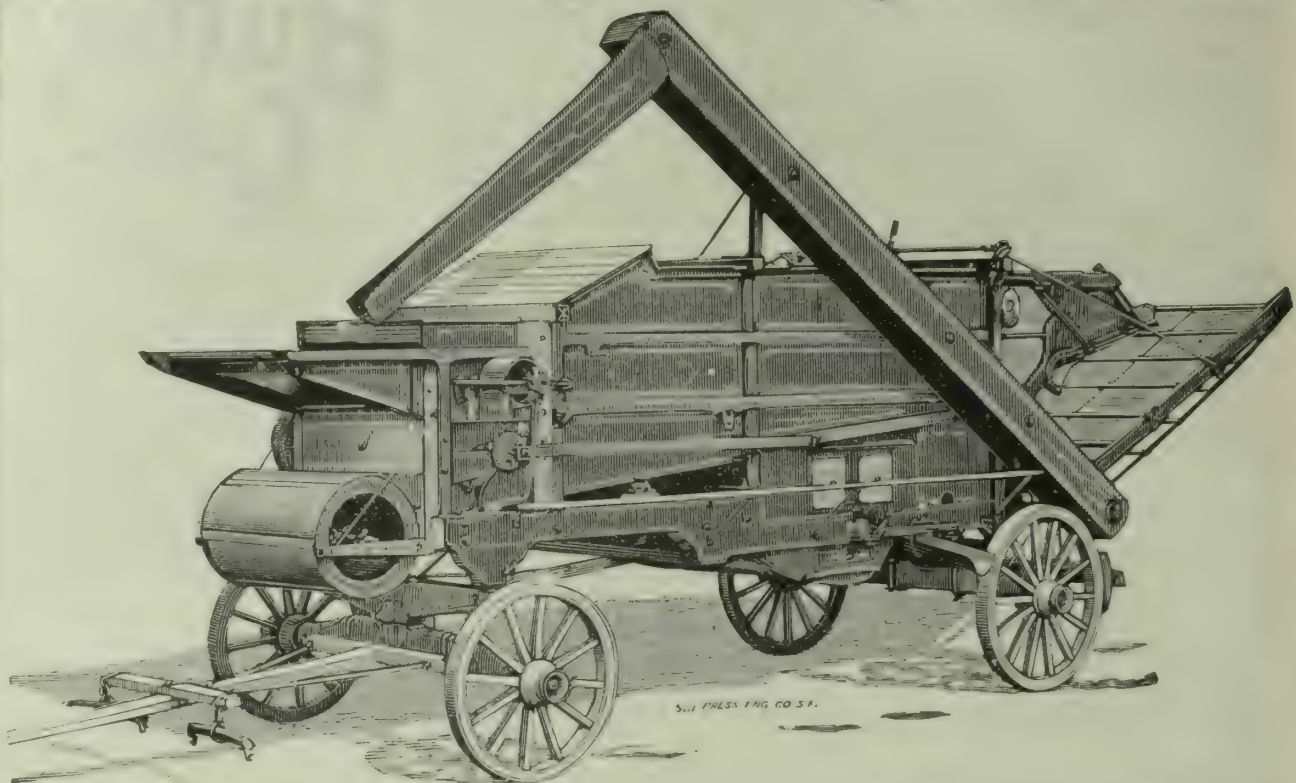
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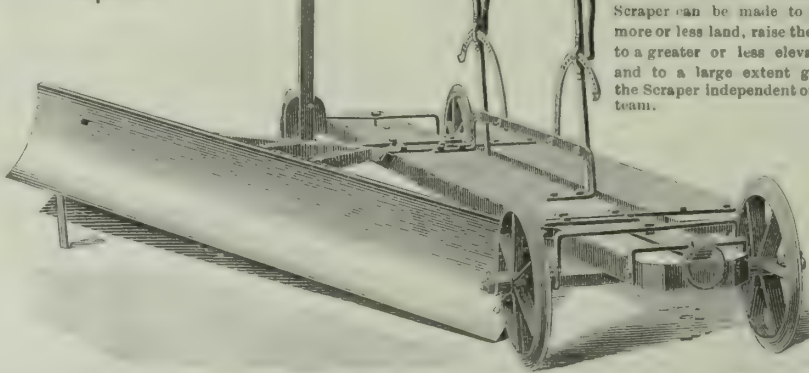
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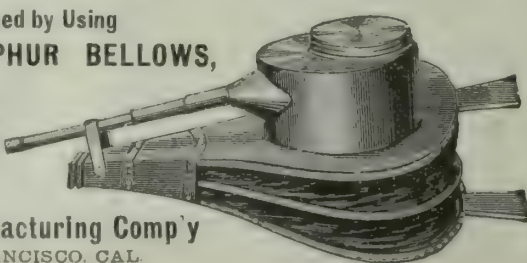
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ENTIRELY NEW. HARROW



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The Great Dog-Show.

To enjoy greatly the long-promised bench-show, which came off here last week under the auspices of the Pacific Kennel Club, one needed not to be an expert canine critic, nor even much of a dog fancier.

As we entered the Mechanics' Pavilion, the varied voices which fell upon the ear before we came in sight of the exhibits, left us in no doubt as to the kind of creatures we were going to see. When fairly within, we found the animals disposed in roomy, straw-strewn box-stalls, open in front and overhead, and raised on benches (whence the title "bench show") to a height convenient for spectators. These boxes stood in several rows, lengthwise of the hall, with ample passage-ways between, and were well arranged for the purpose of displaying their tenants.

First in order were the big mastiffs—sturdy, serious-looking fellows, in smooth, fawn-colored coats, with more or less black on muzzle and paws—who might well serve as trusty guardians of house or person. Of these there were half-a-dozen, each lightly chained to the limits of the pen allotted him. Among them was Mrs. E. F. Preston's "Actress," scarcely two years old, which not only won the first prize in her class, and the special prize offered for the best dog or bitch in the St. Bernard or Mastiff classes, but puzzled the judges, who found it well-nigh impossible to decide whether she or the pointer "Tom Pinch" should be honored as the "best dog in the show."

Then we came to the noble, great St. Bernards, in which class there were 12 or 15 entries; but when the dogs were paraded for inspection all but three or four were quietly ruled out, as not up to the standard of pure St. Bernards—even Mrs. Baldwin's huge white "Rex" being excluded by the relentless judge—which of course caused consternation among the exhibitors. Mr. Manning's rough-coated "Judge," reddish brown and white, A. Hoepner's "Garda," brindle and white, and Mr. Culbreth's smooth-coated "Rector III," orange and white, with black nose, were admirable beasts in this category.

The majestic Great Danes or German mastiffs, of which several were shown by Mrs. Von Ploenies of San Francisco and A. Hoepner of Berkeley, attracted much notice. They are powerful, lithe-looking creatures, with sleek, dark bluish-grey coats. Mrs. Von P.'s "Modoc" is said to be brother to one of Prince Bismarck's famous canine companions.

C. H. Jouett's two deer-hounds, shaggy, tawny and black mixed, and the numerous slender, clean-limbed greyhounds, of various coloring, in turn engaged our attention. Among the fox-hounds, A. H. Rickett's superb "Josh," black-and-tan, with high-domed head and pensive look; C. H. Smith's beauty "Bessie," white and tawny, with singularly large and shapely ears, and H. W. Heath's bright, handsome puppy "Nero" proved peculiarly attractive.

The pointers and setters outnumbered other kinds of dogs, over 80 of the 259 entries being in these classes. We lingered long in front of the many stalls assigned them, but time failed us to examine them as we desired to do. Of all the fine pointers, "Tom Pinch," shown by J. Martin Barney of Dutch Flat, won the first and special prizes for his class; and when, on the closing night, the candidates for the honor of being pronounced "best dog in show" were marshaled for judgment, dog after dog was ordered out of the ring until only "Tom Pinch" and "Actress" remained, he being the best dog in the sporting class, and she the best in the non-sporting. The judges were unable to agree, Mr. Davidson standing out for "Tom" and Mr. Watson for "Actress." At length Dr. Winters was invited to act as referee, and decided in favor of Tom Pinch, awarding him the IXL gold medal.

Among all dogs we confess to a special fondness for setters, particularly Irish setters; and so even Mr. Taft's prize trick-dog, the Gordon "Dorr" from Truckee, beautiful wonder-dog as he was, seemed to us less admirable than A. B. Truman's auburn-clad "Lady Elcho T," who was adjudged the best setter on exhibition.

In the rest of our hurried survey, we glanced with interest at the Irish water-spaniels, in their heavy, curly, liver-hued mantles; at the kennel of friendly, funny little duck-legged yellow dachshunds (badger dogs); at the black poodles, with cloaks as kinky as a negro's wool; at the wolfish Esquimo, which Mrs. Zammatt drove around in harness; and for the remainder must simply refer to the list of awards which may be found on page 335.

The excellent catalogue of the animals made a visit to the pavilion much more enjoyable. The judges imported for the occasion showed themselves masters of their business—the right men in the right places. And although the expenses incurred by the P. K. C. outran the receipts, their inaugural show as a show was a marked success. It is given out that the club will hold one in this city annually, and it is expected that next year a much better class of dogs will be exhibited in the non-sporting classes.

HEREAFTER the terminus of the Canadian Pacific Co.'s steamship line will be San Francisco. The steamships of the new China line will run between Hongkong and San Francisco, stopping, of course, at Vancouver and Yokohama, which will practically become way ports.

Around Vacaville.

EDITORS PRESS:—The weather is warm and pleasant. The rain of the past two weeks has softened the ground so that it can be put in fine order. For pulverizing the soil the best implement ever used in this part of the country is Donahue's of Vacaville. It is made of 2x6 scantling bolted together much like a common clod-masher, with three rows of knives that cut up everything they run over. For killing weeds there is a V-shaped knife to attach. They are sold at from \$14 to \$20. If Mr. Keesling of San Jose will try one, I don't think he will ever want to use an "Acme" again, at least such is the experience of many here.

The prospect for the apricot crop around Vacaville is good. The old trees have light crops in many places, but the young trees are so loaded that from one-fourth to one-half will have to be thinned off. Some have already commenced thinning. The outlook for the cherry crop also is good, but it is too early yet to tell what it will be, as cherries keep dropping until half grown.

The question of help for the coming season is interesting many now. About 35 men have lately come from the East to Vacaville in search of work, and all are now employed on the ranches at from \$25 to \$30 per month. So far as I have heard, they give satisfaction and are satisfied, although some are a little homesick. I do not think the plan of importing negroes will be successful. It was pretty thoroughly tried in Vacaville over a year ago, and failed. The few who would have stayed and worked, some meddlesome fool persuaded away to hunt larger wages.

Frank Back has a large number of trestles made about two feet high to put trays on when drying fruit. The higher fruit is placed from the ground when dried in the sun the cleaner it will be, but it will dry from 6 to 36 hours quicker if the trays are placed on the ground than if set on anything where the air circulates underneath. Fruit will dry in one-half the time on a board tray that it will on tin or wire screens.

The grain and hay crops between Vacaville and Cache lough, a distance of 20 miles, look better than for a number of years at this season.

Vacaville, April 8, 1888.

Sericultural.

The Ladies' Silk-Culture Society held their monthly meeting Thursday, April 5th, at the rooms of the State Board of Horticulture. There were present Dr. Gibbons in the chair, and Meses. Ewer, Mayer, Pratt and Williams. Bills to the amount of \$421.82 were ordered paid.

W. G. W. Harford, manager of the silk-culture station at Piedmont, reported as follows: "I beg to state that the month of January was mainly devoted to clearing more ground for the plow, which work was continued with but few interruptions up to Feb. 16th. The exact area of the newly cleared land I have not yet determined, but I need not tell you that it enlarges the boundaries of the cultivated land to a very considerable extent. Mr. Gray commenced plowing and cultivating on the 18th, and finished the entire piece on the 21st of February. With the exception of a small patch of ground on the rocky point above the nursery, the entire field is planted with trees and cuttings. This would also have been set with trees had time permitted. During odd intervals a couple of small patches have been cleared at the house and devoted chiefly to mulberry trees."

There are now planted on the premises at Piedmont 11,721 mulberry trees and cuttings, representing the following varieties: Nagasaki, 4321; Lhoo, 93, and 715 unknown varieties from Japan. Mrs. H. B. Williams presented 2085 of unknown varieties, and there are 1933 Roses, 454 Alba and 2120 Multicaulis mulberry trees, from which the society intend to experiment in order to determine the best kinds to plant in California.

The president stated to the meeting that about 1000 young trees had been distributed to applicants, and that there will be seed or young worms at the disposal of the society for those who may desire to obtain them.

The Ladies' Society is entirely distinct from the State Board of Silk Culture. The Piedmont station is supported by a \$5000 appropriation by the Legislature, and the monthly expenditure is something over \$400.

The meeting adjourned to Thursday, May 3d.

WYOMING STOCKMEN.—Three hundred members of the Wyoming Stock-Growers' Association attended the annual meeting at Cheyenne on the 21 instant. The rangemen appeared to be in good spirits regarding the outlook. Few storms occurred during the winter, and cattle are now in fine condition. Col. A. T. Bobbitt was elected president of the association, ex-Governor Baxter vice-president, Hon. A. H. Reel treasurer and T. B. Adams secretary. Resolutions urging the passage of the Palmer Pleuro-pneumonia bill and asking for the removal of the license and tax on oleomargarine were adopted by a unanimous vote.

HON. FRANK MCCOPPIN has been appointed Commissioner to the Australian Exposition, and has gone to Washington to receive instructions and make preparations for the service.

News in Brief.

ANOTHER savings bank has been organized in this city.

LOCO-WEED is doing much damage to stock in some parts of Arizona.

AN astronomical observatory is to be built at the University of Oregon.

FIFTY thousand orange trees have been planted in Butte county this season.

TWELVE million bricks have been burned at Pasadena during the past six months.

COUNTERFEIT silver dollars have been put in circulation in the Sacramento valley.

ACCORDING to the Portland Oregonian, 7000 immigrants arrived in that State during March.

THE Southern Pacific has made San Bernardino a terminal point—a concession on rates for freight.

A NUMBER of ostrich chickens have been hatched at Anaheim recently. All the birds are in prime condition.

A WELL flowing two barrels of petroleum hourly has been discovered between Gray's Harbor and Centralia.

LIVERMORE will soon have electric lights, and a new sash and door factory will begin work on May 1st.

RESIDENTS of Taylor, White Pine county, Nev., propose forming a co-operative company to develop the mines in that district.

SLACK CANYON coal, shipped from San Miguel, is now used on the engines of the Monterey express, the fastest train on the Southern Pacific line.

AN order has been made by the court that the Keely motor should be inspected by certain parties who furnished money for the scheme.

THE Central schoolhouse at Seattle was burned on Tuesday last. Loss, \$44,000; insurance, \$24,000. The school accommodated 800 pupils.

SANTA ROSA and Petaluma are to consolidate their efforts to attract greater attention from people abroad to the advantages of Sonoma county.

AGENTS of the railroad company are prospecting for coal in the neighborhood of Huron. Developments are being made of the recent discoveries.

THE motor road between San Bernardino and Redlands was finished last Saturday. Ballasting is nearly completed and trains will be running shortly.

HEREAFTER when specifications are sent out from Washington for public buildings on the Pacific Coast, bids will be included for Inyo county marble.

ANOTHER lumber ship, built of logs, will be launched at St. John, N. B., in June. It will be 600 feet long, 54 feet wide and 38 feet deep. She will have 12 masts and will carry a crew of 20 men.

THE Florence (Ariz.) Enterprise says that nearly all the land-owners along the Florence canal contemplate planting the larger portion of their properties to fruit trees and grapevines, to which the soil is admirably adapted.

TWENTY THOUSAND dead pigs in the Department of the Bouches du Rhone, and all in the course of a few months, is the result of the swine disorder imported into the south of France from the Province of Oran, Algeria.

THE Herald's Paris cable says: Chamberlain, the Texan who is suffering from wolf bites, and is now in the hands of Pasteur, has so far recovered that he is able to drink water without having convulsions. He expects to return home shortly, cured.

THE Supervisors of San Joaquin county pay a bounty of five cents each for gopher scalps. A few days ago a boy walked into the County Clerk's office at Stockton and received pay for slaughtering 2000 of the pests. The same day two other enterprising urchins "toted" in the scalps of 1000 gophers.

ACTING as the agent of Francis Whittaker & Son of St. Louis, Thomas Loughran, the commission merchant, is negotiating for the purchase of one of the large wool warehouses in the vicinity of Fifth and Townsend streets, which will be converted into a large pork-packing establishment at a cost of over \$100,000. The demand for fresh smoked bacon and hams on this coast has justified the venture.

THE Southern Pacific Co. has about completed the track-laying along the Willows and Mendocino Co. line. The force will soon be diverted to Madison, on the Capay valley line. The track-laying force on the Santa Rosa and Carquinez railroad has now reached Glen Ellen. The grade is almost completed into Santa Rosa. This road will be completed by June 1st. As soon as a grading force is available, the Southern Pacific Co. intend extending the line from Huron some 20 miles west into the Coast Range, toward Tres Pinos.

MUCH interest is felt in western and southwestern coast counties concerning the early completion by the Southern Pacific Company of a through line from San Francisco to Los Angeles by the way of San Jose, San Luis Obispo and Santa Barbara. The railroad company is proceeding very slow in constructing the road, in the opinion of some people, but the indications point strongly to the belief that its completion is not far off. The gap to be filled extends from Templeton to a point 18 miles north of Santa Barbara, a distance of 150 miles. There will be some heavy work to do, but with the usual construction force that the company employs, it is almost certain that in 12 months after work is commenced the road will be completed and in running order.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3.00 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

SEEDS BY MAIL.—It is telegraphed from New York that the whole question concerning mail discrimination in the transmission of bulbs and seeds through the mails under Canadian postal regulations is likely to come up in the courts. Postmaster Carr at the suspension bridge has been temporarily enjoined at the instance of James Vick, seedsman, from interfering with packages of bulbs, seeds and plants sent through the mails from Canada on which postage has been prepaid at the rate of 1 cent for 4-ounce cases, and the case comes up for hearing May 7th.

C. E. GROSVENOR of Woodstock, New Brunswick, made us a friendly call a few days ago. Mr. G. is interested in pomology and in Jersey cattle. He has been in California some weeks, taking personal notes in Riverside, Fresno, and other places, as to soil, climate, and products, and will soon go home and give his countrymen the results of his observation through the columns of the Woodstock Press and Sentinel.

What California Enterprise is Doing.

One of the finest mail-order catalogues in the country has just been issued by Weinstock, Lubin & Co., Sacramento, Cal. It contains over a thousand illustrations and gives full descriptions and prices of this season's styles in clothing, dry goods, millinery, household supplies and the many other lines the house deals in. The book is sent free to any address and cannot but prove of interest and value everywhere.

Weinstock, Lubin & Co. have the largest mail-order shopping trade on the coast, which proves conclusively that their goods, prices and methods of business must be of the most satisfactory order.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

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—WITH—

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By MATTHEW COOKE.

Late Chief Executive Horticultural Officer of California. Illustrated with over 750 wood-cuts and 25 pages of classified illustrations. This book is designed for the use of orchardists, vineyardists, farmers and others interested in the subjects treated. It is designed to convey practical information concerning some of the species of insects injurious to the industries of cultivators of the soil, and those interested in earth produce generally. Price \$4, postpaid. For sale by Dewey & Co., publishers, 220 Market St., San Francisco.

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Who sent us a postal note from Middletown, Lak county, without sending his name?
Who did the same thing from Selma, Fresno county, some time ago?

It is impossible to give proper credits unless people will send their names with the remittance. Let all subscribers take notice.

P. S.—If people wonder why their letters are not answered or the paper stopped when they omit the postage stamp on their letters, or misdirect them, or give them to parties who never mail them, whose fault is it?

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,
T. A. SLOCUM, M. C., 181 Pearl St., New York.

Carriages.

We are receiving 10 carloads of Carriages, Buggies and Wagons from the Briggs Carriage Company of Amesbury, Mass., which will be sold at prices that will be satisfactory, considering style and workmanship. Quality of material guaranteed the best.

F. A. BRIGGS & CO.,
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Buena Vista Rancho.

A portion of this Rancho, suitable for mixed farming or dairying, containing 1672 acres, will be offered for 30 days at \$35 an acre, one-third cash, balance in three years. Address J. C. HOAG, 312 Van Ness Avenue, San Francisco, or TYLER BEACH, San Jose.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., Room 3.

GENERAL GEORGE CROOK has been appointed as Major-General to fill the vacancy caused by General Terry's retirement.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

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VALPARAISO PARK, Thoroughbred Polled Angus and Durham Cattle. Thoroughbred Berkshire Swine. Address F. D. Atherton, Menlo Park.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

J. A. BREWER, Centerville, Alameda Co. Short-horn Cattle and Grades. Young stock for sale.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Pages Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Geo. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choice bred strains.

JERSEYS—THE BEST HERD—All A. J. C. C. registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKLEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands, Aargies and Case Strains. Pouch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

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W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, L. Brahms, Houdans. Eggs \$2.

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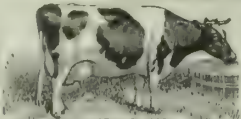
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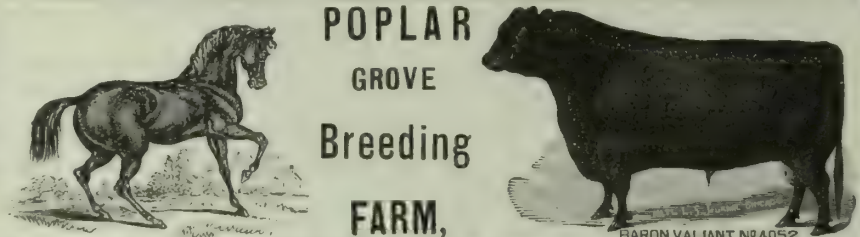
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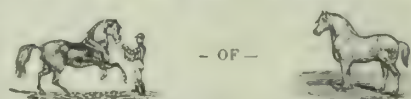
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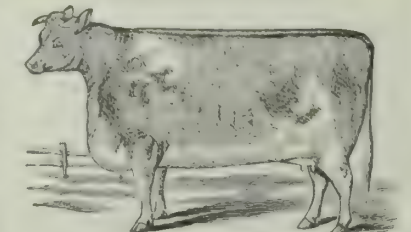
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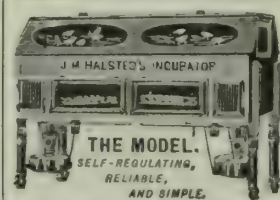
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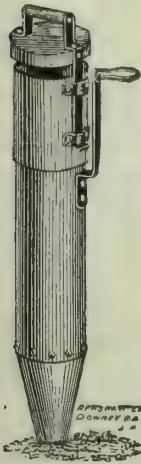
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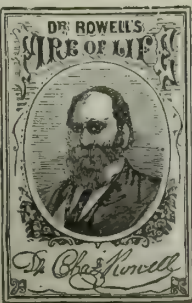
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Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly, DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
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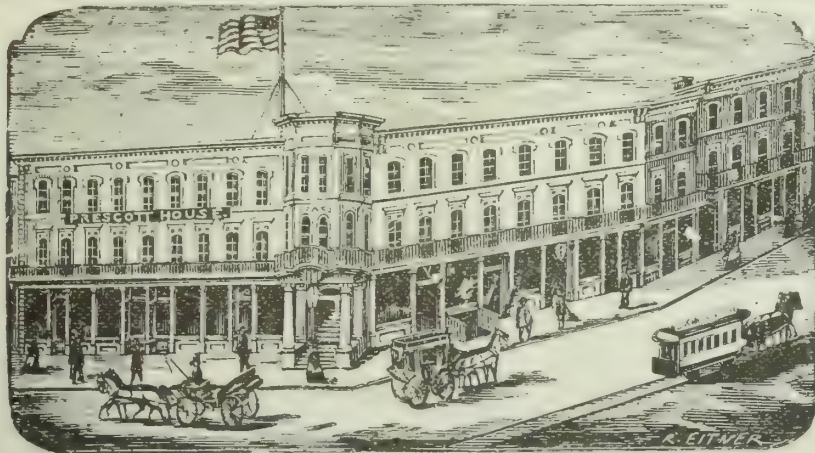
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 11, 1888.

The hot, forcing weather of the past week has brought garden truck and small fruits well along, but for grains, while forcing the plant in some sections, it is causing in other sections a sickly appearance for the want of rain. Trading the past week has been confined chiefly to seasonable vegetables and citrus fruits. The Eastern and European markets for wheat have ruled fairly steady, with a good under tone. To-day's cable is as follows:

LIVERPOOL, April 11.—Wheat. Upward tendency. California spot lots, 6s 5d to 6s 8d; off coast, 32s 9d@33s; just shipped, 32s 9d; nearly due, 32s 9d; cargoes off coast, advanced about 3d @ 9d; on passage, hardening; Mark Lane wheat, firm; French country markets, firm; wheat on passage to Continent, 32d, 000 qrs.; wheat and flour on passage to U. K., 2,250,000 qrs.; wheat and flour in Paris, firm; weather in England, milder.

Foreign Review.

LONDON, April 9.—The *Mark Lane Express*, in weekly review of British grain trade, says: The deliveries of native wheat are falling off rapidly, yet prices continue in favor of buyers. The sales of the week were 41,596 quarters at 30s, against 46,183 quarters at 32s 8d for the corresponding week of last year. Flour is depressed. Foreign wheat continues lifeless. The stocks in London increase weekly. The present quantity in the warehouses, 358,251 quarters, approaches the greatest ever known.

California Products in Chicago.

CHICAGO, April 7.—For choice fruit and desirable sizes of oranges there is a very fair demand and a firm market. California oranges in boxes containing from 128 to 226 oranges sell the best, as these are the most desirable; they also bring a premium over others. Of Florida oranges the supply is about exhausted at present. Messinas and Valencias are of fair sale and steady. There are a good many Jamaica oranges on the market and they rule rather easy. California Riverside oranges, number 128 and 226, sell at \$3.50 to \$3.75; other sizes, \$3.25; California oranges, other places, \$3; Navel, Riverside, \$5 to \$5.50; Navel, other places, \$3.50 to \$4. California lemons are slow and dull at \$1 to \$1.50 per box.

In California dried fruit there is hardly enough stir to bring about any important change. Domestic sales are made and the aggregate trade is fair, but the business done is mainly in small lots. Apricots and peaches are now the most active. In raisins there is a light business, but plums are ruling quite dull.

We quote: Apricots, sun-dried, @ lb, 11c; bleached prime do, 13c; do, choice, 14 1/2 @ 15c; do, fancy, 15 @ 16c; evaporated, choice to fancy, 14 1/2 @ 17c; peaches, sun-dried, @ lb, 11 @ 12 1/2 c; do, evaporated, unpeeled, 13 1/2 @ 15 1/2 c; do, peeled, @ lb, 17 @ 22c; plums, unpeeled, @ lb, 6 @ 7c; pitted, 10 1/2 @ 11c; prunes, according to size, @ lb, 6 @ 10 1/2 c; nectarines, according to quality, @ lb, 10 @ 14 1/2 c; raisins, loose Muscates, 2-crown, @ box, \$1.35 @ 1.45; do, 3-crown, @ box, \$1.50 @ 1.65; do, London layers, @ box, \$2.25 @ 2.35.

During the latter part of the week a better demand for beans has sprung up. The effect of this has been to cause a firmer market, not that prices have ruled any higher, but the figures which were asked early in the week without holders being able to sell, are finally obtained, so that to this extent was the market improved. At the annexed quotations beans are salable; California, according to quality, \$2.50 @ 2.75.

Eastern Wool Markets.

NEW YORK, April 10.—The wool market has been very quiet through the week, with only moderate lots taken up and prices fairly well sustained. Sales include 107,000 lbs of Texas at 16 @ 19 1/2 c; 23,000 lbs scoured California at 40 @ 45c; 50 bags scoured Territory at 44c; 10,000 lbs Cape at 25 1/2 c; 4,000 lbs Montevideo at 26 1/2 c; 20,000 lbs Territory at 19 @ 20c; 8,000 lbs scoured Texas, 50,000 lbs spring California, 5,000 lbs Australian, 10,000 lbs combing pulled, 111 bags scoured, 73 bales East India and 82,000 lbs domestic, on private terms.

Bottom reports dull trade with easier prices, the sales showing 85,000 lbs of spring California; Oregon, 2,775,000 lbs; California fall, 938,000 lbs of other domestic kinds and 746,000 lbs of foreign.

Philadelphia reports an exceptionally dull week with sales of 486,000 lbs. The sales here include 10,000 lbs fall Texas at 15 @ 17 1/2 c; 17,000 lbs ditto at 17 @ 18c; 30,000 lbs ditto at 16 @ 17c; 10,000 lbs medium unwashed fleeces, 26c; 10,000 lbs Au tian, 35 @ 40c; 11,000 lbs Montevideo, 26 @ 28c; 10,000 lbs Cape, 25 @ 26c.

Eastern Grain Markets.

CHICAGO, April 11.—P. M. —At the close of the market wheat is strong; 75c for April; 79c for May; 80c for June. Corn, steady; 49 1/2 c for April; 53 1/2 c for May; 53 1/2 c for June. Oats, steady; 31 1/2 c for May; 31 1/2 c for June. Rye, dull; 60 1/2 c for May, barley, nominal.

NEW YORK, April 11.—Wheat—93 1/2 c for cash, 91 @ 91 1/2 c for May, 91 1/2 c for June and 89 1/2 c for July.

Miscellaneous.

NEW YORK, April 10.—Mustard seed is nominal. Raisins hold the position actively gained. Two Crowns are selling at \$1.40 @ 1.55. Three Crowns, \$1.75 @ 2. A few London layers are finding buyers at from \$2.30 @ 2.35. Valencias are firmer. Hops remain the improverment lately noted, although sales are light. The best grades are regarded as good property to hold. Salt is selling at from 8 @ 14c; new Pacific at from 6 @ 12c; but samples must have a good color to make the outside price.

Local Markets.

BAGS—The market is reported strong, but buying is slow, owing to the dry weather. Calcuttas spot are quoted at 8c; June or July delivery, 8 1/2 @ 8 3/4 c.

BARLEY—In the sample market the consumptive demand has been good; in excess of receipts. In futures, the bears on Call kept prices down, notwithstanding the dry, unfavorable crop weather up to yesterday, when higher prices obtained. They succeeded in bearing the market by reporting heavy stocks in the country. At to-day's Call transactions are reported as follows:

Morning Session: Buyer season—300 tons, 79 1/2 c; 200, 80c. Buyer 1888—100 tons, 89 1/2 c; 100, 89 1/2 c; 100, 89 1/2 c; 100, 89 1/2 c. **Afternoon Session:** Buyer season—400 tons, 80c. Seller 1888—100 tons, 76 1/2 c. Buyer 1888—200 tons, 89 1/2 c; 600, 89 1/2 c; 200, 90c @ cll.

BUTTER—The market strengthened, owing to lighter receipts caused by dairy packing. Several large dairies will not pack when they can sell at 20c or over. Their course is due to the fact that this season more butter will come in tubs from the West than came last season, and consequently the market will be supplied chiefly from that source, and low prices for pack obtain. The market closed firm for fresh rolls, with several houses well cleaned up.

CHEESE—The market, under free receipts and a light call, continues to shade off, closing weak at quotations.

EGGS—The market held up well throughout the week. Hot weather is causing buyers to discriminate more closely.

FLOUR—The market is steady, with a fair demand reported.

WHEAT—In the sample market trading in shipping grades has been light, but in milling there was more doing, and at prices above the quotations of the daily press. In futures, on Call, transactions (cross orders chiefly) were large, with buyers evidently trying to keep prices down, which they succeeded in doing up to yesterday. At to-day's Call the following are the reported sales:

Morning Session: Buyer season—300 tons, \$1.30; 200, \$1.30 1/2; 100, \$1.31. Buyer 1888—300 tons, \$1.38 1/2; 500, \$1.38 1/2; 400, \$1.39; 300, \$1.39 1/2; 200, \$1.39 1/2; 100, \$1.39 1/2; 300, \$1.39 1/2 @ cll. **Afternoon Session:** Buyer season—100 tons, \$1.30 1/2; 100, \$1.30 1/2; 100, \$1.30 1/2. Buyer 1888—300 tons, \$1.39 @ cll.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to April 9, '87.	July 1, '87 to April 7, '88.
Flour, qr. sks.....	3,634,044	2,915,266
Wheat, cts.....	11,146,370	7,606,561
Barley, cts.....	1,990,661	1,956,993
Oats, cts.....	116,888	145,945
Potatoes, sks.....	719,080	938,201
Corn, cts.....	79,484	183,736
Rye, sks.....	21,497	15,998
Buckwheat, sks.....	5,615	3,054
Beans, sks.....	409,387	375,965
Bran, sks.....	378,383	402,956
Hay, tons.....	83,537	96,630
Salt, tons.....	18,853	13,050
Wool, bales.....	50,764	43,721
Hides, No.....	99,142	85,166
Raisins, 20-lb boxes.....	136,845	109,855
Quicksilver, flasks.....	14,884	24,472
Hops, bales.....	12,917	15,126

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to April 9, '87.	July 1 '87 to April 7, '88.
Flour, sks.....	124,639	256,371
Wheat, cts.....	613,727	983,540
Barley, cts.....	5,253	75
Oats, cts.....	293,952	230,605
Corn, cts.....	97,277	12,590
Wool, bales.....	9,063	7,370
Bran, sks.....	27,918	52,390
Hops, bales.....	754	508
Hides, No.....	26,493	23,956
Rye, cts.....	.....	4,798
Potatoes, sks.....	111,252	71,855

Cereals.

The United Kingdom's total supply of wheat and wheat flour imported and home wheat delivered in 206 days ended March 24, 1888, has been equal to 119,943,681 bu. of wheat, comprising 75,362,573 bu. foreign wheat and flour imported and 44,581,108 bu. home wheat delivered. The supply in the 206 days ended March 24, 1888, has been at the rate of 212,510,000. The estimated annual consumption of the kingdom is from 208,000,000 to 212,000,000 bu. Calling the seeding requirements 6,000,000 bu., there remains to be deducted for food 25,703,832 bu. There was on passage for the United Kingdom March 28, 1888, 16,488,000 bu. On the basis of 208,000,000 bu. annual consumption there will be required to purchase in and ship from all foreign countries from March 24th to August 31, 1888, 45,864,487 bu. of wheat and flour together, and at 212,000,000 bu. consumption the required quantity to be purchased and shipped will be only 49,864,487 bu. to supplement the quantity on hand and on the way. The quantity to supplement may be increased by the amount that will be taken off coast for continent and quantity exported in the year, both of which may equal 3,500,000 bu. Up to about the end of January, shipping engagements at Melbourne, Australia, had been limited. Freight to United Kingdom are 30s. to 35s. per ton. Wheat at Melbourne was 2s. 11d. to 3s. 2 1/2 d. per 60 lbs. The farmers are slow to accept these prices, and do not hasten wheat shipments from the interior to the shipping ports.

The quantity of foreign wheat on passage for France, March 16, 1888, 360,000 bu., excluding Marseilles, against 1,590,000 bu. a year ago.

The quantity of wheat on passage to Belgium March 16, 1888, was 440,000 bu., against 880,000 a year ago.

The final definite result of the Hungarian wheat crop of 1888 is 116,107,249 bu., against 118,949,255 bu., reckoned as the preliminary estimate.

The decline in the value of the Russian rouble has tended to facilitate wheat and maize exportation from Russia, but trouble from ice in the Black sea ports has tended to check the outward grain movement from Russian ports.

Roumanian grain production and grain export is assuming increased importance. The wheat area of

Roumania in 1887 was 2,200,000 acres and the yield 61,000,000 bushels, the yield varying from 15 to 45 bushels per acre and the average 28 bushels per acre. The rye and barley crops were good, but the maize crop was deficient, the failure being complete in some districts. The total quantity of grain exported in 1887 from Roumanian ports was 62,738,592 bushels, against 49,958,248 bushels in 1886, being an increase of more than one-quarter in 1887 over 1886. The vessels navigating the Danube in 1887 averaged 717 tons, against 576 tons in 1883. The total tonnage in 1887 was 1,203,683 tons, against 950,657 tons, the largest previous record, in 1886, of which the British shipping was 66 per cent, the Greek 10 per cent, the Austria-Hungary 6 1/2 per cent, the French 5 1/2 per cent and Italian 3 1/2 per cent. Steamers of over 1300 tons net register and 300 feet in length in 1887 navigated the Danube as far up as Breila. The tonnage of the port of Sulina in 1887 was 28.52 per cent of the whole, against 25.74 per cent in 1886.

Bradstreet's, which has been notorious for working in the interest of wheat-buyers, is constrained to say in its issue of March 31: "The weather has been severe on the wheat in Southern Ohio, Indiana, Kentucky and Illinois, but less so in Missouri and Kansas, and there is reason for believing that much of the reported damage from frost, etc., will be found to have been overrated after warm weather has had an opportunity to make itself felt. The season opens quite late, however, and may delay the winter-wheat harvesting, which would, of course, have the effect of drawing more extensively on our reserves, which promise, in any event, to be the smallest on July 1st for some years." *Bradstreet's* in February last published long rows of statistical figures and worded reports from correspondents going to prove that the United States would have a very large carryover of wheat at the end of the present season, and now being forced to admit that it will be very small, must make the editor feel very small. But then the editor of *Bradstreet's* in working against farmers has plenty of company in the so-called commercial editors or reporters for the daily papers in this city.

On this coast wheat crop advices are not of a satisfactory character, and without rains soon there will be a very general cry of poor yield. In Eastern Washington and Eastern Oregon the outlook is thought will not exceed, if it equals, last year, notwithstanding that an increased acreage was seeded. In western Oregon the outlook does not warrant estimating an average crop. More land is seeded in the Rogue River valley, owing to better railroad facilities.

In this State the wheat crop is far from encouraging. Many localities begin to report the plant looking sickly for the want of rain; other localities, on the other hand, report the plant looking healthy and vigorous, but as the moisture in the land is being evaporated quite rapidly, good soaking rains will be a necessity soon. Although rains can be deferred, in the latter localities, for two or three weeks before the plant shows signs of a very discouraging character, still if they come within the next week or ten days much better results will follow. It is most too early to estimate on the outlook, but it is safe to say that without rains soon, it will not be more than last year, while with but north winds later on it will be cut down still more.

While much of the remarks about the wheat crop is applicable to the barley crop, still the sowing of the latter on lowlands will give us a large output, but not as much as in 1887, owing to the acreage seeded not being so large. There can be no doubt but an increased acreage will be cut for hay, which will tell in reducing the total yield.

In the wheat market buyers have been bearing prices by cross orders on Call and in other ways better known to them. As the crop prospects are not so encouraging, holders of wheat are disposed to await future developments before offering to sell. Choice wheat is scarce and hard to get except by bidding well. Millers are compelled to pay \$1.37 1/2 for choice, not gilt-edged. This price was paid to McIntosh at Nelson by a miller. The grade was barely choice. While buyers quote to the daily press low prices, they pay for straight parcels from 2 1/2 @ 5c per cental more. Oregon continues to send us Willamette valley wheat which costs delivered on the wharf from \$1.38 1/2 @ 1.41 1/2 per cental.

The barley market has ruled firmer the past week, notwithstanding buyers both on Call and in the open market did all they could to cheapen prices, and, of course, they were ably assisted by the daily press in their commercial columns. Receipts of barley were light, not up to the consumptive requirements, consequently the reserve stock has been drawn on quite freely, which will cause a decided shrinkage by May 1. The warmer weather has caused more sampling by brewers, but so far as can be ascertained the buying was light.

In oats the demand was light, owing to a weaker tone for off grades. Choice grades continue in light supply and command relatively higher prices.

Corn continues irregular but with a strong tone. Any buying demand advances prices and any selling pressure causes a shading off.

Rye continues weak and in buyers' favor.

Feedstuff.

Light supplies, a good demand and a free demand, combined with dry weather, cause hay to rule strong at full prices. Alfalfa and the poorer grades are slow, but good to choice are wanted.

In ground feed there is a good demand, but continued free receipts of bran and middlings from Oregon keep values steady. Ground barley and feedmeal are firm, with a continued good demand for the former.

Fruits.

Apples are not quotable. In citrus fruits, the market continues overstocked with poor, inferior oranges, lemons and limes. Choice, well-selected, good-keeping oranges and limes are wanted. The warm weather of the past few days stimulated the consumption. From up North there is a good demand.

Pineapples are in heavy supply and lower. The first gooseberries of the season came in yesterday and fetched 25 cents per lb. F. Baumberger at Haywards was the grower.

Straubers are coming in more freely, with the quality greatly improved. Prices are shading, as buyers, owing to the warm weather, only purchase in small quantities, believing that the forcing weather will ripen the fruit rapidly.

The fruit crop, as near as can be learned at present, will be as follows: Apricots short, plums and

prunes large, pears average; peaches will be above an average, owing to more trees bearing. For apricots 2 to 3 cents is asked by nurserymen.

The market on this coast is about bare of raisins, while the stock at the East is passing rapidly into consumers' hands.

The grape crop, at present, looks very encouraging for a large yield and of a superior quality, too. Wine grapes and raisin grapes will command more money, for both wines and raisins are higher with stocks light.

In dried fruits, the market is nearly bare of choice bright, while off-colored are going into consumption quite fast. Apples are scarce and strengthening, under a good demand. It now looks as if the market will be cleaned up of all kinds before the new crop comes in.

Vegetables.

Garden truck is coming in more freely, owing to the warm, forcing weather.

The receipts of asparagus, peas and rhubarb the past week were quite heavy, but prices kept well up. Cucumbers are coming in more freely, with prices shading. Tomatoes are in light receipt as yet, but heavier supplies are looked for soon.

New potatoes make a much better showing both in quantity and quality. Some engagements are said to be made for early shipment to points west of the Missouri river. The crop this year will be large.

Old potatoes, except for seed purposes, are slow and low. For seed, some varieties sell well.

Onions have ruled fairly steady throughout the week. The crop this year promises to be large.

Live-Stock.

Under free offerings, bullocks are a shade lower, with a weak tone at the close. The introduction in Los Angeles of dressed meats from the West and the offering of dressed meats from the same section on this market is against sellers of live-stock. Mutton sheep are weak and lower, under freer selling. Calves and lambs are easier. Hogs are a shade weaker. Hard grain-fed fetches 6 1/2 c. Very few dairy-fed are coming in, yet those coming in sell at from 6 1/2 c to 9 1/2 c, according to size and condition—block hogs fetching the most money. Cows sell readily at \$30 to \$40 for the dairy, and \$40 to \$60 for family use. In horses, there is a good demand for single-footers, driving animals, matched teams and general utility horses. Where animals combine the desired color, freedom of motion and are lively, but not fractious and hard to manage, they find buyers at good prices. Some have been sold lately at an advance on last quotations, but they meet the buyers' views in almost all essential points.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed, and one-half from the price of grass-fed, that is, animals running at large).

HOGS—On foot, grain-fed, 6 1/2 @ 6 3/4 c per lb.; dressed 9 @ 9 1/2 c per lb.; soft, 5 1/2 @ 6 c per lb.; dressed, 7 1/2 @ 8 c per lb. Stock hogs, 3 1/2 @ 5c per lb.

BEEF—Stall-fed, 8c per lb.; grass-fed, extra, 7 1/2 c per lb.; first quality, 7c @ — per lb.; second quality, 6 1/2 @ — per lb.; third quality, 5 @ 6c per lb.

VEAL—Choice, 9 @ 10c per lb.; fair to good, 7 @ 8c per lb.

MUTTON—Wethers, 7 1/2 @ 8c per lb.; ewes, 7 @ 7 1/2 c per lb.; lamb-spring, 10 @ 12 1/2 c per lb.

Miscellaneous.

Poultry continues to rule high for the season, under light receipts and a good demand. Some dressed came in from Omaha, but were readily placed.

Beans have a stronger tone, with holders asking more money. The demand is good.

In honey, there is nothing new to report. It is claimed that the crop will be large and of superior quality.

In hops, the warm weather has stimulated the demand. The stock of choice on the market is light.

In wools, there is absolutely nothing doing. A few straggling clips are coming in, but until receipts increase more rapidly, trading will be slow. It looks as if medium and fine wools will do well, as the supply at the East is light.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way.....	403,861	206,916
In port, disengaged.....	53,259	102,089
In port, engaged.....	7,856	16,820

Totals..... 464,976 325,825
To obtain the carrying capacity, add 60 per cent to the tonnage.

Tonnage on the way to Oregon, 22,835; tonnage at Portland, Oregon, loading and to load, 19,572. Total tonnage, 42,407.

San Francisco, April 11, 1888.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

notations, while very poor		WEDNESDAY, April 11, 1888.	
Apples, bx com.....	@ —	do evaporated	12 @ 18.
do choice.....	@ —	Peaches.....	9 @ 10 1/2
Apricots, lb.....	@ —	do pared.....	@ —
Bananas, bunch, 2 50 @ 4 00		do evaporated	20 @ 25
Blackberries, ch.....	@ —	Pears, sliced.....	4 @ 7
Chanteloupes, cr.....	@ —	do grid.....	@ —
Cherries white bx.....	@ —	do evaporated	11 @ 7
do black.....	@ —	Plums, evapo'd 11 @ 12 1/2	
do Royal Ann.....	@ —	do unplitted.....	4 @ 7
Cherry plums.....	@ —	Prunes.....	7 @ 10
Crabapples.....	@ —	do French.....	8 @ 11
Cranberries.....10 00 @ 12 00		Zante Currants	8 @ —
Currants ch.....	@ —	RAISINS.	
Gooseberries lb.....	@ —	Dehesa Clus, fcy 3 25 @ 3 50	
Figs, black bx.....	@ —	Imperial Cabin.....	
do white bx.....	@ —	do fancy.....	2 00 @ 2 25
Grapes, white.....	@ —	Crown London.....	
do black.....	@ —	Layers, fcy.....	2 00 @ 2 25
do Rose Peru.....	@ —	do Loose Musc.....	
do Muscat.....	@ —	cats, fancy 1 90 @ 2 10	
do Tokays.....	@ —	do Loose Musc.....	
Isabel.....	@ —	cats.....	1 60 @ 1 90
Wine, Zinfandel.....	@ —	Cal. Valencias.....	1 60 @ 1 80
do Mission.....	@ —	do Laysen.....	1 50 @ 1 80
Limes, Mex.....	3 00 @ 5 00	do Sultanah.....	1 60 @ 1 75
do Cal box.....	50 @ 1 25	Dried, sacks, lb.....	5 @ 6
Lemons, Cal, bx 1 00 @ 2 50		Outside brands of raisins	
do Sicily, box.....	3 50 @ 4 50	sell at from 25 cts to 50 cts less	
do Australian.....	@ —	than above quotations.	
Nectarines box.....	@ —	Fractions come 25, 50 and 75	
Oranges, Com bx 1 00 @ 1 50		cents higher for halves, quarters	
do Choice.....	1 75 @ 3 00	and eighths.	
do Navel.....	@ —	RAISINS FOR TABLES.	
choice.....	4 00 @ 5 50	Ashtokenes, doz.....	@ —
do do Com.....	2 00 @ 3 50	Asparagous.....	1 00 @ 2 00
do Panama.....	@ —	do ext choice 2 50 @ 3 00	
do Panama.....	@ —	Okra, dry, B.....	15 @ 30
Peaches, bx.....	@ —	do green bx.....	@ —
Crawforda, bx.....	@ —	Parasips, cal.....	2 50 @ 3 25
do choice.....	@ —		

Pears, doz.....	— @ —	Peppers, dry lb.....	8 @ 10
do choice.....	— @ —	do green, lb.....	10 @ 15
do Bartlett, bx.....	— @ —	Pumpkins pr doz.....	— @ —
Persimmons.....	— @ —	Squash, marrow.....	— @ —
Pineapples, doz.....	2 50 @ 4 50	do Summer bx.....	— @ —
Plums lb.....	— @ —	do choice.....	— @ —
Pomegranates, b.....	— @ —	Tomatoes box.....	3 00 @ 4 00
Prunes lb.....	— @ —	do choice.....	— @ —
Quinces bx.....	— @ —	Turnips ct.....	1 00 @ 1 25
Raspberries ch.....	— @ —	do large box.....	— @ —
Strawberries dr.....	1 00 @ 1 50	Cabbages, 100 lb.....	95 @ 1 25
Watermelons, 100.....	— @ —	do Jarrota, sk.....	30 @ 50

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS.		POTATOS.	
Bayo, ct.....	2 00 @ 2 25	New.....	75 @ 1 00
Butter.....	— @ —	Burbank.....	75 @ 1 15
Pea.....	3 40 @ 3 65	Early Rose.....	40 @ 55
Red.....	2 20 @ 2 50	Cuffey Cove.....	40 @ 55
Pink.....	2 20 @ 2 50	Petaluma.....	45 @ 55
Large White.....	3 40 @ 3 60	Tamales.....	65 @ 75
Small White.....	3 40 @ 3 70	River reds.....	40 @ 60
Lima.....	3 25 @ 3 55	Jersey Blues.....	— @ —
Field Peas, blk eye.....	2 00 @ 2 10	Humboldt.....	— @ —
do green.....	2 00 @ —	do Kidney.....	— @ —
do Niles.....	2 10 @ —	do Peachblows.....	60 @ 70
BROOM CORN.		do Uhle.....	— @ —
South'n perton.....	60 @ 80 00	do Oregon.....	60 @ 70
North'n perton.....	60 @ 80 00	do Salt Lake.....	— @ —
CHICORY.		Sweet.....	— @ —
California.....	6 @ 7	POULTRY AND GAME.	
German.....	7 @ 8	Hens, doz.....	8 00 @ 10 00
DAIRY PRODUCE, ETC.		Roosters.....	7 00 @ 13 00
Cal. fresh roll, lb.....	20 @ 22	Broilers.....	6 00 @ 9 50
do Fancy brands.....	24 @ 25	Ducks, tame.....	9 00 @ 13 00
Pickle roll.....	— @ —	do Mallard.....	— @ —
Firkin, new.....	— @ —	do Sprig.....	— @ —
Eastern.....	18 @ 20	Geese, pair.....	1 75 @ 2 25
EGGS.		do Goslings.....	2 75 @ 3 50
Cal. ranch, doz.....	21 @ 23	Wild, doz.....	— @ —
do store.....	20 @ 21	Turkeys, lb.....	20 @ 22
Ducks.....	— @ —	do Dressed.....	— @ —
Oregon.....	— @ —	Turkey Feathers.....	— @ —
Eastern.....	19 @ 21	tail and wing.....	— @ —
FEED.		Suipes, Eng, doz.....	— @ —
Bran, ton.....	13 50 @ 15 00	do Common.....	— @ —
Feedmeal.....	30 00 @ 31 00	Doves.....	— @ —
Gr'd Barley ton.....	18 00 @ 20 00	Quail.....	— @ —
Hay.....	10 00 @ 18 00	Rabbits.....	1 00 @ 1 25
Middlings.....	16 50 @ 17 50	Hare.....	1 00 @ 1 50
Oil Oats Meal.....	32 50 @ —	Venison.....	— @ —
do new process.....	28 50 @ —	PROVISIONS.	
Straw, bale.....	45 @ 65	Cal. Bacon.....	— @ —
FLOUR.		Heavy, lb.....	11 @ 12
Extra, City Mills.....	4 00 @ 4 35	Medium.....	12 @ —
do Country Mills.....	3 75 @ 4 00	Light.....	12 1/2 @ —
Superfine.....	3 25 @ 3 50	Extra Light.....	13 @ —
GRAIN, ETC.		Lard.....	9 @ 11
Barley, feed, ct.....	70 @ 85	Cal. Smoked Beef.....	11 1/2 @ 12 1/2
do Brewing.....	95 @ 1 15	Hams, Cal.....	12 @ 14
Oatmeal.....	1 25 @ —	do Eastern.....	14 @ 15
do Coast.....	95 @ 1 15	SEEDS.	
Buckwheat.....	1 75 @ 2 25	Alfalfa.....	8 @ 9
Corn, White.....	1 32 @ 1 35	Canary.....	3 @ 4
Yellow.....	1 30 @ 1 35	Glover red.....	11 @ 12
Small Round.....	1 32 1/2 @ 1 36 1/2	White.....	20 @ 22
Nebaska.....	1 20 @ —	Cotton.....	20 @ 3
Oats, milling.....	1 65 @ 1 70	Flaxseed.....	2 @ 4
Choice feed.....	1 47 1/2 @ 1 50	Hemp.....	4 @ 4 1/2
do good.....	1 42 1/2 @ 1 45	Italian Rye Grass.....	10 @ 11
do fair.....	1 35 @ 1 40	Perennial.....	7 @ 9
do black.....	1 30 @ 1 40	Millet, German.....	5 @ 6
do Oregon.....	— @ —	do Common.....	5 @ 6
Rye.....	1 90 @ 2 00	Mustard, white.....	2 @ 2 1/2
Wheat milling.....	— @ —	Brown.....	3 @ 3 1/2
Gilt edged.....	1 40 @ —	Rape.....	14 @ 20
do Choice.....	1 37 1/2 @ —	Ky Blue Grass.....	15 @ 17
do fair to good.....	1 35 @ —	3d quality.....	13 @ 15
hipping choice.....	1 35 @ 1 36 1/2	Sweet V. Grass.....	7 @ —
do good.....	1 32 1/2 @ 1 34 1/2	Orchard.....	17 @ 18
do fair.....	1 30 @ 1 31 1/2	Red Top.....	9 @ 10
HIDES.		Hungarian.....	8 @ 40
Dry.....	11 1/2 @ 12	Lawn.....	30 @ 40
Wet salted.....	5 1/2 @ 6 1/2	Mosquit.....	8 @ 9
HONEY, ETC.		Timothy.....	7 @ —
Beeswax, lb.....	21 @ 25	TALLOW.	
Honey in comb.....	12 1/2 @ 16	Crude, lb.....	2 @ 4
Honey in comb.....	16 @ 19	Refined.....	6 @ —
fancy.....	16 @ 19	WOOL, ETC.	
Extracted, light.....	6 1/2 @ 7 1/2	FALL—1887.....	
do dark.....	6 1/2 @ 6 1/2	Humboldt.....	15 @ 18
HOPS.		Mendocino.....	15 @ 18
Oregon.....	6 @ 15	Sac'to valley.....	12 1/2 @ 15
California.....	6 @ 15	Free Mountain.....	15 @ 18
ONIONS.		N'h'n defective.....	— @ —
Pickling.....	— @ —	S Joaquin valley.....	10 @ —
Red.....	— @ —	do mountain.....	12 @ 15
Silverskins.....	2 00 @ 2 50	Cava's & F'th'l.....	12 @ 17
Cut.....	75 @ 1 25	Oregon Eastern.....	14 @ 20
NUTS—JOBBER.		do valley.....	16 @ —
Walnuts, Cal, lb.....	8 @ 10	Southern Coast.....	— @ —
do Chile.....	8 @ —		
Almonds, hshl.....	5 @ 7		
Soft shell.....	12 @ 13		

To Every Pump Maker,

Owner! Runner! Agent!

If there is ANY PRACTICAL QUESTION concerning ANY APPLICATION or ANY ADJUSTMENT of ANY KIND of a PUMP which is not answered in Mr. ROBERT GRIMSHAW'S PUMP CATECHISM,* we would like to have it for answer in the next edition or volume.

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PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.		Eureka.		Red Bluff.		Sacramento.		S. Francisco.		Fresno.		S. L. Obispo.		Los Angeles.		San Diego.	
	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.
April 5-11.																		
Thursday.....	.00	54 SE	Fr.	.00	52 N	Cl.	.T	62 W	Cl.	.00	60 N	Cl.	.00	69 W	Cl.	.00	64 N	Cl.
Friday.....	.03	54 S	Cy.	.00	52 Nw	Fr.	.00	64 S	Cl.	.00	64 W	Cl.	.00	56 Nw	Cl.	.00	68 N	Cl.
Saturday.....	.04	50 S	Cy.	.00	52 Nw	Cy.	.00	70 N	Cl.	.00	64 Nw	Cl.	.00	58 Nw	Cl.	.00	68 W	Fr.
Sunday.....	.18	52 Nw	Cy.	.00	52 N	Fr.	.00	70 N	Cl.	.00	64 Nw	Cl.	.00	61 W	Cl.	.00	68 W	Cl.
Monday.....	.00	50 Nw	Cy.	.30	54 Nw	Cl.	.00	72 N	Cl.	.00	66 N	Cl.	.00	64 W	Cl.	.00	70 N	Cl.
Tuesday.....	.00	54 SE	Fr.	.00	52 N	Cl.	.00	76 N	Cl.	.00	70 N	Cl.	.00	66 Nw	Cl.	.00	66 W	Cl.
Wednesday.....	.00	64 Nw	Cl.	.00	60 Nw	Cl.	.00	82 N	Cl.	.00	72 Nw	Cl.	.00	74 N	Cl.	.00	78 W	Cl.
Total.....	.22			.00			.T			.00			.00			.00		

EXPLANATION.—C, for clear; Cy, cloudy; Fr, fair; Fy, foggy; — indicates too small to measure. Temperature, wind and weather at 12.00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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IS THE

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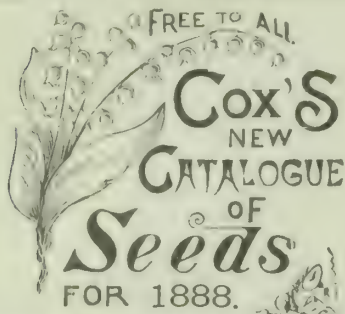
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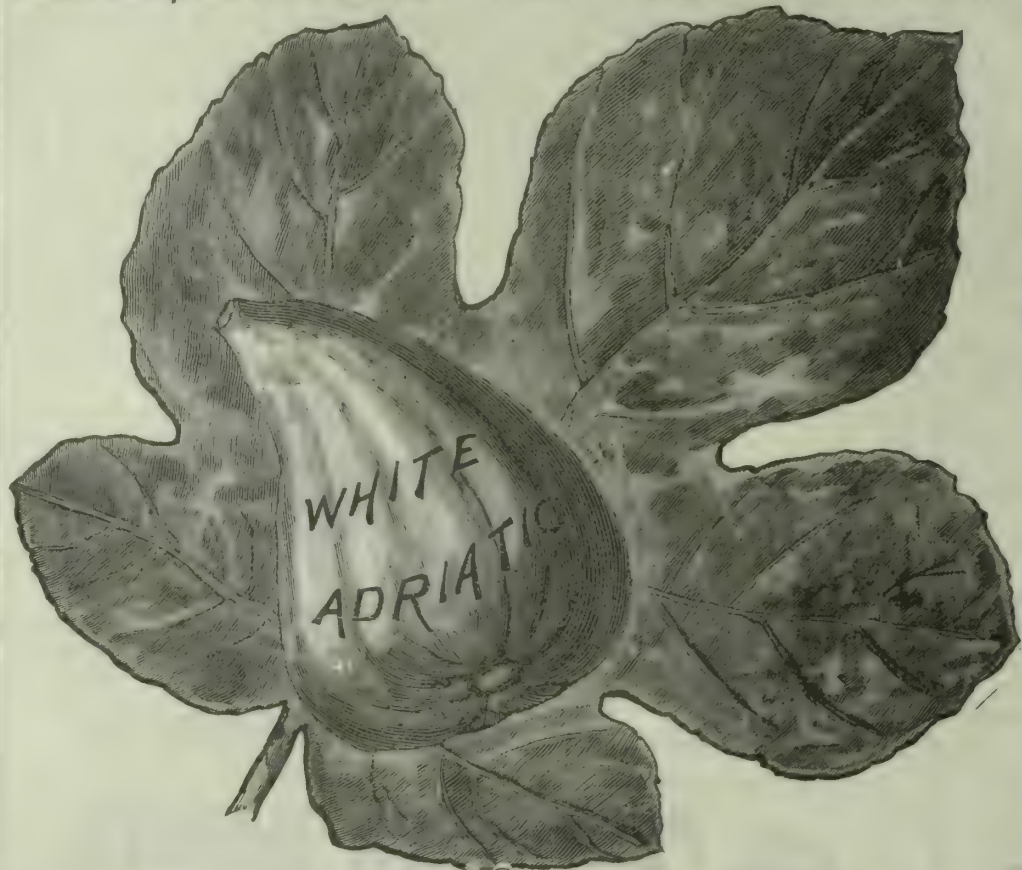
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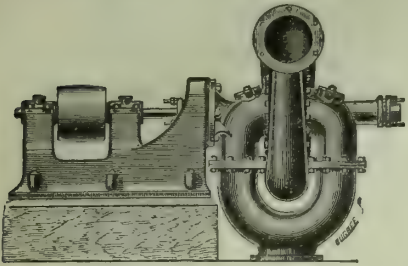
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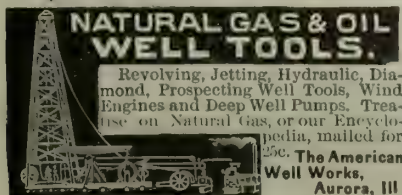
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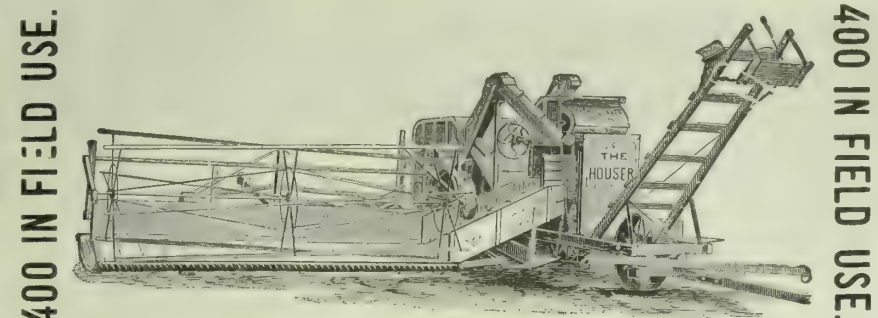


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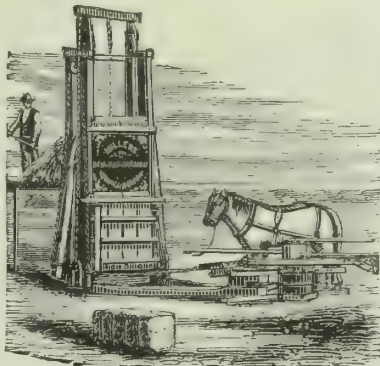
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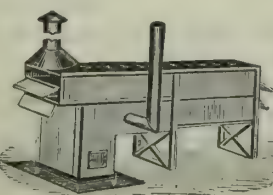
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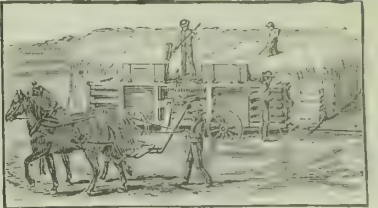
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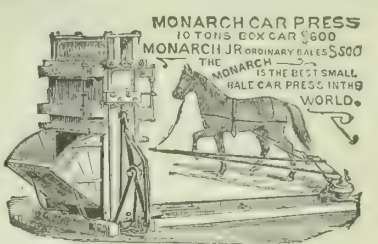
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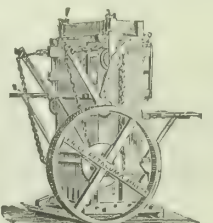
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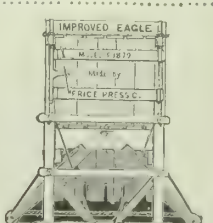


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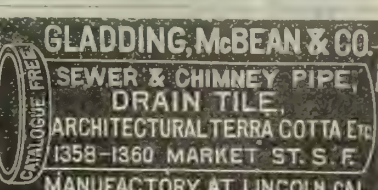


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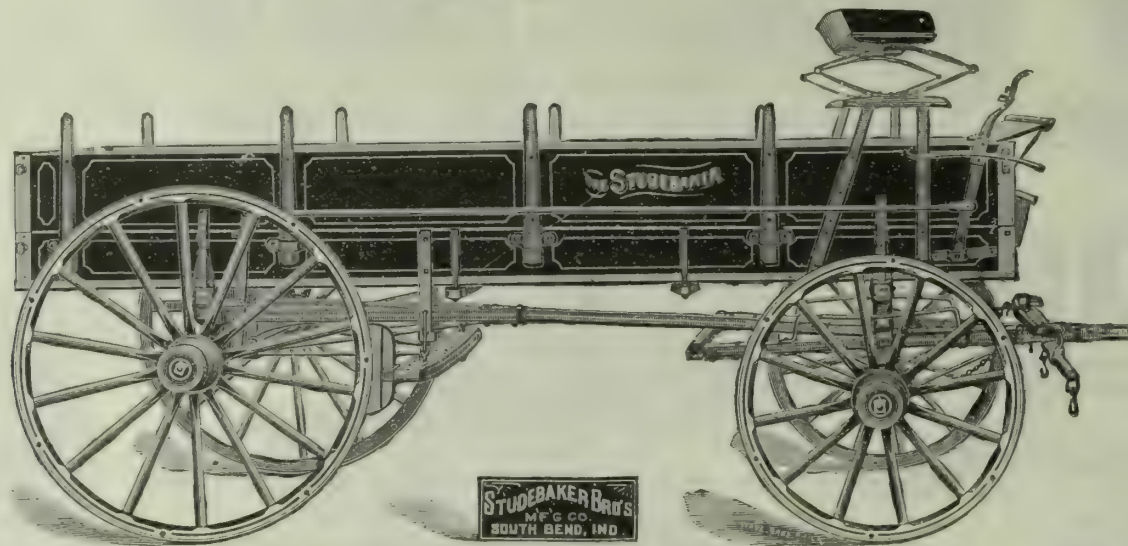


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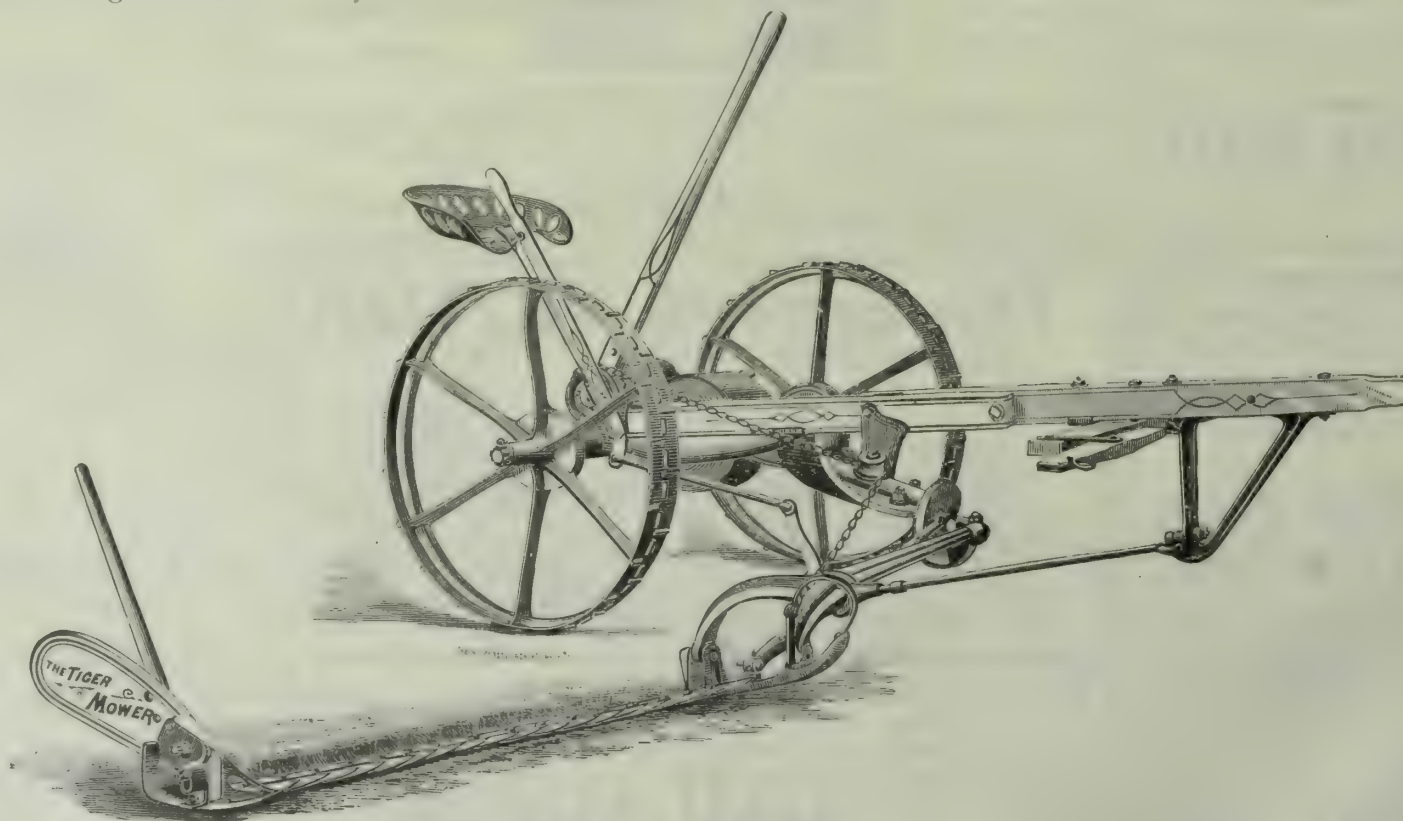
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Serious Loss of Horses at Palo Alto.

All lovers of the noble animal will be pained to hear of a disastrous fire at the Palo Alto stables of Senator Stanford in which six animals perished and two others suffered severe injury by the flames. Palo Alto stables were planned to reduce danger from fire to a minimum without using fire-proof materials. The buildings were but one-story sheds, the floors of earth well tamped and no inflammable material was allowed to remain except such as was absolutely necessary for feed and bedding. With such precautions and the continual patrol of a watchman, a fire seemed very unlikely to occur, and in fact seems unaccountable except on the theory of incendiarism.

But a fire did break out about midnight Tuesday night just after the watchman had passed the locality and found everything in proper order. He had not reached his room before the presence of fire was discovered, and almost before the stablemen could raise a cry the one-story wooden sheds were blazing fiercely. Every person on the farm ran to the barns to try to liberate the racers, but almost before a door could be opened the heat had driven the men back, and they were forced to witness the cremation of the horses without being able to lift a hand to save them.

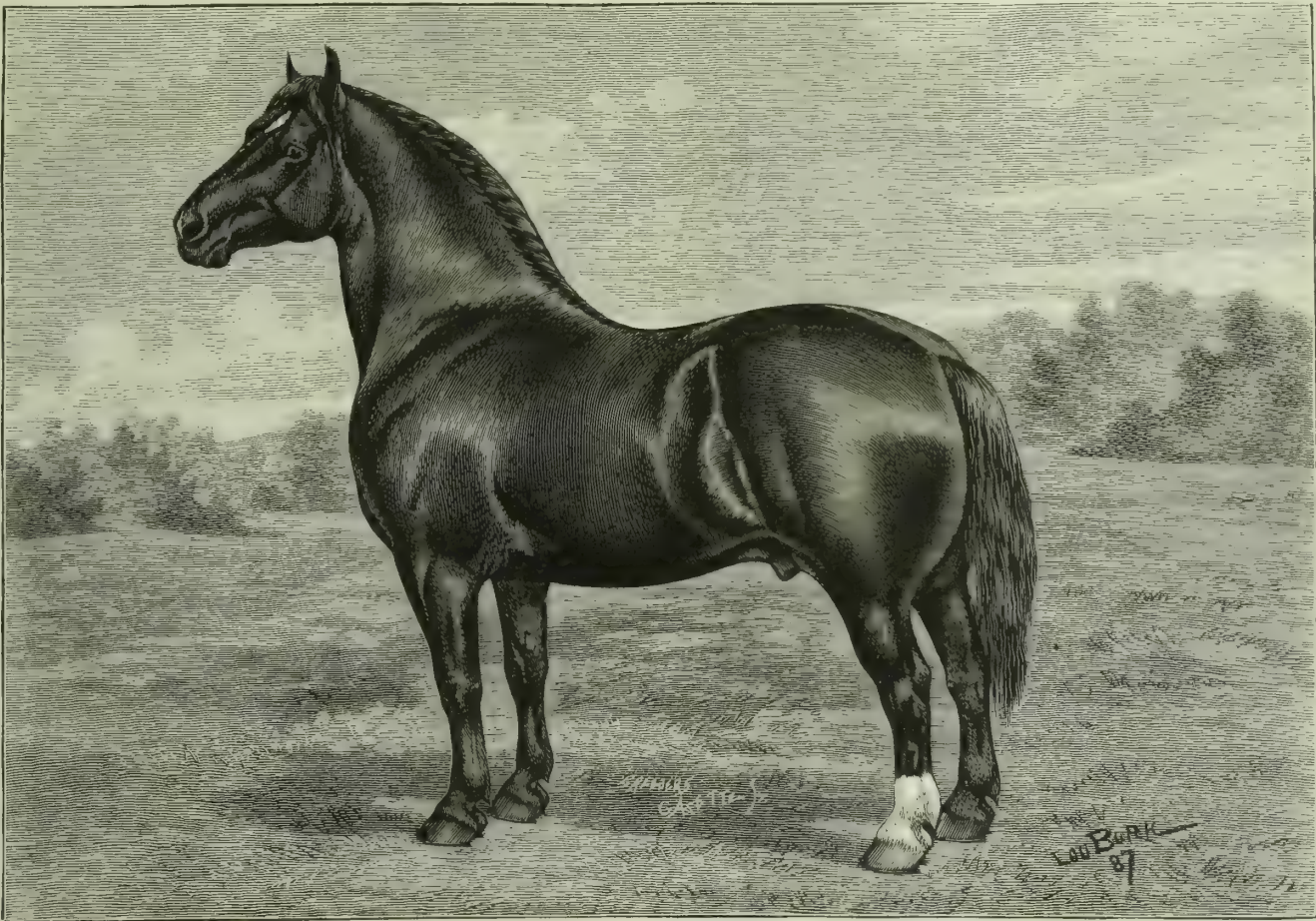
As we go to press on Wednesday, the following statement of the deplorable results of the fire is received: Burned to death—California Belle, four years old, dam Claribel, by Abdallah Star, 2:24; Rexford, three years old, dam Rebecca, by Gen. Benton, 2:24; Maiden, three years old, dam May Queen, by Alexander's Norman, 2:23; Norlaine, yearling, dam Norma, by Alexander's Norman, 2:31½. Also, the colts Emma Robertson, Troubadour, Lowell, and Howard.

Seriously burned but still living on Wednesday—Palo Alto, dam Dame Winnie, by Planet, 2:20½. Manzanita, dam Mayflower, by St. Clair (fastest to date), 2:16.

It will be seen that the stable contained some of the most rapid travelers on the turf, and there are not many sportsmen in the country who will not feel a pang of regret at the death of the animals, and a shock at the manner in which it was encompassed. It will be rather the sentimental than the pecuniary aspects of the loss which will affect Senator Stanford, for he is famed for his love of his animals.

A Fine Percheron.

We give on this page a very striking portrait of an imported Percheron, "King of Perche," a horse which has made a remarkably fair record, considering his brief residence in this country. The horse is the property of W. L. Ellwood of De Kalb, Illinois, who says he has refused \$5000 for him. King of Perche, 4975 (6738), is a worthy specimen of his race. He



IMPORTED PERCHERON STALLION KING OF PERCHE.

is a jet black, and a very fine-styled horse. Imported in July, 1886, he won first premium in the four-year-old class of the great Percheron show held in Chicago last September. He has also won sweepstake premiums at the Nebraska and Illinois State fairs, and the first premium at the St. Louis fair in the four-year-old and over class.

King of Perche was foaled in April, 1882; bred by M. Brault, commune of Brosse, canton of Thiel. Sire, Cheri (6746), owned by Chas. Avelin, he by Favors (725), he by Favori I (711), he by Vieux Chaslin (713), he by Coco (712), he by Mignon (715), he by Jean-la-Blanc (739), etc. Dam, Rustique (6737), owned by M. Brault, she by Superior (730), he by Favori I (711), described above.

The artist has succeeded in presenting the horse in a very spirited pose, and shows his excellent points and proportions well.

A SALOON having started north of the city limits of Pasadena, the citizens of that section met in mass meeting and decided to annex to Pasadena, thus extending the city corporate limits nine square miles.

AUSTRALIAN PARASITES OF THE FLUTED SCALE.—A peculiar little tin box, all the way from Australia, was received this week by W. G. Klee, State Inspector of Fruit Pests. It contained several parasites, which destroy the *orthesia*, a scale closely allied to the white, cottony cushion scale bug so destructive to fruit trees. There were also in the box some of these scales on which the parasites prey. Several of the scales were dead and their bodies

perforated with tiny holes, where the parasites had left after killing them. This method of destroying the bug pest has not yet been tried in California, and the intended experiment will prove very interesting. The parasites received by Mr. Klee will be propagated by Mr. Kooble in Alameda, and if successful in this climate as they have been in Australia, immediate steps will be taken to spread them over the State.

It is proposed now to carry into effect the original proposition of making a large canal bringing water from the American river to the town of Folsom. It is to be six feet deep, 32 feet wide and with a fall of nearly a hundred feet. This will give employment to prisoners and give power for manufacturing purposes, and make Folsom a manufacturing town with unlimited water-power. The canal will also furnish water to irrigate a large tract of land.

THE four Assistant Commissioners to the Melbourne Exposition will be F. B. Wheeler of New York, L. R. Miller of Lynchburg, Va., Mr. Stevens of Boston, and Mr. Kemble of New Orleans. The Chief Commissioner is Frank McCoppin of San Francisco.

Cactus for Fodder.

We recently referred to the food value of cactus pads or fleshy leaves as determined by chemical analysis of their substance. We also had a letter from a Texas correspondent, describing her experience. A few days ago the Experiment Station at Berkeley received a letter from E. H. Carr of Kerrville, Texas, who is an amateur experimenter with grains and forage plants, telling his experience in feeding cactus pads and general facts concerning the practice. He commonly fed boiled cotton-seed to cows in milk, but his supply of seed running low he began giving one ration of seed and one of cactus, burning off thorns and chopping up the leaves.

He writes that the Mexican people have for many generations been in the habit of feeding prickly pear to cattle, sheep and goats, but it never attracted much attention on the Texas side of the line until Dr. Carr, the s, in the winter of 1886 and '87, fed a large number of beeves on prickly pear and cottonseed meal and sold them in Chicago. Mr. Carr writes that there are now machines made in Texas for burning the thorns off the whole plant, where it grows, with crude petroleum, and another for crushing the leaves and feeding

without burning. Most of the cactus which Mr. Carr fed this year was from a single plant which he had started himself. The pads of the last year's growth root easily if stuck in the ground. He believes that cactus has as much nutriment as turnips, and perhaps more, and that on millions of acres in Southern California, Arizona, Nevada, New Mexico and Western Texas the prickly pear may be a valuable auxiliary to the stockmen to carry stock through a season of drouth.

REDDING is the shipping point for large quantities of the wool clip of Modoc and Lassen counties and southeastern Oregon, and has abundant water-power for manufacturing purposes. It is expected that the company to build the proposed woolen-mill will be formed with \$100,000 capital, half paid up.

A WINE STORAGE cellar to be built of stone and cost \$350,000 has been commenced at St. Helena, Napa Co.

MANY acres of eucalyptus trees are being planted for fuel in the Santa Ana valley.

HORTICULTURE.

The Santa Barbara Convention.

(Specially reported for the RURAL PRESS.)

In the beautiful town of Santa Barbara, there opened on April 9th the Ninth Annual Convention of California Fruit-Growers. Mr. Ellwood Cooper, president of the State Board of Horticulture, was in the chair when the meeting was opened in the afternoon, with prayer by Rev. N. R. Peck. Messrs. Edward Iveson and H. C. Ford were elected vice-presidents and A. E. Putnam assistant secretary, Mr. B. M. Lelong of the State Board being secretary.

President Cooper appointed the following Committee on Program to outline the work of the convention: Sol. Runyon of Courtland, Sacramento county, Captain Robinson, Ojai valley, and Joseph Sexton, Goleta. President Cooper then delivered his opening address, of which we give the following extracts:

President Cooper's Address.

This will be the ninth Fruit-Growers' Convention and the fifth held under the auspices of the State Board of Horticulture.

I have noticed in the vicinity of Santa Barbara quite a number of English walnuts and other fruit trees being planted on land recently covered with live-oaks. These orchards can only result in failures, which the owners can ill afford.

Samples of the same varieties of prunes, peaches and apricots were shown me when last in San Francisco. The one in demand at high prices, the other dull of sale at probably half price. Drying fruit successfully and putting it on the market in good condition is the key to successful fruit-growing. The discussions at the Santa Rosa Convention were more full on this subject than at any previous convention, so that I call your attention to the same and especially to the remarks of Mr. Hayden of San Francisco and Mr. Gladden of Healdsburg.

In Consular Report Vol. 67, page 476, our commercial agent at Mayaguez says: "If you want dried apples, the American fruit is first offered to you, while a long string of adjectives is thrown off at you in praise of it. These apples are to be met with almost everywhere, and are preferred to all others on account of the excellence with which they are dried, and for their cheapness."

The questions of greater importance to be considered at the convention are first, insect pests; second, distribution and drying as accessory to the distribution. In a few years more we will have ten times as much fruit as now, and it is necessary that we combine to increase the demand; as a very important part of the marketing I would encourage the further investigation and application of cold storage. With this aid our marketing period can be more than doubled.

Insect Pests.—The *Icerya purchasi*, or fluted scale, has assumed very alarming proportions in the vicinity of Santa Barbara. There is nothing practically being done to eradicate this pest beyond the city limits. Our community does not comprehend the danger that awaits them. Some radical measure should be adopted to arrest the spread of this insect.

I recommend the appointment of a committee to visit the orchards of S. P. Stow and the Hollister estate, and report to this convention that we may take action regarding the same. I trust there will be some reports made of the experiments with gas in Los Angeles county. I do not wish to be considered an alarmist, but I beg leave to call your attention to what has been done in New Zealand regarding the rabbit pest. I quote from Consul Campbell of Auckland, Vol. 88, page 150:

"The rabbit pest is the greatest evil that has afflicted the Australian colonies, and perhaps no greater evil has ever come upon any country. To eradicate it from New Zealand has been the constant aim of Government and people, and the ways and means devised and put in operation to this end have been numerous and ingenious. A rabbit department has been established in the Government, with a superintendent in charge, local boards have been created and private enterprises set on foot, all having one common object in view—the extermination of the rabbits. They have eaten out the ranges so that the capacity for maintaining sheep has greatly lessened. The loss has been immense, running up into millions. At the Australian stock conference held in Sydney in October, 1886, it was shown that the carrying capacity of the land had been reduced a third, and the weights of fleeces had decreased from one pound to one pound and a half each fleece. The lambing percentage had decreased from 30 to 40 per cent, while the death rate increased from 3, 4, 5 and 6 to 10, 11, 12 and 13 per cent. In 1882 what is known as 'the Rabbit Act' became a law; since then the Government has expended annually \$35,000 on the Government lands alone and it was estimated that \$1,250,000 was expended annually by private individuals. During the last eight years there has been expended the sum of \$12,000,000 and a very much larger sum from the beginning of the war."

We have quite frequently of late read accounts of rabbit-drives in the San Joaquin, which have been attended with considerable sport, people

going from long distances to enjoy the fun. It is not my desire, nor do I wish to be understood as underestimating the rabbit plague in New Zealand or in the San Joaquin, but I do not hesitate to predict that the *Icerya* in California, unless soon arrested, will be worse than the rabbit plague in New Zealand. You cannot drive it, there is no sport or fun connected with fighting it; on the contrary, every one going into badly infected districts will turn away with disgust.

The *Coccus Oleæ* or *Lecanium Oleæ*, commonly known as the black scale. No new developments since reports made at the Santa Rosa Convention. The rainstorms this winter made it impossible to get on the ground during the months of January and February. No other insects excepting the above have made their appearance to create alarm so far as I have heard.

Fruit Unions.

There is no branch of the business that requires such united effort as the distribution. Without fruit unions we cannot make a financial success. We cannot grow too much fruit if it is properly distributed. The shipping of ripe fruits must not be in over quantities to any one market, but in such quantities as will be eagerly taken up for immediate consumption. Every market that will take one carload must be sought out. Trainloads can be divided at the Missouri river, and from there go to the place of destination by the most direct trunk line. It cannot be managed with success if each individual fruit-grower undertakes to ship his own fruit. It must be from a central office where a careful record is kept of fruit demands in every market, and shipments directed from that office.

The sooner fruit-growers realize this fact the better. Trees are planted by the million every year. The fruit product will be enormous, and if we do not have the knowledge of distribution perfected, serious losses must result. The drying can be carried on with the ripe fruit shipping. In fact this is the safety valve of the whole business. Ship all the ripe fruit the market will bear—dry the rest. The central office ought also to manage the dried fruit. There is no reason why any market should be overstocked with dried fruit; a suitable warehouse can be obtained where advances can be made on dried fruits and thus relieve the necessity of forcing sales. Our knowledge as to growing fruits is well advanced, we are to a certain extent well informed. Drying and canning the same. The kinds, varieties and localities the same. The manner of packing has almost reached perfection, so that we are now in the advanced stage of discussion on these points.

Sulphuring.

The sulphuring in the process of curing or drying fruits was denounced in quite an animated discussion at the Santa Rosa Convention. It was claimed by some that there was danger of poison; from others objections are made from a moral standpoint. The remarks were mostly made from statements that were without foundation in experimental facts. I have taken some pains to investigate what does result from the fumes of sulphur. It is evident to my mind that sulphuring English walnuts unless done with great care will injure them. The two lobes in more than half the nuts are not so close but that the fumes enter and seem to unite with the oil of the kernel, so that this contact will cause them to become rancid in a few months. With the almond there does not appear to be any danger.

Freight Rates on Fruits.

The Chamber of Commerce appointed a committee to act in conjunction with a committee appointed by the California Fruit Union to obtain the best possible rates from the railroad companies. The fruit-growers at the late Santa Rosa Convention also appointed a committee to act with the above committees. Our committee was composed of James Betner, Geo. F. Hooper and S. J. Stables. I recommend their continuance.

Protection to the Fruit Industry.

The Mills bill, now before Congress, puts on the free-list oranges, almonds and walnuts, and reduces the duty on raisins and prunes. I recommend that this convention respectfully protest against any change in the present tariff duties so far as it affects the fruits produced in California. The duty on almonds is five cents per pound, walnuts, 3 cents, oranges, \$1.60 per 1000. As I am a large grower of almonds and walnuts, I seriously object to any reduction in the duty. The average net price that I have received for the past five years is, for almonds, 10 9-100 cents per pound, for walnuts, 8 10. Presuming that there would be a decline equal to the duty, I should at once root out my almond trees because there could be no profit at these reduced prices. Were it even probable that by the reduction of five cents a pound our people who purchase these nuts would continue to save this amount on what they purchased, there would be some reason for the reduction. But on examination, I learn from my former agent in San Francisco who was in the shipping business, and who received consignments of these goods, that the lowest price he ever received for almonds was 22 cents. During the first years of the California production the uniform price was 25 cents. As soon, however, as more was produced than our home market would take, a rapid decline to less than one-half said price took place. They have been sold as low as 11 cents. Remove the duty

and European producers would drive us out of the business and then put up the price to former figures.

Prices of Labor.

I have taken some pains to investigate the value of labor, or the prices paid for labor, in countries where we have competitors, or may have competitors.

West India Islands—Barbadoes, Consul Reed in Vol. 86, page 248, gives the price of labor 20 cents per day for men and 15 cents for women. Antigua, Consul Jackson, in Vol. 69, page 160, men 20 to 24 cents, women much less. Guadeloupe, Consul Bartlett in the same volume, page 163, men 22 cents, women 18 1/2. Cuba, Consul Pierce, Vol. 65, page 267, men slaves \$3 per month, free men \$4.25. On the western end of San Domingo, where I lived and did business for a period of 10 years, and was for a time joint owner of a sugar plantation, we paid men 16 cents, women from 12 to 14 cents, and they boarded themselves. Italy, Consul Toukay, Vol. 69, page 123, men 120 francs per year, equal to \$22.50, with some perquisites which are estimated by the same Consul, page 124, to be worth from 40 to 60 francs per year, or about \$3, making but little over \$25 for a year's work. Near Rome, Consul Alden, Vol. 76, page 120, 20 to 40 cents, not including board. Catalonia, Consul Schenck, Vol. 70, page 243, 40 cents per day. Marseilles, Consul Mason, Vol. 70, page 215, \$5 to \$9 per month; \$7 would be a fair average. Morocco, Consul Mathews, Vol. 69, page 184, 5 to 20 cents per day. Hawaiian Islands, Consul Putnam, Vol. 69, page 140, men \$9 per month, women \$6.

I might pursue this investigation to much greater length, but do not consider it important to do so. I will, however, state that about the same rates exist on the west coast of South America, and less rates from Mexico to the Isthmus of Darien or Panama. One other fact I wish to state, although not pertinent to the fruit industry of California. Consul Mason of Dresden in the volume entitled "Labor in Europe," page 16, writes: "An important factor in the labor of Germany is not inquired of in the circular, viz., the labor of dogs. I have heard it estimated that women and dogs harnessed together do more hauling than the railroads and all other modes of conveyance of goods united. Hundreds of small wagons can be seen every day on all the roads leading to and from Dresden, each having a dog for the 'near' horse harnessed, while the 'off horse' is a woman with her left hand grasping the wagon tongue to give it direction, and the right hand passed through a loop in the rope which is attached to the axle, binding the shoulder; thus harnessed, woman and dog trudge along together, pulling miraculous loads in all sorts of weather." I mention this merely to show the difference between our American system and the system of some other countries.

We quite frequently hear of syndicates being formed to purchase large landed districts in Mexico for the purpose of orange-growing. Not at \$1000, \$1200 to \$1500 per acre, as at Riverside, or at \$1000 per acre in the San Gabriel valley, or at \$500 per acre in Goleta, this country, but at \$1 and less, with the most favored spots at less than \$10 per acre. There is not only this difference in the cost of land and price of labor, but the command that those governments have over the laborers. Consul Herring of Honduras, Central America, Vol. 82, page 288, writes: "A strike was attempted once; the strikers were hunted and arrested by soldiers or policemen, under orders from the Government authorities, given a sound flogging, and sent back to their work." Rather a summary way to solve the great problem, yet it worked like a charm.

Work of the Board of Horticulture.

It is now about seven years since the creation of the State Board of Horticulture. I had the honor of being a member of the first board, and was present at the first meeting. When I look back to that period, knowing the crude state from which we developed, the difficulties we had to encounter and our own inexperience during the first years of our organization, it is with feelings of pride that I appear before you to-day. At that time fruit-growers were groping in the dark, their operations were mere experiments, the results uncertain. To day there is no uncertainty among the intelligent fruit-growers, many branches of the industry is now a science well mastered.

I venture the assertion that nowhere in the world is the business so generally and so well understood as in California.

The dissemination of important knowledge, the progress made, has reached the most isolated fruit gardens, as well as the most princely orchards. Fruit-growers vie with each other to discover new facts and to disseminate them. We are united. Our mutual efforts have secured for us in the past year a success beyond our most sanguine expectations. I do not claim this credit on the part of the board. All interested fruit-growers have contributed. It is the result of our united efforts.

The board has been subjected to the most stinging criticisms, and very possibly deservedly so. But what other organization, State or otherwise, can show better results? We have given our time and our money almost without compensation.

I have served for seven years to the best of my ability, devoting much of my time with considerable money, and think that I should be relieved and some other put in my place.

Ladies and gentlemen, members of this con-

vention, all these questions are submitted for your consideration.

After the conclusion of Mr. Cooper's address, which was heartily applauded, Hon. Russell Heath, of Carpinteria, delivered the following

Address of Welcome.

In considering agriculture and horticulture in Santa Barbara, it will be necessary to speak of the early efforts of that devoted body of men who came to the coast under the auspices of the Catholic church, particularly protected and encouraged by the King of Spain, who then claimed this vast territory. As a body of missionaries they came to civilize the Indian tribes; but their great distance from their own country rendered it necessary for their own support and the support of their converts that the land should be cultivated. Not content with the ordinary cereals for bread and food, the habits and tastes acquired in their own favored Spain induced them to try the choicest of the fruits of their own and neighboring countries; to these wants, necessities, and desires we are indebted for the introduction of the pomegranate, fig, date, apple, pear, grape, orange, lemon, lime, olive, and the nut-bearing trees of the Mission gardens. Here it was that wheat was cultivated and manufactured into flour for the use of the different parts of the coast. From the propagating gardens established here were distributed the trees, vines and shrubs to other Mission establishments; here the sheep were cared for whose fleeces were manufactured into clothing and blankets for the priests, converts, and soldiers stationed for their protection. When we consider that this occurred 100 years ago, agriculture and horticulture can hardly be said to be in their infancy; and when we consider that at one time this Mission had under its care and instruction 3000 Indians, we must conclude that their operations must have been conducted systematically and on a grand scale. Everything had to be produced, houses built, animals raised, and subjected to toil, implements of every description manufactured. Am I saying too much, then, when I say we are greatly indebted to those missionary priests for their experiments in this new and untried land?

These things, great though they were, were destined to have an end. Revolution, the destroyer of civilization, came. The Spanish of the Americas declared their independence from Spain. The Missions were despoiled of their hard earnings and left without means of supporting themselves or the Indians. All sank into poverty together. Thus things continued until fortune finally placed our own republic in possession of our Golden State. Some time was spent in mining for the precious metals; but the ever-restless Americans soon learned that in the soil was to be found what in reality would make California one of the brightest of the American constellation. Under this new order of things Santa Barbara's first Agricultural and Horticultural Society was formed in 1856, with a membership, if my memory serves me right, of about 25, and James Ord, now stationed in Arizona, as its first president. But few of the old members still remain. From that year dates this new era in agriculture. Orchards and vineyards commenced to be planted. The thread dropped by the Mission Fathers was taken up by the American settler. All of the choice fruits of our own country have been experimented with. Europe, Asia, Africa and the islands of the sea have been called upon to increase our store. You will be able to judge with what success this work has been prosecuted when you examine the exhibition of the society. Remember this is not the time of year when we have our fruits fresh and in perfection. Such as we have, we welcome you to. In the name of the Horticultural Society, I welcome you to our society, city and county. We claim no superiority over our neighbors of other counties. We are striving to keep pace with others. The laggard has no place with us. We indulge the hope that you may see enough in our county to please and interest you, and when you shall have returned to your distant homes that some slight recollection may remain of your brethren in horticulture in Santa Barbara county. Again I welcome you.

[Other papers and addresses before the convention will be given in subsequent issues.—EDS. PRESS.]

THE APIARY.

No More Extracted Honey.

The fact cannot be denied that the beekeepers of California have for several years past been having a pretty hard time of it. We have seen prices go down gradually, year after year, until now they are so low that there is absolutely no profit in the business, at least so far as the production of the extracted article is concerned. And the decline in price has seemed to have very little reference to the amount produced. Naturally, one would suppose that in seasons of short crops prices would become correspondingly stimulated. But such has not been the case. The price has gradually fallen until two or three cents a pound is about the limit of the price received by the producer, and one does not need to know that at such absurdly low prices there is no profit for the beekeeper. There seems to be some insuperable

objection among the majority of people against the use of extracted honey. When that article was first put upon the market it was thought possible, and even probable, that its use might become general, and that so pure and healthful an article would quickly take the place of the impure and adulterated molasses, syrups and "drips," which are so largely consumed. Especially was it thought that this would be done when the price for the pure honey was put at a lower figure than those articles could be sold for. But for some reason it has proven all but hopeless to attempt to persuade people generally to become consumers of honey. As a consequence the price has, as already been stated, reached a very low point, both here and in the East, though it was much longer in getting down there than on the Pacific Coast. Now, bee-keepers all over the country are seeking some method by which to make their business profitable. Many of the most experienced bee-keepers of the East have decided that there is nothing to be done except to put a stop to the production of extracted honey and devote their entire time to the comb. It is now claimed to have been a great mistake to have put the extracted honey at so low a price compared with the comb; but the damage has been done, and it was based upon the idea that the bees could make about three pounds of extracted honey to one pound of comb honey, and that therefore the relative prices should be about in the same proportion. But this does not work very well in practice, for while extracted honey at three cents a pound, no matter in how great quantity it is produced, does not yield a profit, comb honey at eight to ten cents pays very well indeed. As a consequence the advice to stop the production of the extracted article seems to be well founded. It is certainly far better to produce two tons of comb honey that will give a profit of two cents a pound, than to produce six tons of the extracted that has to be sold at a loss.—*San Bernardino Times.*

THE VINEYARD.

Buildings for the Interior Valleys.

The following paper was read by Frank West of Stockton before the Sixth Annual Convention of Viticulturists held under the auspices of the State Commission. The statements apply primarily to wine-cellar, but the same methods are applicable to the construction of warehouse, barns, milkhouses, etc.:

In the erection of cellars in the great interior valleys of California, many obstacles present themselves which are not apparent to those wine growers whose vineyards are located in the smaller valleys or on the hillsides.

We cannot tunnel into the side of a mountain for a cellar, neither have we any stone quarries near at hand—hence we must look to our only available building materials, brick, wood, and adobe. The cost of a cellar built of brick is sufficient to place it beyond the reach of many wine-growers of limited means.

Cellars can be constructed of wood, double-walled, which will, perhaps, keep a moderately low temperature, but the very fact that all wooden buildings are subject to a heavy fire risk, places them out of the question, except, perhaps, for fermenting-houses, where very little valuable property is stored except during the vintage season.

We now turn to the adobe, which seems to be really the only cheap and serviceable material for the construction of storage cellars in the hot valleys of the interior. Their durability has been thoroughly proven in the old Spanish Missions built of this material so long ago, many of which are even now in very good repair. As a non-conductor of heat, they are unquestionably better than brick, and cellars can easily be constructed which will maintain a temperature not exceeding 60° to 65° even during our hottest months. With the exception of our own cellars at Stockton, and those at the various vineyards around Fresno, I have never seen any adobe cellars in the State, and a few facts concerning their cost and construction will perhaps be of interest.

Foundation.

It is policy in all cases to put a foundation of brick or concrete under an adobe building, and if gravel or good hardpan is at hand to be used in making concrete, that is by all means the cheaper and better material to use. Broken rock or "clinkers" from brickyards may be used. Concrete is cheaper for the reason that it can be laid quicker and no skilled labor is required. A few small experiments will soon demonstrate to any practical man what proportions of cement mixed with gravel or other material will make the best union. We generally use one part cement to eight or nine parts of moderately coarse gravel.

The depth of the foundation must probably depend upon the location of the building, but we have found a foot of concrete 22 inches wide sufficient to sustain the walls of a cellar 14 feet high and 18 inches thick. The concrete should come a little above the surface of the ground to keep the moisture away from the bottom of the adobe wall.

In the manufacture of adobes, which are simply sun-dried bricks, the first step is to find a soil which, either by itself or mixed with sand, will make an adobe which will be hard and at the same time will not crack. This can easily

be accomplished by mixing a small lot of mud, letting it soak over night and molding a few adobes the next day. One day's exposure to the sun will prove whether or not they are going to crack. Great care should be taken not to use soft adobes. I have seen walls built of adobes in which sediment from the rivers had been used in quite a large proportion. The slightest moisture would cause these walls to crumble, and it was almost impossible to protect them from the rain. The regular molds for making adobes are old-fashioned brick molds, but larger in size. The process of manufacture is the same. We have always used adobes 3x6x12 inches, while in Fresno the size is generally 4x8x16. Regarding the comparative merits of these different-sized adobes, I am not prepared to express an opinion.

Adobes of the size first mentioned can be made by contract for \$4.50 to \$5 per M and laid in the wall for \$6 per M by skilled labor. In this connection I would state that skilled labor is not necessary in laying adobes. It is plain, rough work, and any ordinary laboring man will soon learn to lay them as well as a mason. As a proof of this we have in Stockton a cellar built 15 years ago with unskilled labor, the walls of which are as tightly and as well constructed as any we have since had built by masons. However, if one is not prepared to give his personal attention to the work, it is perhaps better to use skilled labor. I make the allusion to unskilled labor for the benefit of those who wish to construct small cellars for the least possible cost, and are prepared to devote their entire time and attention to the details of the work.

Adobes may be laid in either mud or mortar, the latter being more expensive but a little better. To show the comparative cost of brick and adobe, 1000 adobes 3x6x12 can be made and laid for \$11 per M, while bricks 2x4x8 cost with us \$15 per M. An adobe being three times the size of a brick, 1000 adobes at \$11 will occupy the same space as 3000 bricks at \$15 per M, or \$45. Hence an adobe wall costs only about one-quarter as much as one of brick. It may be that adobes of the size used in Fresno will make even a better showing.

The walls of a cellar having been constructed, the next move is to lay the ceiling. The size of the floor joists will depend upon the width of the span between supports.

We use 2x12 timbers 24 inches apart for 20-foot spans. The floor should be of redwood and should be covered with a layer of adobes and mud five or six inches thick. This serves to keep an even temperature, and another great advantage is derived from the fact that there is absolutely no connection between the roof and the woodwork in the cellar. The building is rendered thereby as nearly fire-proof as possible. In fact, experienced firemen have expressed the opinion that the roof of a building so constructed could burn without injury to the interior of the cellar. We have had reference to buildings of one story. The roof of the cellar may be of tin, corrugated iron, shingles or shakes. The latter would be the cheapest material. Roofs should project three or four feet. Unless the walls of any adobe building are protected from the rain by sheds, they must be protected by some coating which will be impervious to water.

Cement is the material generally used, but the objection is raised that it is almost impossible to prevent its cracking, for the reason that cement will not adhere as well to adobe as to brick. A thick coating is usually applied, but from experiments we have recently tried, we are convinced that plain cement mixed with water and applied with a brush is far better, and is certainly cheaper. One barrel of cement is sufficient for 1200 square feet of wall.

At the winery of Webster & Sargent at Min-turn, Fresno county, a mixture of coal-tar, salt, and potash was used, and I am convinced is more serviceable than cement. The proportions were five gallons of coal-tar to one pound of potash, and five pounds of salt dissolved in hot water. This mixture should be heated when applied, an ordinary white-wash brush being used in putting it on. It should be applied in the summer, or at any rate before rain. Two coatings should be used. This, of course, gives the buildings a somber appearance, which many would object to, but cement can now be applied better than before, as it has a harder surface to adhere to.

Many wine-cellar in Fresno are cemented and blocked in imitation of stone, and the finish is certainly very handsome. The work is, however, quite expensive. The appearance of an adobe building can also be improved by putting on a brick front, laying a course of brick in the front of the adobe wall, laying it at the same time. Any design may be selected, and the adobes being connected the whole building has the appearance of brick.

We have adopted this plan in our buildings, erected in the past two years. In conclusion there seems to be no reason why adobe cellars should not be more generally used in this State. They are much cheaper than brick, cost only a little more than wood, and on the whole seem particularly adapted to our wants.

PRESERVING THE BISON FROM EXTINCTION.—It is said that Eugene G. Blackford, N. Y. Commissioner of Fisheries, has become interested in a plan to propagate the American buffalo and will present a pair of them to the Government for breeding purposes. They will be maintained by the Smithsonian Institution in Washington.

POULTRY YARD.

The Hill Lands Good for the Turkeys.

A St. Helena contributor of the *Cackler* writes as follows:

I hear so often the careless remark: "What is the hill land good for?" or, "Keep away from the hills, you cannot make an honest living up there!" Or some say, "I wonder what people do for a living upon that barren hill land." Well, to tell the truth, they do very little, but they might do a great deal. Some keep one or two cows, a few chickens, and the men go off to work in the valley, and earn in this way a little money, may be just enough to keep them alive, as they only live from hand to mouth. How much they could better their condition if they would go to work and raise turkeys and chickens for the market. There are millions of acres of hill land not fit for cultivation near San Francisco and other large cities and towns in California. Land for which, so far, nobody seems to care, and which anybody can claim for a homestead. Why don't people go and take it? Go, instead of crowding the cities and starving to death in the streets. This is my constant wonder. How different would that be in Europe. How delighted would the poor and rich people be with such a free and healthy mountain home! In Europe the poor pay high prices for land rent, and higher prices than here for each article of food, and still they try to raise chickens in great numbers, and make it pay. Why cannot we do the same and much better here? The land is free, or to be had for a calling; feed and breadstuffs and meat are cheaper, while eggs, chickens and turkeys bring much higher prices here than anywhere else in the world; and still so few people go into this business which is so sure to pay. The reason therefore I cannot explain, but the fact remains.

But to the turkeys. What an immense profit can be made with a little care and patience in raising turkeys? Now, the above-mentioned hill land is hardly able to sustain two cows all the year around on 150 acres. Six months the cows will have plenty to eat, and the other half of the year they will be in a starving condition. There is, of course, good hill land, but I am talking of the worst, because that is yet to be had, and is just as good for raising turkeys as any of the better land. Now, this same land that is not able to keep two cows in good condition all the year around, will raise from 300 to 500 turkeys with very little more trouble than the cows require, but with much more profit.

My proposition is: Keep only one cow if you have a family, and need the milk for your children, and with the money that would buy the other one—say \$35 to \$45—buy some 20 turkey hens and two or three strong gobblers, and start in and raise turkeys. Do you or your wife know how to raise chickens? Well, turkeys require not a bit more care. The whole secret of successful turkey-raising I should like to give in the three following sentences:

1. Let the little ones alone.
2. Keep them shut up at night.
3. Keep them free of lice.

Do this and you will have very little trouble. The young turkeys are, the first four weeks, very tender. The touch only of your warm hand may kill them. In this glorious climate, where in the summer months there is no danger of rain, but plenty of warm sunshine, it is wise to leave the little ones entirely to the care of the old hen. She will lead them to places where they find plenty of small insects and honey-dew—the very milk and bread for them. One week running at large will make them stronger than two or three weeks of confinement with the best of care. But keep them shut up at night; you will lose all if you don't. The wild animals, such as wild-cats, foxes, raccoons and skunks, are very plentiful on the hill lands, and are sure to come and kill off every chicken you have. Protect your turkeys against these wild animals. Get some large boxes (if you cannot do any better) from your grocer or dry goods merchant; they make nice coops and cost you very little. Keep them just as nice and clean as you get them from the store, and you will have no trouble with lice. A little whitewash once a month will help you greatly. Wash your coops inside and outside. Don't put any hay or straw in the boxes; the old hen will scratch it out, and some of your small turkeys also. Dry sand or any dry soil is much better and cleaner. As soon as your turkeys get big enough, let them roost on the trees in your yard; that is natural with them. Cut the lowest limbs off, so the fox cannot jump at them, and tie some double-barbed wire around the trunk of the tree; or still better, chain a good dog to it; he will keep off the four and two-legged animals—the latter kind are, in some locations, just as bad if not worse than wild animals.

Have you ever been in the hills—may be on a hunting expedition? then, did you see and do you remember the vast number of grasshoppers you stirred up wherever you went? Well, they are the bread and meat for your turkeys; they are easily digested and the turkeys never get tired eating them. It is amusing to see the turkeys run after them, and you find them the year round on the hills, so you don't need to feed your stock at all; besides, there are always plenty of wild oats, and many kinds of weeds, too numerous to mention. If you don't see all those small seeds your turkeys do, and are sure to find them.

A neighbor of mine sold a band of turkeys about Thanksgiving Day last year, none of them weighing less than 10 pounds. They were raised on very poor hill land. I kept, at the same time, a large flock on valley land, fed them regularly all summer, and none of them weighed over five pounds by Thanksgiving Day, and they were of course not fit for sale, and in the early part of January only half of them weighed from 10 to 14 pounds, and the balance much less. I paid about \$15 for feed, my neighbor not a cent. Does not that show very clearly that the free hill land has a great advantage over a yard in the valley?

On 160 acres of hill land—a homestead claim—you are quite sure to find one or two good springs of pure water, and also a few acres level land, just large enough for a house, garden and yard. Now, why don't you go? Your 500 turkeys bring you a net profit of at least \$500, and you might just as well raise a thousand. Could you not live quite comfortably on five hundred a year? And this is only what your turkeys do for you. You can keep at the same time a few dozen chickens for home consumption or market. You can pay for your groceries with eggs and chickens, if you have any to spare.

Again I must ask you, why don't you go and take up some hill land? I live in the beautiful Napa valley, and I think the hills of this little valley are just what you want. You have the railroads to ship your stock to San Francisco always at hand; but then I see so far no reason to ship to the city. The home market has always a demand for all you can raise, and they pay you higher prices here than they pay you in Frisco, because everybody ships from here to there, and the demand here is so often, consequently, greater than the supply. And so, if you don't know a better place, come to Napa valley, claim a homestead on the hills—there are plenty to be had yet—and raise turkeys and make money.

FLORICULTURE.

Care of Roses.

"Rosa" writes to the *San Rafael Journal* as follows:

It seems strange to me that so little attention is paid to the unsightly disease which so infests our rose bushes. It is by no means an uncommon thing to see a majority of the bushes in our choicest rose gardens infected with the mildew at this season. At a little later day they will be still more unsightly by the changed and sickly foliage. Enough has been said and written about this disease to post any gardener on the subject. The present article is not intended to furnish new material, but only to call attention to what ought to be well known by every one who has a rose bush. I shall not burden you with names of the fungoid diseases of the roses. Suffice it to say that it is a fungus or some one of those parasitic plants. What we need to know is, when and how it is best to attack it.

1st. When? In answer to this, I say the best time is in the fall or early winter. The leaves, as a rule, have then fallen.

2d. How? A little care taken to carefully rake up all the dead leaves and burn them will go far toward protection in the spring. If any spotted or dead leaves or fruit capsules remain on the bush, pick them off and burn them also. The bushes may then be left until pruning time. If any dead stalks remain, burn them, and as soon as the leaves begin to come out sulphur them, or, what is better still, dust them over with Ongerth's insecticide, for this latter will keep away the aphides as well as the worms that are apt to feed on the young leaves. This dusting should always be done while the dew is on the plants.

But there are a few other equally important things to be considered. The plant must be well fed. Don't under any circumstances try to feed a fine rose with rotten or decaying straw, for by so doing you are quite likely bringing to the plant the very disease you are trying to get rid of. Use only the best and oldest manure if you use any on the soil. Liquid manure is better. To this you may add charcoal, iron or ammonia, according as the character of your soil may need. Bones, fish, dead hens, cats or dogs make good food for roses. I presume the careful gardener knows when and how to push his plants. The great point is to keep them strong. If a rose is worth buying and planting in your place, it ought to be worth care.

If your roses are now mildewed, lighten up the ground. Give them a weak solution of ammonia and water at the roots, and treat the leaves either to sulphur or Ongerth's insecticide. If you wish to deepen or classify the colors you may find help in the use of iron and charcoal water. The latter are good for many plants whose flowers you wish to make richer. Look well, I say as a parting caution, to all dead leaves, and get them out of the way in the fall. Well rotted and mixed with lime or super-phosphates they are safe to put around young plants, but not otherwise.

THE more popular brands of Columbia-river salmon are beginning to come upon the market at New York for next season's delivery. Several sales have been made on car lots at \$1.65 free on board, which is about equal to \$1.82½ laid down.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Finances.

It will no doubt be a gratification to many earnest Patrons to know the financial standing of the State Grange.

At the close of the State Grange session at Santa Rosa, the small amount in the treasury about equally balanced the amount due the National Grange for quarterly dues and several small accounts due. The meeting of the State Grange had naturally called out pretty full receipts for dues to the State Grange for the quarter ending September 30th, so that but a limited amount could naturally be expected from subordinate Grange dues till the end of another quarter, viz., December 31st. This left a term of nearly three months' running expenses of the State Grange with very little income to be expected. To place the treasury of the State Grange in good condition to meet these expenses, so that bills might be promptly met, and the reputation of the State Grange be kept good, Bros. I. C. Steele and A. D. Logan generously placed in the Grangers' Bank, subject to orders on the treasury, \$100 each.

Although there were extra expenses during the intervening three months, consisting of the printing of the Annual Proceedings, envelopes, blank-books, blank forms, letter-heads, etc., the State Grange well managed to pay its rent, salaries and all its expenses, and meet promptly all demands up to the 31st of December. Dues coming in for the quarter ending Dec. 31st have been sufficient to meet all obligations up to the end of the quarter on the 31st of March, except the money advanced by Bros. Steele and Logan.

The per capita tax payable on the 31st of March being increased, funds have accumulated in the treasury up to date to the amount of \$260, a sum large enough to meet the money advanced by Bros. Steele and Logan and to pay every cent of indebtedness which the State Grange owes. Yet not more than two-thirds of all the Granges have paid their dues for the quarter ending March 31st.

The National Grange dues have just been paid for quarter ending March 31st.

The cash (\$260) is now in the treasury with the hope and expectation that the amount of increased revenue derived from the increased per capita tax can be appropriated for the use of special organizers, Deputies and Lecturers in the field, whether any considerable donations are secured, as proposed at the Deputy meeting, or not.

Only one Grange has unequivocally "bucked" against paying the increased dues, and that we believe was done through a decided misapprehension of facts. Thirty out of 32 that have remitted dues to March 31st have already paid in full. We are sure the others will not stand out in any less just and magnanimous position when they know and fully consider all the facts, circumstances and noble action of their fellow-Patrons.

We judge, as far as our knowledge goes, that the finances of the State Grange have not been for a long time in better if so good condition as they stand now. Prospectively they are No. 1. All that is needed is that all Patrons "stand firm by their guns," "hold the fort" a little longer, and we feel confident and sure that our Grange interests and prospects will steadily brighten. From reasonable encouragement given in regard to the organization of new Granges by Bro. Still in Nevada county, Bro. Frisbie in Sutter, Yuba and Butte counties, and other brothers, it would seem an assured fact that we are just entering upon a season of renewed and permanent prosperity.

Faith and harmony prevail, and there seems no reason why the Grange should not steadily improve in this State from this on.

Changing the Name of a Grange.

The members of Newcastle Grange propose changing its name to Penryn Grange, and wishing to obtain all the information possible in regard to the mode of procedure in such cases, the W. M., Bro. S. Austin Wood, wrote to the Secretary of the State Grange for his opinion. The Secretary finds on pages 56 and 57, Section 17, of the Digest, edition of 1887, the following law: "Any Subordinate Grange desiring a change of name shall proceed: first, by the selection of a name, which shall be proposed at a regular meeting and be approved by a two-thirds vote at two subsequent meetings; second, after such proposition and approval,

the name so chosen shall be reported to the Worthy Master of the State Grange, together with the transcript of records relating to action thereon, and when the name so chosen is approved, the Worthy Master of the State Grange shall report the same, together with the former name and number of the said Subordinate Grange, to the Worthy Secretary of the National Grange, who shall then enter the name chosen as the name of the Subordinate Grange; and such report shall also be made to the Worthy Secretary of the State Grange, and like action shall be taken by him; whereupon said change of name shall be effected, and the Subordinate Grange shall thenceforth be known by its new name."

A Governor Who Means Honest Business.

Gov. Waterman's earnest talk to a *Record-Union* writer recently is worth repeating for its sincerity. It will take time to prove the wisdom or fallacy of his ideas of reforming our depraved State Prison youths, however:

"I am striving to give this State a good business administration. I am neglecting my private affairs to serve the people, and I am bending every energy to round things up in good shape. A Governor who attends to the affairs of State properly has his hands full every day in the year and every hour in the day. The State Prisons of this State have occupied much of my time. I found a jute plant at San Quentin that was being operated in the interest of this State. It stood between the grain-producers of our valleys and the 'grain-bag rings.' Being a practical business man, I saw no reason why those mills should not be operated day and night. If it was a good thing, why would not twice as much of it be better? My idea has been carried into effect, and we are now running two shifts, and if we had more prisoners we would run three. In order to increase the force it was necessary to transfer 150 prisoners from Folsom to San Quentin, and they are now earning their bread by the sweat of their brows making burlaps. Why all this cry against transferring prisoners from Folsom to San Quentin? They were earning nothing at the Branch Prison, the product of their quarry was not in demand, and it was simply a matter of business to take them to the point where they could at least earn a portion of their keep."

"Now I will be plain about this matter, and you can report me as so saying if you choose. California is a young and ambitious State, and I want to see her lead and not follow. There is no reason in the world why she cannot lead every State in the Union in the reformation of her youthful criminals. I am in favor of San Quentin for the State Prison. We have a good one there, and let us work the hardened criminals in the jute-mills, and make the cost of their maintenance a mere nominal sum, and, if possible, make the prisons self-sustaining institutions. In other words, let's manage those institutions, not as homes of ease for pensioners, but upon strictly business principles."

"Now, what I am going to advocate is this: Let us make of the Folsom Prison a reformatory, and place therein the prisoners under 20 years of age. I would be in favor of discarding the striped suits, and the rigid prison discipline as much as possible. Increase the size of the farm to 1000 acres, set it out in orchards and vineyards. Grow olives and citrus fruits. Beautify Mount Stoneman. Educate the youths thoroughly, and they will be forced to realize the errors they have made, and will go forth into the world at the expiration of their sentences better men for their imprisonment, men who can enter society, the business walks of life, and who will forever turn their backs upon criminals and criminal methods. Do this, and you will constantly have Folsom Prison full. It will separate the trivial offender from the red-handed murderer; the youthful transgressor from the boory-headed sinner. Captain Aull would be just the man for the position of Warden of such a reformatory. Now those are my reasons for wanting to take the workers from Folsom to San Quentin. I want to knock the 'grain-bag rings' in the head with prison labor, and thereby benefit the granger. I want to separate the youths from the hardened criminals, educate them to be somebody, so that when turned out upon the world again they can shift for themselves without having to resort to crime."

MERCED GRANGE.—Sister E. S. Elliott writes: We initiated two sisters at our last meeting and have two more for our next. We celebrate our 15th anniversary on the 5th of May, and would like to have some of our State officers present to encourage us in the work. Some of our old members have come back during the last quarter.

Literary Day at Sacramento Grange.

EDITORS PRESS:—Grangers, old and young, big and little, thick and thin, assembled at Grangers' hall in Sacramento, April 14th, for the purpose of enjoying the treat that awaited them. The exertions of the committee were happily materialized. The literary meetings of this Grange, which occur at intervals of about two months, are events which every loyal Granger looks forward to with a keen anticipation of pleasure and profit. They break into the rigid routine work, and better fit the hard-working Granger to do his allotted work for the cause. And then it is such a splendid place for the handsome sisters to show off their new spring bonnets and ecru-colored, Swiss-muslin polonaises and such things.

The meeting of yesterday had an attendance of 84 (babies not counted), and when it is remembered this is one of the busiest times in the year, it cannot be truthfully said there is any urgent need of having a goodly sized monument on hand to erect over such lively remains.

This Grange usually has a grand collation literary days, prepared by the nimble fingers of the sisters of the Order, but it was abandoned on this occasion because the brothers, in their infinite goodness, promised not to feel a certain faintness—and then chickens are so dreadfully hard to catch when the trees are in leaf.

The Worthy State Master Overhiser was present during the last half of the festivities, and gave an entertaining account of his visit to the National Grange. He pointed out convincingly how the Grange can be improved, and he said he would cooperate with heart and soul in such improvement. His remarks were eloquent, trenchant and instructive. Come again, Bro. Overhiser, and remain with us longer.

Hon. Thomas McConnell, Past Master of Elk Grove Grange, spoke in an interesting manner concerning the alleged hard times of to-day, with the situation 50 years ago. His remarks were excellent, sound and well chosen, and at the finish were greeted with genuine applause.

Bro. W. Walter Greer was the Master of Ceremonies, and he performed his duties with that dignity, neatness and dispatch so characteristic of the modest young Granger mentioned, who constantly is bent on hiding his light beneath the bushel.

After many kisses were exchanged on the part of several of the sisters (they seem on this score to indorse free trade) and old-fashioned hand-shaking on the part of all the brothers, the assemblage dispersed to meet again at the reunion at Enterprise Grange next Friday. Faithfully and fraternally,
CHARLES McEDWIN.
Sacramento, April 15.

Grange Items.

Worthy Master Overhiser writes from Stockton, April 15th, as follows: Returned to-day from Sacramento, where I attended Grange yesterday. It being literary day, the hall was well filled, and the exercises passed off very pleasantly. Met several members of other Granges, and learned that the members of Enterprise Grange were making arrangements for their annual reunion, which takes place Friday, the 20th inst., at 10 A. M. Tuesday, the 17th, San Joaquin Pomona Grange meets with Woodbridge Grange.

Another Tribute to his Memory.

The Grangers' Business Association has added yet another to the many tributes of respect and affection called forth by the sudden departure of Judge Joel Russell:

WHEREAS, God in His kind providence has called home our esteemed brother and former Director of the Association, Joel E. Russell; therefore, be it
Resolved, by the Directors of the Grangers' Business Association, that by the death of Bro. Russell we have lost a man true to his every instinct of justice and right, unwavering in his allegiance to the Patrons of Husbandry, and to the cause of temperance, in which he was a shining light, a genial and true gentleman and an esteemed friend, and we hereby tender to his bereaved family our heartfelt sympathy in this, their great affliction.—F. W. STEELE, I. C. STEELE, I. C. MERRYFIELD, Committee.

POSTAL TELEGRAPHY.—The Knights of Labor have been circulating petitions in every Congressional district and have secured nearly a million signatures from members of that Order and others in favor of a postal telegraph, says a late dispatch to the *Chronicle*. They have also asked their members to address private letters to Congressmen urging the desirability of Government management of telegraph and the strong popular demand for it. The formal petitions have just been sent to Washington and they constitute, it is believed, the largest array of names ever signed to a single request presented to Congress. The num-

ber of signatures to the petitions presented by the Pacific Coast men is as follows: Congressman Thompson, 1491; Biggs, 168; McKenna, 1952; Morrow, 125; Felton, 863; Vandever, 825; Gifford of Dakota, 1407; Voorhees of Washington Territory, 6706; Herman of Oregon, 2619.

Picnic Suggestions.

All admit the desirability of having our Grange picnics held in various parts of the State on different dates, so that the State Grange officers and other visitors can attend them in a circuit, after the fashion of holding courts and religious meetings in the Western States in early times. But with the matter of fixing dates for such a desirable arrangement comes the difficulty of accomplishing such a desideratum to the satisfaction of all interested.

In the absence of any report from other quarters, the *Patron* ventures to submit, as suggestive merely, a list of dates, to be knocked down, set up and rearranged to suit the wants and circumstances of all concerned. How would these dates do? Danville, Saturday, May 12th; Watsonville and Santa Cruz, Wednesday, May 16th; San Jose, Thursday, May 17th; Santa Rosa and Bennett Valley, Saturday, May 19th; Tulare, Saturday, May 19th; Modesto and Merced, Tuesday, May 21st; Stockton, Lodi and vicinity, Wednesday, May 22d; Sacramento and vicinity, Thursday, May 23d; Yuba, Butte and Sutter counties, Saturday, May 25th; Roseville and vicinity, Tuesday, May 28th; Nevada county, Wednesday, May 29th.

The main point, however, is to talk the matter up and hold the picnics on the best dates for all, and have a good time anyway. There is nothing that "does itself" so well, when once started, as a Grange and farmers' picnic.

Do not consider these hints as otherwise than suggestions. We hope El Dorado county and many other Granges will announce their determination to have pleasant and unceremonious outdoor gatherings, and send notice for our columns. Invite your friends and favorite speakers, and have a patent brake in readiness to apply to any long-winded speech that may happen to break loose and endanger the joy and success of your happy greetings.

YUBA CITY GRANGE has been discussing the hall proposition for some time, says the *Sutter Farmer*. Their plans are somewhat more extensive, as they contemplate a building to cost about \$13,000, containing a lodge-room and a large public hall. The Grange will meet April 21st, at 10 o'clock A. M., to confer the third and fourth degrees, and transact such other business as may come up. A harvest feast will be tendered to the new members and it is hoped that there will be a large attendance.

A TRUST is defined by the N. Y. *Herald* as a combination of manufacturing capitalists to check production, feed the market with only a limited supply of their goods and thus keep prices high. Their aim is to manufacture less and charge more. But if they make less goods, that means that they will employ fewer workmen, or give those they keep on less steady work. Hence a trust is a blow at the workmen.

ALHAMBRA GRANGE will confer the fourth degree to-day, and have the usual harvest feast. An invitation to all Patrons to be present has been extended.

Welcoming a Rival Road.

On Monday evening of this week the citizens of Hanford and vicinity held a meeting in Pythian hall to hear the report of the committee lately sent to interview the directors of the San Joaquin Valley Railroad Company.

The report being such as greatly to encourage the hope that a line of road will soon be constructed which will relieve the Lucerne valley from "the unreasonable exactions and mendacious policy of a grinding and unscrupulous monopoly—the Southern Pacific Railroad Co., who in the past have controlled and imperatively dictated to the people in the matter of transportation and other railroad facilities," the following resolutions were adopted with enthusiastic plaudits:

Resolved, That we, the people of the Lucerne valley, in mass meeting as embodied, do accord the contemplated San Francisco and San Joaquin Valley Railroad Company, whose survey intersects this country, our most cordial and hearty support, and we hereby pledge to them when their road is built our patronage in fares and freight; and be it further

Resolved, That we stand ready to extend to them and their prospective road both our hearty goodwill and financial assistance, which we feel assured will bring us relief from servitude.

A committee of three was also appointed to canvass the neighborhood, and secure pledges to the amount of \$100,000 as a bonus to aid in carrying out the enterprise to fulfillment.

ENTOMOLOGICAL.

How to Destroy the California Grape-vine Hopper.

[Appendix 2 to the Annual Report of the Chief Executive Viticultural Officer for 1888.]

The description of this insect and its habits is taken from "Harria" Insects Injurious to Vegetation," page 227, which reads as follows:

"The vine-hoppers, as they may be called, inhabit the foreign and the native grapevines on the under surface of the leaves of which they may be found during the greater part of the summer, for they pass through all their changes on the vines. They make their first appearance on the leaves in June (as early as April in California, J. H. W.), when they are very small and not provided with wings, being then in the larva state. During most of the time they remain perfectly quiet, with their beaks thrust into the leaves, from which they derive their nourishment by suction. If disturbed, however, they leap from one leaf to another with great agility. As they increase in size they have occasion frequently to change their skins, and great numbers of their empty cast-skins, of a white color, will be found throughout the summer, adhering to the under sides of the leaves and upon the ground beneath the vines.

"When arrived at maturity, which generally occurs during the month of August (earlier in California, J. H. W.), they are still more agile than before, making use of their delicate wings as well as their legs in their motion from place to place, and when the leaves are agitated, they leap and fly from them in swarms, but soon alight and begin again their destructive operations. The infested leaves at length become yellow, sickly and prematurely dry, and give to the vine at midsummer the aspect it naturally assumes on the approach of winter. But this is not the only injury arising from the exhausting punctures of the vine-hoppers. In consequence of the interruption of the important functions of the leaves, the plant itself languishes, the stem does not increase in size, very little new wood is formed, or, in the language of the gardeners, the canes do not ripen well, the fruit is stunted and mildewy, and, if the evil is allowed to go on unchecked, in a few years the vines become exhausted, barren and worthless. In the autumn, the vine-hoppers desert the vines, and retire for shelter during the coming winter beneath fallen leaves, and among the decayed tufts and roots of grass, where they remain till the following spring, when they emerge from their winter quarters, and in due time deposit their eggs upon the leaves of the vines, and then perish."

The Remedy.

Little difficulty has been experienced of late in destroying insects which prey directly upon the foliage of the plant. A resort to poison where it may be had has usually proved satisfactory. The subject of this treatise, however, is much more difficult to eradicate in that it derives its nourishment by sucking the sap from the cells of the plant, to poison which latter would mean the destruction of the same. Most prominent among the remedies proposed in the past few years have been: Spraying with toxic solutions, whale-oil soap being foremost. Sulphuring in the early part of the season has been advocated as a partial remedy. Carrying a lighted torch through the vineyard has also been suggested. An important aid to their destruction has been brought about by turning sheep into the vineyard in the fall, whereby the eggs and insects are eaten on the foliage or tramped under feet. This, however, has proven inconvenient in many cases, and cannot be recommended as a general remedy.

During the past week extensive experiments have been conducted by myself at the "Olivina" vineyard, near Livermore, where, with the assistance of Mr. Smith, the proprietor, I have been able to devise a means which I believe promises complete success.

First, however, to test the value of previous experiences, we resorted to spraying, sulphuring and fire. The following solutions were employed:

1st. One pound of whale-oil soap mixed with one pint of syrup and then diluted with one gallon of water.

2d. One-half gallon of syrup with one gallon of water.

3d. Two pounds of whale-oil soap to one gallon of water.

4th. Four pounds of whale-oil soap with one gallon of water.

Each and all of these were carefully applied to the infested vines by means of the Cyclone nozzle.

The strongest solutions of soap were such as to burn the tender leaves of the vine. The strongest solutions of syrup likewise proved detrimental to the foliage, but with all alike the hoppers continued their work undisturbed. Twenty minutes after the applications were made, and they have been made thoroughly, the hoppers were found on any and all of the vines treated and in as great abundance as before. In many cases they had been forced to the ground by the spraying, where it was thought the wings would become clogged and their further recovery thereby prevented. A short time afterward, however, careful search revealed none on the ground and remedies of this character were abandoned.

Sulphur has been dusted on the vine to such an extent as to render the foliage yellow, but shortly afterward the hoppers were found uninjured and continued so.

A torch carried at night was a failure.

Early-Morning Trap.

A contrivance for holding petroleum in pans was then arranged so that it could be placed

under the vine. This employed morning and evening proved an effective trap; for on shaking the vine the hoppers would drop into the liquid and so become destroyed. Still the apparatus for this purpose was so elaborate and expensive as to form a potent objection to its use for operations on a large scale. For this I therefore substituted a screen made out of green wire gauze, such as is ordinarily employed for window screens. The gauze should be stretched over a frame made of stiff wire, forming a screen circular in shape and about 2½ feet in diameter. A slot in one side will enable the screen to be placed immediately under the vine, the whole being attached to a stick in such a manner as to form a handle. We now have an effective trap for morning and evening work, for, by placing the screen under the vine, the hoppers will fall readily on to it; when there, they expire immediately if disturbed. Previously the screen has been coated or smeared over with crude petroleum, or even common kerosene will do.

How to Make a Trap for Midday Work.

For day work, which is the time when most of the operations must be conducted where large areas are to be treated, a different contrivance must be formed. For particular instructions, the following will direct any one:

For short prune varieties, first: The operator should be provided with 20 feet of one-fourth-inch iron rod, or an equal length of heavier wire approximating to this in size. Cut two pieces seven feet long each and two pieces three feet long each. With these, two semi-spheres may be made with a diameter of about two feet (these measures may be increased proportionately to make a larger trap). A strip of green wire gauze six feet long and three feet wide will answer to cover the trap. The gauze should be the material commonly used in window screens, and worth about 2½ to three cents per square foot. Do not try substituting cloth for the gauze, for our experiments proved it inapplicable. Bend the seven-foot length in a circle three feet in diameter, turning the ends together and twisting them outward to serve as a handle. Cross the circle with a second piece three feet long, which should also bend in a circle outward; this forms a semi-sphere. Now cover the whole with gauze, which may be sewed on like the parts to the cover of a baseball, attached by means of a string.

Make a second semi-sphere similar in every respect to the first, and such that the two, when brought together, form a complete sphere. The circle of the first semi-sphere may be provided with a notch to accommodate the body or trunk of the vine, thereby enabling the operator to completely cover the plant and provide against the escape of the hoppers.

Care should be taken in forming the notch to see that it is so placed in relation to the handle as to enable the operator to stand partly over the vine when bringing the trap together.

To Operate.

Smear the gauze over with crude petroleum or even ordinary kerosene oil, which may be applied by means of a brush or cloth as often as seems necessary. One semi-sphere is then taken in each hand, and each vine quickly and cautiously approached; the parts of the trap are brought together over each plant, and the stump of the vine kicked with the foot; in efforts to escape the hopper jumps from the vine and meeting the gauze comes in contact with the petroleum, the least touch of which means immediate death.

In our work, after making the parts according to the above description, and operating on a few vines, the green gauze was changed to a yellowish hue by the myriads of insects captured.

The apparatus being light and easily handled, a large area may be gone over in a single day.

With one appliance a man can go over three or four acres per day, and the total cost of treatment, including oil used, should not exceed 50 cents per acre.

To use the trap with best success, it should be employed at the present season. With the increase of foliage and enlargement of the vine, the trap must also be enlarged, becoming more cumbersome and more difficult to wield, though equally effective.

A great advantage in early work accrues from the destruction of the insects previous to the time of laying their eggs, thereby lessening the chance of damage.

For Long Pruned Varieties.

Where higher staked or longer pruned varieties are infested, the appliances must be adjusted to the shape of the vine. The semi-cylinders may be constructed with the same iron wire and gauze as that used for semi-spheres, with a bottom shaped to accommodate the stump of the vine.

It may be open on top, as experience proves they do not fly out above.

Vines lying on the ground, like those pruned on the Chaintre system, would require a semi-cylindrical screen, which may be so formed as to cover the foliage. Extermination in this case would prove more difficult, as we have no means of catching those which drop on the ground. But by operating in the heat of the day, the insect will be found to fly upward and be completely entrapped by the oil which has been placed on the gauze.

Before closing this treatise, I desire to express particular acknowledgment to Mr. J. P. Smith of the Olivina vineyard, and to his foreman, for their kind assistance and interest in the experiments which have been conducted

at his place, not only in the interests of his vineyard and those in that section, but also in the interest of many other interior sections from which I have received letters asking for information regarding the best means of destroying these pests.

The hoppers have increased on the Olivina vineyard during the past three years to such an extent as to become alarming. Many leaves already put forth are withered by their attacks, and some other sections report a similar condition of affairs.

It is now my belief that prompt and energetic attention to the above detailed method will remove all fear of damage to the grape.

In the past two years the Commission has experimented with and provided ample remedies for all insects consuming directly the foliage of the plant. The arsenic and bran remedy enables us to meet the grasshopper plague successfully, and Paris green or London purple mixed at the rate of 1 pound to 160 gallons of water will destroy other foliage-consuming insects, and has been proved innocuous to the fruit, vine, or raisin.

Up to this time the vine-hopper has proved a constant menace to the grower, but from this it is to be hoped dates our victory in the field.

J. H. WHEELER,

Chief Executive Viticultural Officer.

The "Twig-Borer."

EDITORS PRESS:—A little insect which I am told is called the "Trig" (or is it not "Twig?") borer is giving me some trouble this year. It is a chocolate-colored bug about three-eighths to one-half an inch long and about one-eighth inch wide. I have found it on both prunes and peaches, but have not noticed it on apricots so far. It bores into the branches at the root of a fruit spur, or young shoot, making a hole deep enough to contain itself, and I presume laying eggs there. I am going over the orchards and dig them out with my knife whenever I see one, and also drop a little whale oil into the hole; but I could not do this if the trees were large. If any of your correspondents can recommend a wash which will keep them off without damaging foliage or young fruit, I shall feel much obliged.—GEO. RODGERS, Guberville.

The name is certainly "twig-borer," not "trig-borer." The insect is probably *Polycuon confertus*, which does much harm in olive trees, but does not disdain other fruit trees. Its injury is greatest when the tree is young, and the loss of shoots may injure its shape. The insect, so far as now known, merely goes to the fruit trees for a lunch, but breeds in old oak stumps, etc., near by. Such stumps and half-dead trees should be grubbed out. We have thought that an early spraying with whale oil soap, which would taint the twigs for some time, would make them distasteful to the insect. What have others to suggest by way of prevention?

A VALUABLE PRESENT.—William H. Robinson, secretary of the County Board of Horticultural Commissioners and Quarantine Guardian of San Joaquin county, has presented to the High school of this city his cabinet of entomological curiosities. He has been ten years in collecting this cabinet, which is quite extensive and valuable. A great deal of time and attention have been spent in mounting, classifying and arranging the specimens, many of which are not common in this vicinity. They are in boxes with glass tops, and in vials, and preserved by alcohol, and consist of moths, millers, butterflies and bugs of various kinds; insects injurious to foliage and fruit, and insects which are beneficial to productive industries. Mr. Robinson says there is a general and growing interest in entomology, and some of the High-school scholars have made good beginnings, both in study and in collecting specimens of their own, which they arrange into orders, sub orders, genera, species and families.—Stockton Mail.

California Poultry Association.

The California Poultry Association held its annual meeting in this city on the 11th instant, Pres. J. J. Jones in the chair. There was a good attendance from the city and the bay counties. Mr. Cutting and other Sacramentans were also present.

Officers were elected as follows: Pres., Jasper J. Jones (re-elected); Vice-Pres., G. R. Presson, Thos. Waite, Wm. Niles, T. D. Morris; Cor. Sec., H. G. Keesling; Sec. and Treas., G. T. Marsh; Executive Committee, Jno. McFarling, D. H. Everett, A. H. Carlton, L. H. Cutting, S. McBurney, O. J. Albee, R. G. Head, C. H. Crowell.

McBurney, Bayley and Jewell were appointed a committee to prepare articles of incorporation, and report at the next meeting, to be held June 6th.

CATTLE SALE.—We wish to call the attention of our readers to the auction sale of thoroughbred and grade Holsteins and Jerseys announced by Killip & Co. in this issue of the paper. This firm is becoming an important factor in the live-stock business of California, and we are pleased to see they are meeting with a share of the success which their business enterprise so richly merits.

FLOODS in the Northwest are doing great damage. St. Paul, La Crosse and Oconto, and other cities and towns are partly flooded.

News in Brief.

CARP are plenty and easy to catch at Rosa.

MYERS' CANNERY at Seattle was burned last week; loss, \$15,000.

A FIRE at H. W. Rice's machine shop in this city did some little damage.

A FRUIT cannery and drier is likely to be erected at Santa Cruz the coming season.

THE people of Siskiyou are talking of illuminating Mount Shasta on the Fourth of July.

ELECTRICITY is being used for motive-power at several places in San Francisco and Oakland.

ALL arrangements for the building of Spreckels' sugar refinery at Philadelphia are now complete.

THE records of the patent office show that women have obtained patents on 1900 inventions.

MATTHEW ARNOLD, the eminent author who recently visited this country, died suddenly this week.

ROSCOE CONKLING, the eminent lawyer and politician, died in New York on Wednesday morning.

THE Native Sons of the Golden West will shortly erect a monument to General Winn, the founder of the Order.

A BILL has been introduced in Congress to make the arsenal at Benicia an arsenal of manufacture, construction and repair.

THE power to run the dynamo that furnishes Honolulu with electric light is run by water-power supplied by the city's water-works.

EIGHTEEN Italian marble-cutters who reached New York were placed under arrest for violating the importation of contract labor law.

A JET of natural gas is burning night and day on the Buttes, near Sutter City. Natural gas has also been found at Kelseyville, Lake county.

A COUPLE of Japanese are in Napa county for the purpose of buying horses, cattle and other live-stock to improve the breed of stock in Japan.

THE SENATE COMMITTEE on Public Buildings and Grounds has passed favorably upon the bill for a public building at San Diego, Cal., appropriating \$200,000.

THE telephone has been used with success between Bloomington, Ill., and Kansas City, Mo. Other connections were also made for a distance of 400 to 500 miles with success.

THE New York Assembly has passed the bill providing for the execution of the death penalty by means of electricity. This prohibits newspapers from publishing details of the execution.

LOS ANGELES is soon to have another cable street railroad, 10½ miles in length. It is to be double, making 21 miles of track, which will cost, when completed, over \$1,500,000.

THE Standard Oil Company will build a pipeline from Lima, Ohio, to Chicago, for the cheap and rapid transportation of crude oil, which they think is destined to take the place of coal in the great manufacturing establishments in Chicago.

Osage Orange Hedge.

The osage orange has been grown in this State to a certain extent from the very earliest days of American occupation, but has never reached any very great prominence. The tree grows well in this State, and its wood has been turned to account in Stockton and elsewhere, perhaps for buggy hubs and for other purposes. We get an inquiry once in awhile about the value of an osage hedge. The following, written by a Porterville farmer to the Visalia Delta, of a hedge which he saw in Los Angeles, will be of interest:

I visited Mr. George Hynes' ranch, near Los Angeles, where I was shown a specimen of the fence. My prejudice was entirely overcome, and I will here state that while I regard it the most substantial fence I have seen anywhere, it is decidedly the fence best calculated to suit the farmers of this county, inasmuch as it is proof against the depredations of both the smallest as well as the largest animals. The fence so exhibited to me was explained as not being a fair test of its usefulness and beauty, since it was constructed out of an old hedge that was very irregular, and too large to give a perfect idea of what the fence would be if it were built at the proper age of the plant. The side branches were trimmed or cut off close to the body of the plants, after which four smooth wires were stretched along beside them, when the earth was thrown away from the roots of the hedge, then the plants bent over to an angle of 45°, and stapled or "plashed" to the wires while in this position, after which the tops of the plants may be cut off at any desired height and the roots covered again with earth. The plants, reclining in this position, send forth shoots or sprouts from the ground all along on their upper side to the extreme top of the plants, which grow in a perpendicular shape, forming a lattice-work between the wires and the bending plants, and soon becoming proof against the smallest animals, while it is a perfect fence against all large ones as soon as plashed to the wires.

LEFFEL'S FARM MACHINERY.—We have received a very interesting catalogue from the Springfield Machine Co. of Springfield, Ohio, containing full descriptions and illustrations of the Leffel wind engine, pumps, tanks, etc., also feed-mills, etc., hay forks, hay-carriers, etc., sheave wheels, etc. All these devices are in wide use and worth consideration.



My Pansies.

O, here is one in a purple hat
And a robe of violet silk!
This little fellow is all in yellow,
And that one white as milk;
Dancing high and dancing low,
Just as the breezes come and go,
Dear little spring-time beauties, O!

One is dressed in a velvety black,
And one has a crimson gown;
This little maid is in blue arrayed,
And that in golden-brown;
Dancing high and dancing low,
Just as the breezes come and go,
Dear little spring-time beauties, O!

One has a critical, earnest look,
And one is wofully sad—
My pansies wise with their dusky eyes
And faces grave or glad!
Dancing high and dancing low,
Just as the heavenly breezes blow,
Dear little thoughtful beauties, O!

—Nellie M. Garabrant, in *American Magazine*.

Sadie's Progressive Conversations.

(Written for the *RURAL PRESS* by MAUDE S. PEASLER.)

"What on earth did you invite her for, Sadie?" asked Belle Roland, as leaning over her cousin's shoulder, her eyes rested on the name of Mabel Grey in a list lying with a pile of neatly written invitations.

"Well," Sadie answered slowly, "I guess was because mamma wanted me to, though I'm sorry not to have thought of it myself. You see, she goes out very little, and has very few pleasures," she added half apologetically, for she stood somewhat in awe of this tall, fair cousin of hers, who had been "out" in society two years already. She herself was just beginning to realize that she was a young lady, and the party for which those dainty, scented invitations had been made ready, was her first attempt at evening entertainment.

"Ah! well," said Belle, "there is fortunately no danger of her coming. Not that I have any reason to dislike her, dear, only—well, she is not our sort, you know," she finished rather lamely. So at least thought the lady who entered the room just in time to hear the remark and Sadie's answer: "I think she will come, for mamma will take the invitation over to her," she said, "and beg her to make an exception in our favor. She has refused all invitations since she came here six months ago, to live in the house on the hill. Her aunt left it to her by will, on condition she should live there and retain the old servants, who had been so long in the family. I beg your pardon, mamma," she exclaimed, "I did not see you. Take this chair," and she playfully pushed her mother into the easy-chair from which she had risen as she saw her in the room.

"Thank you, dear child," said Mrs. Roland. "I was tired from my morning work, but am all ready now for a rest and a little chat with you two. Please bring me the footstool, and hand me my knitting. I see you have finished writing the invitations," she added, smiling approval at her daughter. Then turning to her niece, she asked:

"May I depend on you Friday to attend to the management of the flowers in the parlors? Sadie and I will be busy with other matters."

"Certainly, auntie. I see your party is sure to be a success, for your plans are all laid so as to avoid hitching—as papa would say. He has always praised you to me as the most perfect hostess he ever knew. He says any social event is sure of success if you have the management of it."

"He is very kind," returned the lady, smiling. "I certainly make an effort to have everything I undertake pass off smoothly, and it is pleasant to know that one's work is appreciated."

"I only wish mamma's mantle might fall on me," said Sadie, "but I'm afraid I'll never be as much of a success as she is."

"You need only practice, and to remember that your guests are invited that you may give them pleasure, to make you at ease when entertaining friends," said Mrs. Roland.

"That's just it, auntie," said Belle. "You never seem worried nor act as if you feared some mistake or accident. When I have company, I'm sure something will go wrong—the lemonade will run short if nothing worse happens."

Sadie and her mother laughed, and the latter said:

"Well, dear child, time and careful forethought will help you in these matters. Sadie, I'm going to take Mabel's invitation to her this afternoon, and if you will have some flowers ready, I will take them to her from you. I think she will promise me to come. As I came in the room, Belle, I heard you and Sadie talking of her. She is a very refined, accomplished girl in appearance, and, as far as I can judge, is allowing herself to brood over some trouble. It can hardly be the death of her aunt,

for they scarcely knew each other. She is old enough to manage her own affairs, but is, I believe, alone in the world. I think if she can once be aroused from her apathy, she will be a pleasant friend to know."

"You look more closely than I do, Aunt Ellen," said Belle, "for I failed to see any possibilities in her. I supposed you had asked her merely to 'fill up.'"

Mrs. Roland flushed warmly, saying: "No, Belle, I would never ask a stranger in a strange land to fill so unenviable a position. If she comes, I expect her to be treated as an honored guest."

"I beg your pardon, auntie," said Belle, penitently. "I'm afraid I was rude."

The entrance of the younger children from school prevented any further discussion among the three. Belle was soon assured that her aunt was not displeased with her by the warm pressure of the lady's hand as she sat near her at dinner.

As the two girls were waiting the first arrivals on Friday evening, Sadie complained of feeling a little nervous and fearful lest the evening should not prove a success. "It seems a little rash," she said, "to begin learning to be a hostess by bringing out something new, but mamma said I was all the more sure of interesting my guests. We have grown very tired of progressive euchre this winter, and no one has spoken of this yet."

When the first comers entered the room, Sadie introduced Belle to John Rivers, the only one she had not met, and was soon busy receiving and welcoming her arriving guests. John Rivers stood chatting with Belle as the merry crowd greeted each other, for all except Mabel Grey were old friends. "Yes, Miss Roland," he said, "I met them all last Monday at the Methodist social. The town seems very lively—much more so than when I used to spend my vacations here with Uncle Baxter. My friends have grown older, too, as well as myself. We were boys and girls together."

Sadie came up to them at this moment to ask Mr. Rivers if there were any he did not know. He assured her he had met them all. "All of them have arrived," said Sadie, "but Miss Grey, you do not know her."

"Yes, I have met her," he answered, little thinking which Miss Grey she meant. Sadie had forgotten there were two in town of the same name, and dismissed the matter from her mind. She was soon seen with a curious Japanese tray in each hand, offering of the contents to each she met. As she came near, John Rivers noticed that those in one tray seemed for the ladies, and those in the other for the sterner sex. He lifted by the lavender ribbon tied in the upper left-hand corner one of the square white cards, and after admiring the delicate spray painted on it, asked if they had a mission beyond being a charming souvenir.

"Oh, yes!" said Sadie, pausing to explain. "You will notice that the quotation written on it is incomplete. Some one of the ladies present has the other half written on a card tied with ribbon the color of yours. She will be your partner. Please find her as soon as possible so I can fill the tables."

Soon afterward he came to her and laughingly assured her that she must have intended slighting him, as no one had the rest of his quotation. "It is a familiar one for me, too," he said; "it was a favorite of a dear friend of mine."

"The stars come nightly to the sky,
The tidal wave into the sea;"

He read from his card in a subdued tone, as if it was fraught with dear memories. "The rest of it," he continued, "is:

"Nor time, nor space, nor deep, nor high,
Can keep my own away from me."

"Ah! Miss Sadie, good old John Burroughs was more hopeful than I, who lost my friend long ago, and to-night, through his little verse, have lost my partner."

"But," she said, half vexed, "we must find her, else my table is incomplete."

After a little laughing futile search, she said: "Why, I don't believe you have seen Miss Grey's card. She is half hidden by the curtain here." And Sadie led the wholly-puzzled man to a lady whose back was turned toward them and whom he had not noticed before.

"They told me Mary Gray was not here to-night," he said; at which Sadie turned in some astonishment.

"This is not Mary Gray," she exclaimed. "Perhaps you have not met this Miss Grey, after all. Let me present you to her. Miss Grey," she said, as she reached the seclusion of the bow-window in which Mabel had begged to be left till she grew used to the half-strange faces around her, "Miss Grey, permit me to present my old friend, Mr. Rivers."

Mabel rose with a very white face, to have both hands clasped in John's strong ones.

"I've found you at last, sweetheart," he exclaimed; and Sadie, with the quick intuition inherited from her mother, left them to talk it all over without listeners.

Going to her father and mother, she begged them to take the vacant places left at the table. The tap of a little silver bell now drew the attention of all present, and Sadie, with a bright flush of excitement on her young cheeks, invited the ladies and gentlemen to take seats at the small tables placed down the center of the room. Two couples were at each one.

"The name progressive conversations almost explains itself," she said, "especially as you are familiar with progressive euchre. In this,

however, only the ladies change their seats; the gentlemen remain where they are. The first topic of conversation this evening will be 'leap year,' and the ladies will try to give the gentlemen as much information as possible, the latter merely playing the part of listeners."

"At the end of five minutes, at tap of bell, the ladies will change seats as in progressive euchre, and a new topic be announced. At the close of the conversations, the gentlemen will vote for the most entertaining lady-talker, and the ladies for the gentleman who proved the best listener."

After a few moments of laughter and assurances on the part of the gentlemen that they would not find it hard work, as they had long been forced to accept the office of listener, the bell was tapped, and the conversations had begun. The gentleman in some cases looked as if they were used to it. Others seemed to think they ought to have a "turn at it."

After several topics had been given and discussed, the ladies had changed their seats so as to talk with each gentleman, and the voting began. Mrs. Roland attended to this, so that Sadie might steal away to the two guests who had kept up a steady stream of conversation ever since she left them.

During one of the short recesses allowed the gentlemen, in which they might rest, "by talking as much as they pleased," (so Sadie put it), one of them whispered to his fair neighbor, "John has outstripped us all, as usual. He seems to have found a willing listener, instead of being obliged to be one himself."

Sadie found Mabel looking so bright and happy that she could hardly help exclaiming over it. John Rivers rose, and still holding Mabel's hand, said: "Sadie, you have helped me to find my promised wife. Through a misunderstanding, we were parted, and I have been unable to find any trace of her who had filled so dear a place in my heart. I should have left here on Sunday, and but for the quiet insistence of your mother and self in coaxing her back to social life, would in all probability have missed her again. When they spoke of the shy Miss Grey, I thought they meant Mary Gray, and had no reason for looking in this quiet place for my lost Mabel. I hope you will be friends," he continued. But the two girls had their arms around each other before he had finished, and Sadie took them both into the sitting-room. She sent her mother to them as soon as the first prize, a satin hand-painted fan, had been given to Helen Conroy, a vivacious little brunette, to whom all had agreed in awarding the palm.

Kenneth Stone had an embroidered handkerchief-case given him, with the inscription: "He that hath ears to hear, let him hear," in one corner. This was traced on the light-blue satin with dark ink.

While they waited for refreshments, Sadie told them quietly what had happened, and when John and Mabel came back, all understood the situation. They made them at ease by taking it all for granted, and not appearing to notice that they had taken no part in the game. After some music and a cheery good-night, the guests went home, voting Sadie's party a complete success in more ways than one. They grew to know Mabel Grey very well before John took her to the lovely city home he prepared for her; and all felt glad that Mrs. Roland and Sadie had looked deeper than the rest, and secured them so congenial a friend as the "shy Miss Grey."

That Boy!

Mrs. Shamm gave a small but very elegant tea the other evening, and, as a reward for being good for two hours, she allowed her son Bertie, aged 10, to sit at table with the guests. As an example of cold-blooded villainy we give a few of the remarks made by Master Bertie during the progress of the meal:

"Ma," he asked first, "whose spoons are these?"

"Hush, dear," said Mrs. Shamm.

He hushed for a second, then:

"Ma, whose big glass dish is that?"

"Little boys should be seen and not heard," said Mrs. Shamm with a sickly smile, that did not conceal from the guests the fact that there was a fearful reckoning in store for Bertie on their departure.

"Say, ma," he put in, interrupting old Mrs. Moneyweight, who was the special guest of the occasion, "that ain't our silver cake-basket, is it?"

"Bertie, didn't you hear Mrs. Moneyweight speaking?" chides his distressed parent.

"Well, I'll be quiet if you'll tell me whose pretty glasses these are. They're Mrs. Baxter's, ain't they?"

"Bertie!"

"Oh, ma, I forgot to tell you that Mrs. Hooker wants you to be sure to send back her teaspoons to-night, and—Oh, ma, did you know that Sally broke one of Mrs. Walker's nice teaspoons? and—Oh, what a pretty plate this is! Who does it belong to?"

The doors had hardly closed on the last guest when the neighbors were apprised by a sound whose import could not be mistaken, that Bertie's time of reckoning had come.—*Detroit Free Press*.

"THE GREAT CRYPTOGRAM."—The Lowell Citizen remarks that if Shakespeare had only known about the Baconian cipher when he wrote his plays, there can be no doubt he could have made them fit a great deal better than they do.

How to Remember.

Toward the close of a talk on "memory culture" in San Jose, the *Herald* says Prof. G. W. James gave these hints on cultivating the faculty of recollection:

Observe, look and hear carefully. I dare say there are few, even in this audience, which ought to be eminently astronomical, for the great telescope stands almost over you, who could go out and tell the time of night within a few minutes by the position of the polar stars; and yet there are those with half your knowledge who can do it unerringly, and simply because they have observed carefully, and for that very purpose.

Reflection. That is, when your mind has received a thing, turn it over and look at it again.

Link thought with thought. There are three ways of doing this. First, the incidental way; this was practiced by Thurlow Weed, the great New York politician. He recalled at the close of every day each act he performed, every sight he saw, every conversation he engaged in, and was thus enabled to remember his promises, a difficult thing for this class of men.

The second way is the accidental. Thus, we have this year the figures 1888 to indicate the year of our Lord, and only once in a century do three figures come together in that way. Thus I recollect 1666 as the year of the great plague, the great fire, and from the latter fact the further one is suggested that 1666 gave us the first insurance company, and as this company insures our homes, and in our homes we all drink tea, it recalls the other fact that in the year of the three sixes was tea first imported from China.

The third way may be called the methodical. This means that if you have a theory or plan in which to array your thoughts, it is easy to recall them. It would be hard to remember all the actions that resulted in the upheaval of our mountains, and the forming of our valleys, if we did not first learn the theory of the contraction of the earth in cooling, and the cracks and fissures thus formed, but bearing this in mind, all is easy to remember. Lastly, using all the means possible to fix the impression you have received; think of the effect and review and arrange the impressions which have come to you, and they will become fixed, and you can recall them at your will.

How to Live Happily.

Thomas Jefferson wrote the following excellent advice. There is a great deal of human nature and good sense in it:

"Harmony in the married state is the first thing to be arrived at. Nothing can preserve the affections uninterrupted but a firm resolution never to differ in will, and a determination in each other to consider the love of the other of more value than any object whatever on which the wish had been fixed. How light, in fact, is the sacrifice of any other wish when weighed against the affections of one with whom we are to pass our whole life. And no opposition in a single instance will hardly in itself produce alienation, yet every one has his pouch, into which all these little oppositions are put, and while that is filling the alienation is insensibly going on, and, when filled, it is complete. It would puzzle either to say why, because no one difference of opinion has been marked enough to produce a serious effect by itself. But he or she finds his or her affections wearied out by a constant stream of little checks and obstacles. Other sources of discontent, very common indeed, are the little cross purposes of husband and wife in common conversation; a disposition in either to criticize and question whatever the other says; a desire always to demonstrate and make him feel himself in the wrong, especially in sympathy. Nothing is so goading on the part of either. Much better, therefore, if our companion views a thing in a light different from what we do, to leave him in quiet possession of his view. What is the use of rectifying him if the thing be unimportant; and, if important, let it pass for the present, and wait for a softer moment and more conciliatory occasion of revising the subject together. It is wonderful how many persons are rendered unhappy by inattention to these rules of prudence."—*Et.*

TOBACCO BLINDNESS.—This infirmity, it is said, is becoming a common affliction. At present there are several persons under treatment for it at one London hospital. It first takes the form of color-blindness, the sufferers, who have smoked themselves into this condition, being quite unable to distinguish the color of a piece of red cloth held up before them. Sometimes the victim loses his eyesight altogether. Tobacco being a narcotic, naturally benumbs the nerves. When the nerves are thus benumbed people do not see as distinctly, and this defectiveness of vision tends to increase and become permanent.

PENCIL FOR WRITING ON GLASS, ETC.—The new pencils introduced by Faber for writing upon glass, porcelain and metals, in red, white, and blue, are made by melting together spermaceti, four parts; tallow, three parts, and wax, two parts, and coloring the mixture with white lead, red lead, or Prussian blue, as desired. These pencils are convenient in the laboratory, and save the trouble of labeling.

YOUNG FOLKS' COLUMN.

How a Brave Boy Succeeded.

(Written for the RURAL PRESS by O. B. SERVER.)

(Concluded from our last.)

The morning of Jerry's birthday dawned bright, clear, and balmy. The family were astir early, for there was much to be done before the arrival of the youthful guests. Pies to bake, cake and doughnuts to make, vegetables to prepare, berries to hull, oysters to cook—in fact, Mrs. Howard and Ellen determined to make this the grandest gastronomic achievement of their lives; and you may be assured that their culinary qualifications were of no mean order. Then there were the chickens to clean and stuff, for a potpie of that succulent fowl was to be one of the many dishes on the occasion.

But the turkey! He was truly a royal bird—fat, meaty and of such huge dimensions that it seemed scarcely possible to "get away" with him at one sitting, even though the family was more than doubled for the time being. As the morning wore on, the edibles were prepared and placed in the oven, and their appetizing odors soon permeated the house and extended to the street, causing the passers-by to eagerly sniff the fragrant aroma.

Soon the guests began to arrive. First came George Gordon and Harry Sinclair, Jerry's friends, closely followed by Emma Burton and Julia Chilson, Ellen's schoolmates. Shortly after Henry Danbar and Kitty Sherrill arrived, and Edwin Ashford then came, completing the little party.

A merry group they were, as, gathered in the little parlor, they showered congratulations on Jerry for his well-deserved promotion at the store and his bravery in the recent attempted robbery. He was profuse in his thanks, but stood blushing like a schoolgirl at the many honors heaped upon him.

Soon dinner was announced, and as the merry group took their places at the table—Jerry at the head, the post of honor—their appetites needed no whetting, for they were fully primed to do ample justice to the toothsome viands spread before them. Although Jerry was the acknowledged host, his father relieved him from the duty of carving, and soon had the turkey thoroughly dissected and distributed to each guest. Jokes and laughter abounded, and when the dessert was served many of the party were in the condition of the traditional schoolboy—"too full for utterance;" the turkey and "fixings" had monopolized so much of their stomachs that no room remained for more.

After dinner the young people re-entered the parlor and engaged in music and social games. They were so engrossed that time was unheeded, and before they were aware of it, the evening shadows began to fall.

Now were this a conventional "love story" I would narrate how the blushing Jerry received the plaudits of his fair guests with the customary embarrassment; how the girls vied with each other to secure his attention and preference during the evening, and to receive from him the lion's share of osculatory favors in "Copenhagen" and similar games in which the merry party indulged. But as the sketch is nothing of the kind, but a "plain, unvarnished tale" of the boy's fortunes and his determination to rise in the world, I shall, in nautical parlance, "stow" any allusion, for the present at least, to the fickle goddess of Love.

What a merry party they were, to be sure! One of the young men had brought his violin, on which he was a proficient performer, and this, with Ellen's piano, furnished opportunity to the young people to enjoy the "mazy dance" to their hearts' content. Quadrille, waltz and contra dance succeeded each other rapidly, and the time for departure came all too soon.

As the hands of the clock neared the hour of eleven, several of the guests congregated in little groups and indulged in mysterious whispers. Then a spokesman was apparently chosen, for after a hurried consultation, Harry Sinclair, advancing to Jerry, addressed him as follows:

"We have gathered here to-night in response to your kind invitation to celebrate your sixteenth birthday. We well remember, while at school, your kindness to us and your readiness to assist us in our studies; and it gives us great pleasure to know of your success and well-merited advancement in business. In conclusion, allow me, as the representative of your old schoolmates, to present you with this slight token of our esteem and well wishes."

The "slight token" proved an elegant gold watch and chain, the former appropriately inscribed with the recipient's name and those of the donors. To say that Jerry was surprised would but faintly express his feelings. He turned white, then red, and endeavored to give utterance to the words welling up from his heart, but the power of speech appeared to have deserted him, a confused jumble only was audible, and he took his seat in despair.

"Speech! speech!" resounded from all sides. Jerry sat as in a brown study, seemingly trying to collect his thoughts. When order had been restored, he arose and said:

"My dear friends, I have no words to express my deep gratitude for and appreciation of the elegant gift you have so generously tendered me. It is such a surprise, it came so suddenly, that I am at a loss to put my thoughts into

language. Believe me, I am truly grateful, and I shall always hold in loving remembrance the dear ones who have so kindly testified their friendship in return for the slight favors I may have rendered them in the old school days."

He resumed his seat amid the tumultuous applause of the company, his eyes moist with feeling. At this moment the door-bell pealed loudly, startling the whole group, as the hour was very near midnight.

Mr. Howard answered the summons and soon returned accompanied by a district messenger with a note addressed to Jerry. The boy accounted for his tardiness in delivering the message by saying that it was handed in to the office late in the afternoon, but had been mislaid, and that when the note was found he had started immediately to deliver it, but as ill luck would have it, he had missed the last car and was obliged to traverse the long distance on foot.

The note was from the cashier of the H— bank, and read as follows:

Master Jerry Howard: I would be pleased to have you call at the bank at noon to-morrow in relation to a matter concerning yourself.

HENRY WESLEY.

More mystery! What could it mean? thought our hero. This had indeed been a day of surprises to him, and the end was not yet. Many and various were the surmises indulged in by the little group, and none was more mystified than Jerry himself as to the purport of the message.

The party separated at midnight, with many wishes for their young host's prosperity, and shortly after the family retired.

At 12 o'clock sharp the next day Jerry presented himself at the bank, and upon inquiring for Mr. Wesley was shown into that gentleman's private office.

"Glad to see you so prompt, my boy," said the cashier, extending his hand. "Promptness is one of the cardinal principles of business, and a boy who is careful to keep an appointment strictly at the hour designated is pretty sure to observe other rules which qualify him for success in whatever vocation he engages."

Jerry stood, hat in hand, at a loss how to reply; but Mr. Wesley, motioning him to be seated, continued:

"It is not customary with us to employ boys of your age, even in a subordinate capacity; but in addition to my own knowledge as to your character and capabilities, I have made inquiries of those who have known and observed you for years, and one and all unite in commending you in the highest degree. There is no vacancy in the bank at present, but I sent for you to say that the first of the year Mr. Price, our assistant book-keeper, leaves for New York to fill a similar position in one of the banks of that city, and that then the berth will be yours if you choose to accept it."

If Jerry was surprised at the reception of the watch and chain on the previous evening, he was doubly so now—this offer coming from one who was a comparative stranger. He had seen Mr. Wesley on his business trips to the bank, but previous to the day of the assault had not dreamed that he occupied a share of that gentleman's attention.

"Mr. Wesley," said he, "I assure you I am deeply grateful for your kind offer to and confidence in me, a poor boy whom you scarcely know. I have long wished for such a position, and hardly dared hope for it, even in the store where I am employed; but Mr. Stillman has offered me Mr. Dinmore's place when he resigns, which he intends doing shortly, and it would hardly be just to him to leave on so short notice."

"But it will be a month," replied the cashier, "which is certainly sufficient; and, besides, your salary here will be one-third larger."

The temptation was great, but Jerry requested further time for consideration and consultation with his father, which was granted, and the interview terminated.

The little family sat up late that evening, discussing the subject. Mrs. Howard and Ellen favored the acceptance of the offer, averring that the proffered position was but the stepping-stone to one of higher trust and emolument; but the father's conscientious scruples outweighed all monetary considerations, and he insisted that, considering Mr. Stillman's confidence in and generosity to the boy, it would be base ingratitude for the latter to desert him almost at the moment of his promotion.

The argument ran high on both sides, and after a three-hours' discussion all agreed to let the matter rest until Jerry should be installed in his new position of book-keeper at the store.

How little they dreamed of the events to occur in those few days!

Time passed; the first of December came, and Jerry was duly promoted to the book-keeper's desk. He was assiduous in his duties, made special exertions to please his employer, and his books were a marvel of neatness and accuracy.

It was the season of short days and long nights. Darkness came on early, and before five o'clock the clerks and office employees were obliged to work by gaslight. They were more than ordinarily busy—the holidays were approaching and large and increased orders had to be filled.

One evening a customer entered the store and inquired for an article not in common use. It could not be found on the shelves, but a clerk, remembering that several packages were in store in the basement, descended the stairs with a candle to procure it. Among the con-

tents of the cellar were a few barrels of oil, the faucet of one of which had been inadvertently left open, and the floor in the vicinity was saturated with the inflammable substance. How it happened was never definitely ascertained, but a hoarse cry of "Fire!" from the clerk as he rushed up the stairs, his clothes in flames, followed by dense volumes of black smoke, warned the occupants of the building to flee for their lives.

The unfortunate clerk, a mass of fire, rushed madly to the street, the draft created by his rapid exit adding intensity to the flames. He was seized by a dozen hands and his garments torn from him, but not until portions of his face and body were fearfully burned. A hack was summoned, in which he was conveyed to the hospital, where, after lingering for two days in great agony, he died.

When the fire broke out, Jerry was at his desk in the front of the store. At first he did not realize its close proximity and his danger, and hurried to the rear to rescue all articles of value possible. But the rapid spread of the flames soon drove him back, and he perceived the futility of all attempts to save anything except his own life. Moreover, he was so hemmed in by the small army of employees, and carried along with them, that he was soon forced to the street, where he stood in a dazed manner watching the destruction of the building.

Suddenly he exclaimed, "The books! I must save them!" and rushed into the store before his intention could be divined. The engines had arrived and were playing on the building, but heedless of the streams of water, the smoke and the flames, he disappeared through the half-consumed door.

An exclamation of horror went up from the crowd. "The boy must be mad! He will never come out alive!" was echoed by scores; and every eye was strained, and voices hushed in eager expectancy, as they scanned the opening through which he had entered.

At last, after a few minutes, but which seemed hours to the multitude, Jerry reappeared, a mass of grime and dirt, his coat smoking and his hands blistered, but firmly grasping the books. As he staggered out of the door, a dozen hands were outstretched to relieve him of his burden and convey him out of danger; but a falling timber struck his head cruelly, and he fell senseless to the ground.

When Jerry recovered consciousness he was lying in his own bed at home, his limbs swathed in flannels, his head covered with plasters and his whole body feeling sore. His injuries at first had been deemed most serious, if not fatal; but owing to the skill of the family physician, and the unceasing care and nursing of his mother and sister, he steadily gained in strength and was now rapidly recovering.

Just before Christmas he was permitted to go out for a walk, supported by his sister. Henceforward his improvement was all that could be desired, and in two weeks' time he was ready to report to his employer.

Mr. Stillman, however, had lost heavily by the fire, his insurance being light, and had concluded to wind up his business and go East. This was at first a surprise and disappointment to Jerry, but recalling the offer made him by Mr. Wesley, he proceeded to the bank to ascertain if the vacancy still existed. He was cordially received and informed that the position was only awaiting his recovery to fill.

The following day Jerry began his labors at the bank, and at once became a favorite. An apt learner of the duties assigned him, conscientious and painstaking, he soon gained the confidence of the officials, and in less than a year became paying teller. I will not follow him in his repeated advancements, but will picture him as he stands to-day, the honored president of one of the most solid financial institutions in the city.

All these events happened many years ago. Jerry—now a middle-aged man—is the owner of a mansion on Nob Hill, a happy husband—his wife, by the way, Emma Burton, one of the birthday guests—and the proud father of three beautiful children. His parents are still living in the old place, and point with pride to their son, the stay and comfort of their declining years. Ellen is happily married and the mother of two promising boys.

Our young hero's example may well be followed by the youth of to-day. No truer adage exists than "Nothing succeeds like success," and the prime factors for its attainment are industry, faithfulness and honesty.

THEY BROUGHT THE WILDCAT. — One day last fall, while W. D. Clark of Pleasant Valley, near San Jacinto, was away from home, his two little girls, the eldest ten years of age, espied a large wildcat prowling around close to the barn. They with two small dogs gave chase, the eldest girl armed, not with a broom, but with a black-snake. The wildcat took position on a large boulder and waited for the avenging force. The little girls pulled the dogs' ears and cried "sic," and the battle began, the girls pelting the cat, dogs and surrounding boulders with such stones as they could pull up, and using the blacksnake promiscuously. They came dragging their victim home, very much fatigued, and hardly knowing what it was. They certainly didn't know what risk they had taken.

"Did it rain?" said a Western man, in the course of a thrilling recital of border life. "Say, it rained so hard that afternoon that the water stood three feet on a slant roof!"

DOMESTIC ECONOMY

TOMATO OMELET.—Season a can of tomatoes with salt and pepper, add an onion finely minced, and spread over a hot, plain omelet.

APPLE-BUTTER PIE.—Two eggs, two heaping tablespoonfuls sugar, one tablespoonful flour, teaspoonful apple-butter, half-teaspoonful all-spice and milk to fill the pie.

SAVE all the brown meat-paper: it is very useful for wiping out greasy kettles and pans; it absorbs the grease, saves the dishcloth, and can be burned when through with it.

BUTTER TAFFY.—Two cups sugar, one cup water, two tablespoonfuls of molasses, four tablespoonfuls of vinegar, 1½ tablespoonfuls of butter. Boil 20 or 30 minutes and pour in buttered tins.

WHITE FRUIT CAKE.—One pound of flour, one pound of sugar, one pound of butter, one pound almonds, after they are blanched, one coconut grated, three pounds citron cut fine, whites of 16 eggs.

FRIED OYSTERS.—Out of their own liquor into cracker meal cook well, dip in beaten egg and then in cracker meal again; fry four or five minutes. Oysters look twice as large as they really are when double-breaded.

TO COOK BEEF TRIPE.—Wash the tripe carefully and soak in salt and water, changing once or twice; then boil until well done; remove from the water, dip in melted butter and fry a good brown; season with salt and pepper.

HORSE-RADISH SAUCE.—Take stock which has been cooked with a little vinegar, salt, butter, sugar and fine breadcrumbs, and mix with it as much grated horse-radish as will be required; the sauce should be quite thick; eat with boiled beef.

POTATO CUSTARD.—Grate six large potatoes, add to them one quart of boiling milk; stir in three beaten eggs and one-quarter of a pound of sugar, boil seven minutes, taking care not to let it burn, then add one-half cup of butter. This will make three good-sized custards.

WASHINGTON PIE.—One cupful of sugar, one-half cupful butter, one-half cupful sweet milk, one-half cupful flour, one egg, one teaspoonful of cream tartar, one-half teaspoonful soda; flavor with extract of lemon. Put on dinner-plates; spread with apple-sauce between each layer.

GINGER NUTS.—Three pounds of flour, three-fourths of a pound of butter rubbed into one-half pound of sugar, one pint of treacle, two ounces of ginger, one-half a nutmeg, one-fourth of a teaspoon of cinnamon. Make the dough stiff and knead it hard for ten minutes; cut into cakes and bake.

CHOCOLATE ICING.—Take one-half cup sweet milk, let it warm, grate what chocolate desired in it, stir it well, set on stove, add one cup of sugar, let boil five or six minutes, stir occasionally to keep from burning, and stir while cooling; when cool, add a little extract vanilla, which improves the taste very much.

MUFFINS.—To four well-beaten eggs add one pint of new milk; rub three ounces of butter into as much flour as will be needed to make a batter; stir into the butter and flour the milk and eggs, and add one teaspoonful of salt and one tablespoonful of yeast. Let it stand in a warm place to rise and bake in muffin-rings or patty-pans.

A SIMPLE FRUIT PUDDING.—To make this pudding take a teacupful each of sugar, sweet milk and chopped raisins or currants, one egg, one large spoonful butter, two teacupfuls flour and 1½ teaspoonfuls baking powder. Mix quickly together, put in a greased pan and bake or steam as preferred. Use with a hot sauce, or butter and sugar rubbed together.

CHEAP CAKE.—Put one-half teacup of warm lard in a pan with 1½ cups of sugar, one-half cup of water, a little flour; stir well or until the sugar is dissolved; add one-half cup of water, two eggs, a little nutmeg or essence of lemon, baking-powder one teaspoonful, and flour enough to suit; stir well. This will make dropcakes if flour enough be added, and sheet-cake if left thin.

STUFFED HADDOCK.—To stuff haddock, mix one ounce of dripping with 1½ ounces of breadcrumbs; add to this one teaspoonful of chopped parsley, one onion, one teaspoonful of milk and a little salt and pepper. After stuffing the fish, sew it up neatly and put it into a baking pan. Brush it over with butter or melted drippings, and sprinkle with breadcrumbs. Bake in a moderate oven, basting occasionally.

HOP YEAST.—Boil four or five medium-sized potatoes with a small handful of hops tied in a muslin bag. When tender, pour the water (there should be at least one quart) slowly upon four even tablespoonfuls of flour, one of salt, ginger and sugar. Stir constantly to avoid lumps. Allow this to boil, then add potatoes previously well mashed, and when cooler or lukewarm add two yeast cakes previously soaked in tepid water.

POTATO TEA CAKES.—Take one pound of cold boiled potatoes, and mash them smooth with the rolling-pin. Add one pound of flour, half a pound of suet, very finely chopped, six ounces of currants, two ounces of moist sugar, and one teaspoonful of baking powder; a little grated lemon peel may be put in if liked. Roll out to the thickness of half an inch; bake in a moderate oven for an hour, or until nicely browned. Cut into squares and serve hot.



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The Week.

We went to press last week just as the hot wave was beginning to elevate itself. Before the turn came, the heat made an excellent record, in fact, according to some authorities, the highest April achievement within memory even to 82°. In the interior the heat was also great, but, as a rule, acceptable in bringing forward early fruit and stimulating growth of grass and grain, which in many parts has been lacking in buoyancy this season, because of prevailing low temperature. Since the warming up, growth has been splendid where the soil has received moisture enough to foster it. Some fields are finely headed out and hay-cutting must be just at hand, but in others it will take much more heat and some more rain to secure satisfactory results.

The first orchard fruits, in the form of cherries, came from Placer county, as noted in our

"Agricultural Notes." The contest between early regions is just beginning, and it would puzzle a prophet to declare which will be the really and truly early fruit district. There must be also sharper lookout for early varieties. The contest will be interesting and the results profitable to the winners.

The Future of our City and our Commerce.

Our merchants and manufacturers are concerned about it, and with some very substantial reasons. We are not making the progress that our position and natural advantages would promise. Indeed, there are already some visible signs that we are to have competitors for the commercial supremacy of the Pacific Coast, and it behooves us to discover what impedes our prosperity, and give it the gravest consideration.

It is an alarming fact for us, that within a few months, a vessel arrived from China with 4000 tons of tea for New York, and did not land in San Francisco, but went North to a British port. How many more will do so? Is that to become the accepted line, or shall we assert our supremacy and bring all this through traffic to our wharves?

In considering this question, there are some underlying facts that must not be ignored, or we shall grievously stray from a wise solution. Most of the great cities of the world began in a condition of simple life and extreme poverty. Wages, rents, interest and habits were all on a very low scale. They have risen continually, but only as a general necessity demanded, evenly and smoothly all along the line; and are, even now, within a very little of a dead level. Thus in London or Liverpool, you hire a day laborer for 75 cents a day. But when this man goes to market with his money, he buys almost nothing that has not been produced by labor at the same price, or less. The farmer and gardener work for 50 and 60 cents. The skilled mechanic takes only \$1. Nineteen-tenths of all workers are within these rates. Interest is only three per cent. Rent is almost nominal. A handful of fruit is one cent. He shaves for two cents. Thus he gets value received, or nearly so, for his labor.

Here in San Francisco we began business in the midst of a gold fever, the other end up, as it were. Interest three per cent a month. Rent almost fabulous. Skilled labor \$10 a day, and all things away up in proportion. Fees, salaries, taxes and dues were all fixed on this basis. Nothing was natural. We wanted a school-teacher, and one came from Liverpool who had never earned \$500 a year, and was installed at \$2500 or \$3000. The London policeman came here from a salary of \$30 a month and was accepted at \$150. The sack of flour in those days cost \$20 for 100 pounds.

We have had to scale down instead of up. It is a difficult process, and resisted with might and main by all parties concerned. The result is that we are in a most anomalous and trying position. Those who have come down feel a nipping poverty, while all who remain away up find employment falling away, and little prospect for their boys and girls to do as well as they have done.

Some things have touched the bedrock of cheapness. Mere labor can be had for \$1 a day. Flour is \$2 the hundred-pound sack. Interest has come to six and seven per cent, and you get shaved for ten cents, if you so wish.

But this laborer for a dollar a day is far less happy than the one in England with his 75 cents. When he comes to buy, and to pay rent and taxes, here is the scale of prices:

	Per day.
Bricklayers at.....	\$6 00
Carpenters.....	4 00
Painters.....	4 00
Plasterers.....	5 00
School-teacher.....	8 00
Policeman.....	4 00
Barber, a shave.....	10

The taxes in our city amount to \$100 a year to every voter; in the State, to \$30 a year; in the nation, \$30 a year. Here are \$160 a year for taxes, and he must go into the market and buy the labor of others at the rates above stated.

These exactions explain why bread, made from California wheat, sells in London at four cents a pound and costs six in San Francisco. The taxes, the rent, and the high wages do it. The teacher or principal of a high-grade school, with his \$2000 a year, in 1856 could buy only

100 sacks of flour of 100 pounds each. He can now buy 1000. Our farmers and their laborers pay this much more for his services.

With these taxes, rents, interest and unequal wages and salaries, wharf-dues and charges, we are as a city set on a hill, a city of high prices, that buyers shun and sellers only visit.

And while we continue this course we must continually feel the consequences. Our customers will go elsewhere. Our shipping will go elsewhere. And eventually our children will go elsewhere, to find a home and bread. Our city cannot grow under these conditions.

There is not on earth a more favorable location for a great city. We have neither heat nor cold to impede any kind of manufacture. There is no place where a laboring man or woman can work 300 days in a year with less exposure to wear and tear. There is no place where the body can be made comfortable, in house, clothing and food, on such easy terms, so far as nature is concerned.

When we come to the cash cost the difficulty begins. But it is in our power to remove it. It is in our power to make San Francisco the cheapest, as well as the best, city in the world to live in. And the manufacturer and the merchant are first of all interested in this work. The necessary cost of living is one of the prime factors in all commercial prosperity.

What would we have, then? Simply this—a better scale of wages and salaries, taxes and fees, rents and prices. In Europe, England comes nearest to us, and as we have seen there, 60 cents a day is very poor pay, and a dollar is very good. In a great factory with a thousand operatives, all but three or four are within this range. Foremen and managers run up to double. With us the range is much wider. If the lowest were a dollar a day, the highest would be five times.

The storm is upon us. The Canadian Pacific railroad has brought it right to our doors. British and American cities on Puget Sound are being founded with as good harbors, with coal, timber, and all facilities equal to ours. They are setting up a scale of prices beside which ours are the golden days of '49; and they will take our business, and we shall sink unless we wake up, shake off this golden dream, and strip for the race before us.

It must come, sooner or later. It will come in peace and wisdom, if we so wish; in strikes, riot, and perhaps destruction, if it must.

Now, then, should it be done?

Thus: Let us call a convention, a friendly conference, of all our merchants, manufacturers, mechanics, laborers, politicians, professions, indeed of all whose fees, charges, rents, profits or wages affect our prosperity and our future. Let us ask what is best to be done that we may maintain our supremacy as the Queen City of the Pacific!

Let us see who should yield a little for the general good, and lay the foundation for a scale of prices to our customers that will entice them and be no oppression to any of us!

Remembering always that when we yield a little and others do the same, we are really repaid in the cheapness of what we buy, and in the fact that the growth of our city will find room for our children, who without that growth must inevitably wander away from us.

It is a question of life or death for San Francisco.

A Spanish Plow.

California fruit-growers will be interested in the letter from Mr. Lubin on the state of the agricultural art, in at least one horticultural district of Spain. The sketch given of the plow, which is even now in use, must be a sort of exponent of the condition of husbandry which could tolerate such a tool. The lettering on the engraving is thus interpreted: A is the wooden portion, generally a part of a tree of the proper shape; B is the moldboard or point combined, in this case plated with iron, but sometimes merely sharpened wood; C is an iron piece answering to the landside.

VICE-PRESIDENT OAKES of the Northern Pacific says the sale of 80,000 acres of timber land in Washington Territory, within 30 miles of Tacoma, has been consummated. The transaction involves the construction of a line from Tacoma, to be known as the Tacoma Southern, to cost \$2,000,000.

THE Santa Rosa & Carquinez railroad is rapidly nearing completion.

Having Eyes They See Not.

The great trouble with many people in this world is that they are not industrious with their eyes. They do not see with them many things that they should, and often make sad, costly mistakes from not seeing things aright, and even not seeing at all. Nature has given us fairly good eyes, and gave them to us for use, for pleasure, and for profit. Their use is cheap, they are able to do all the reasonable work we may use them for, and if we use them quite industriously they will last us as long as any other members of our body, and will last just as long when used constantly in useful work as when not used with any profit to ourselves or others. These thoughts are suggested by the very many mistakes we have seen made by divers persons by seeing things wrongly.

Recently the writer saw a large cherry tree robed in snowy whiteness with its abundant flowers. An intelligent young man near by spoke up, "Yes, it is nice, but it will not have any fruit this year; it is just covered with little red lice, and they are eating off all the flowers."

We stepped up to the tree but could see no lice. "Go round to the other side and you will see millions of them." We passed around to the other side and found nearly every flower nipped off as smoothly as if done with shears. It is true there were a few minute red mites on the twigs, but most certainly they had not nipped off the blossoms. Seeing some finches ("California linnets") in the ravine close by, we stepped out of sight, when quickly three or four were in the tree, snapped off a flower apiece and flashed back into the brush.

The young man had observed the tree in the middle of the day, the day before, when the twigs and flowers were swarming with the little red mites, and at once jumped to the conclusion that they were doing the damage. Suppose he had been the fruit-grower himself, and had taken the same view of it. He would have said, "These miserable little mites are ruining my cherry crop, but I will fix them," and at once gets his spraying apparatus and deluges the tree with some strong alkaline solution, and kills all the flowers left, the mites, and perhaps the tree, while the finches, the true cause of the mischief, are hopping around in the brush.

But with the skillful fruit-grower there should be no *perhaps* in any such cases, for he should at once determine, if possible, whether this particular mite was noxious or beneficial, for some of the mites are strictly vegetable feeders, others, animal. Among the former, some of them are very injurious, the "red spider," the green louse, common on some of our fruit trees, is an example. Others again seem to be neutral. But those of the genus that feed on animal matter are, many of them highly beneficial, others quite noxious to animal life.

Now, in this instance of the cherry tree, the cause of the destruction of the flowers should have been quickly determined by a man with eyes and a little brains behind them, and the remedy instantly applied, to wit, the shotgun, or some small pieces of bright tin suspended by threads from the branches. The shotgun should be used on this flower-eating finch at every house, for it is exceedingly destructive to fruit-tree flowers, and when it is reinforced by the notorious English sparrow, which has the same bad and flower-devouring propensity, our fruit-growers will have a lively time. This finch is a shy, retiring bird. This particular cherry tree stands near a brushy ravine. The side next it was stripped nearly entirely of flowers, the opposite side not touched. Therefore trees near a thick, brushy cover would be denuded of flowers by it, or, a great number of these birds might get into a thickly planted orchard if the environment suited them, and be entirely denuded, while another orchard of the same kind, not near cover, or more thinly planted, might escape entirely and bear full crops.

We have seen many other just as serious and uncalled-for mistakes. Then, let us use our eyes, and the large or small amount of brain power behind them, as may be the case, and make fewer mistakes.

THE Hawaiian sugar crop this year will amount to over 100,000 tons, of which about 60,000 tons come to the American and the balance to the San Francisco refinery.

Orange-Growing in Spain.

[From our Special Correspondent abroad.]

This morning, accompanied by Manuel, the guide, and having in my possession a written permit, we drove to the ranch of the Visconde del Pequall. This, I was told, is one of the most valuable pieces of farming land in the suburbs of Cordova.

The road to the right and left of us presented a fine appearance, being almost a continuous orange and olive grove.

Arriving at the gate of our destination, I handed the permit to a party stationed there, and in a short time the head steward, or superintendent, made his appearance and bade us welcome.

We were shown through the garden and the residence and then the fields. The first thing I inquired for was to see the implement department.

The superintendent looked at my interpreter in blank amazement. A department for implements? What could that mean?

I told him that in our State the extensive farms generally had a shed, house or store-room where the implements were kept, and some of them even had blacksmith's shops and blacksmiths on the place to repair or even devise implements. The superintendent (after this explanation) said: "Yes, I have heard that in America the people try to make all sorts of machines do the work in place of working with men, horses, oxen or mules. We have even tried some kind of a machine several years ago, when it was left here to be sold, but we Spaniards know how to work good enough without machines."

Having failed in finding the "implement department," I next asked to see a plow.

I was shown one (inclosed you will find a rough sketch of it which I drew on the spot). How do you like it? I saw its partner 3½ years ago at Jaffa, when Mr. Howard, the guide and hotel man there, told me: "Vehn Ebrahaam vuz beebie e yuze zot kin plode pipel off Kal-dee zere."

After seeing this plow I began to realize what a mistake I had made in asking for an "implement department." However, I made another attempt. "Have you no plows made of iron or steel in modern shape?"

"No; they have them for sale in Madrid in a machine store."

"What other implement have you," I asked, "for working the land?" All I could learn was that it was a "flat spread" with teeth in it (presumably a rude harrow). As there were none handy, I did not see it. The plows, as illustrated herewith above, cost 10 francs in plain wood points and 16 francs with iron-plated points. They are, however, usually "home-made."

They plow one acre a day, requiring one man and two animals; depth of plowing, about four inches; cost of laborer, 1½ to 2 pesettas (about 30 to 40 cents) per day (no board).

I inquired the price of land, and none could tell me other than "rent prices."

From what I could learn there is no selling prices, for it is very seldom that land is sold, excepting only in cases where a bankrupt nobleman is compelled to pay gambling debts. In such an event the land is sold, but not to the people. Oh, no! the people may look at land, they may rent land, they may work on land, but to own land—who ever heard of such a thing?

To be sure there are a few miserable peasants in the north of Spain, who, by dint of much labor, have removed boulders and rock sufficient to enable them to scratch in a quarter or half acre of seed on land they may call their own; but when it comes to the lands in Andalusia it is a different thing. "None but noblemen" is the rule here.

What is the result? What may we expect as a result from such a course? The result, as far as I can see, is this:

1st. On the one hand the nobility are a set of heartless, selfish bigots, ostentatious, frivolous and unscrupulous.

2d. The peasantry are profoundly ignorant, superstitious and slavish.

This combination has its effect on the people of the Spanish Kingdom. Toledo, which could support a population of 200,000 under the Moorish rule, now can scarce support 18,000. Cordova, that could count over 1,000,000 inhabitants under the tolerant Caliphs and Sultans, can scarce count 40,000 to-day.

The nobleman whiles away his time in Paris or in questionable intrigues at Madrid, and the laborer finds the "the good-old-way" plow equal and superior to the "Oliver chilled."

I learned from this superintendent that some



PLOW NOW USED IN THE ORANGE ORCHARDS AT CORDOVA.

kind of a mysterious disease has sprung up, fatally injuring the orange trees.

Some five years ago it was observed that some of the foliage would turn yellow, wither and die; soon thereafter other portions of the tree would share the same fate, and in time the tree itself died.

From year to year this state of affairs continued and kept on increasing in fatality, and in an almost geometrical proportion, until now (according to the information of the superin-

carefully destroyed after examinations and tests, as they may carry with them an infection.

In my next I hope to be able to give you my observations on Malaga Vine district.

D. LUBIN.

Cordova, Spain, March 12th.

[The specimens are received. It seems altogether likely that the trouble is underground, and possibly from unfavorable soil or moisture conditions.—EDS. PRESS.]

VITICULTURAL COMMISSION.—The terms of some of the Viticultural Commissioners having expired, the Governor has made appointments to fill the vacancies, and the board is now as follows: San Joaquin District, George West;

Sonoma, I. de Turk; Los Angeles, J. J. Rose; El Dorado, G. G. Blanchard. M. M. Estee succeeds Arpad Haraszthy as Commissioner at Large. Mr. Haraszthy was President of the Commission and one of its oldest members. He was appointed by Governor Perkins when the Commission came into being, and has been President ever since.

CALIFORNIA PRODUCTS IN CHICAGO.—An exhibition of California products is to be main-

The Mills Grape.

A new Eastern seedling grape which is praised at the East for hardness and p. iveness is shown in the engraving on this page. The new variety has perhaps exceptional interest in this State because the vinifera element enters into its parentage. It is described by Ellwanger & Barry of Rochester, New York (who are propagating and distributing the variety), as "the result of long and intelligent experiment by one of the most judicious experimenters in the country."

The Mills grape was raised by Mr. William H. Mills of Hamilton, Ont., by crossing Muscat Hamburg with Creveling. Bunch very large, compact, shouldered, some clusters weighing over 12 ounces. Berry large, round, jet black, covered with a thick bloom; flesh firm, meaty, juicy, breaking with a rich, sprightly flavor. Skin thick; berries adhere firmly to the peduncle. Vine vigorous and productive; foliage large and healthy. Ripens at the East about with the Concord, or a little later, and is a long keeper.

Ellwanger & Barry who have grown the grape in the open air for several years, give the following judgment upon it:

The Mills is a grape which for size, quality and appearance comes the nearest to the ideal variety of any we have seen. Its quality is the very best, exceeding in richness any hardy grape we are acquainted with. It possesses distinguishing characteristics which place it at once much in advance of the ordinary grape, and entitle it to be regarded as a remarkable production. We do not presume to say that it will succeed in all soils, situations and climates, but we believe that in a climate similar to that of Western New York, and with a reasonably good soil, situation and treatment, such as every grape should have, it cannot fail to give satisfaction. It is especially recommended to those who desire a grape of high quality, and are willing to bestow upon it the care it deserves.

The Mills seems to have qualities which may make it valuable here as a shipping grape. The

American Rural Home says of it: "The vine is vigorous, apparently quite healthful, heavily-loaded with immense, compact bunches of large, very solid blue-blackberries of an exceedingly rich, sprightly, aromatic flavor. We have nothing to modify in that description. As would naturally be expected from the texture of the grape, it is a good keeper, and was shown at the horticultural meeting last January in an excellent state of preservation."

We have no doubt some of our enterprising growers will try the Mills, and then we shall know of its local adaptations, which we hope

will add another to varieties valuable in California.

ACTION ON CONTRACT.—In Judge Gibson's court in Oakland, on the 12th inst., a jury awarded \$450 damages to A. Lusk & Co. of San Francisco, in their suit against W. C. Blackwood of Haywards, for the non-delivery of dried apricots which he had agreed to sell them. It appeared that Blackwood made a contract with Lusk & Co. in June, 1887, to deliver them 30 tons of choice sun-dried sulphur-bleached apricots at 11½ cents per pound, but afterward tendered apricots of an inferior quality, which they declined to receive, and as he refused to deliver according to contract, Lusk & Co. sued him, and after a stubborn contest won the case, as above stated.

GLACE HUMBBUGS.—New Yorkers have lately been surprised to find "crystallized figs" offered for sale in shop and stand for 20 cents a pound, whereas they have usually been charged 70 or 80 cents for such confections. When tasted, they prove not bad, yet not very delicate, and the Graphic explains that they are not "crystallized figs" at all, but only lumps of cheap fig jam, molded into the shape of a fig and sugar-coated.

LARGE quantities of wool are being shipped from San Diego and National City.



THE MILLS—A NEW EASTERN SEEDLING GRAPE.

tendent) fully one-third of the entire orange orchards of Spain are past recovery.

Not alone are old trees affected, but young trees suffer alike with the old.

The first sign of the attack is seen in the turning to a yellowish tinge of the center rib in the leaf. "When this is seen," said my informant, "the tree is as good as dead (although it may linger a season or two and even give several good crops in the meantime); the tree is doomed." I soon learned to distinguish the difference between the healthy and the affected trees, and found that the affected trees were most numerous on the place visited.

I asked if the trees were affected thus by any insect or animal, signs of which could be found on exposed or hidden portions of the tree. I was told that no sign or indication could be found as to the cause of the trouble.

I could find no insects on the trees. Believing that it would be of interest to our orange growers to learn more of this matter, I herewith inclose specimen of trunk and root-bark, and leaves from affected trees.

When grubbed, the roots are much decayed, and the superintendent attributed the trouble to some root disease.

Prof. Hilgard may be able to determine the nature of the trouble and perhaps a remedy. The root-bark and leaves should, however, be

tained at Chicago as an advertising medium. Cereals, preserved fruit and green fruit in season will be displayed. The project was worked up by the Southern Pacific railroad people. Nineteen counties have agreed to contribute \$300 a year each for its support, with others to hear from. The California Fruit Union will send shipments to this display depot. H. M. Van Arman will return to Chicago and arrange for the exhibition, and Dr. Latham will be in charge of it.

THE STATE AGRICULTURAL SOCIETY has lately bought four lots adjoining the east side of Agricultural Park for \$9900. They will be utilized for the sheep and swine exhibits of the State fairs, and thus give more space for horse stalls. The society had been badly crowded, and this is a most important purchase.

COLORS SERICULTORS.—A colony of negroes in Jefferson county, Ala., is said to be cultivating silkworms with great success. From 100 to 400 pounds of silk, worth \$5 a pound, can be raised on one acre. A company will be formed to manufacture the silk.

ACCORDING to the Inyo Independent \$100,000 is loaned on mortgage upon Owens Valley lands. Much of this bears interest at 15 per cent and none less than 12.

FRUIT MARKETING.

The Labor Problem.

EDITORS PRESS:—Last year Chinese, school-children, tramps, and all were unable to prevent hundreds of thousands of dollars worth of fruit from wasting. An increase of 25 per cent over last year's crop would not be an extravagant estimate, and where is the extra help coming from? Suppose we have enough to handle such a crop as last year, even then one-fourth our fruit must be wasted. But that is not all. Suppose 100 men were on this side the river each waiting to cross where they would get a dollar for that day's work. The only ferry-boat could take but 75. Now, if there were no other means of getting across, the ferry-man would be master of the situation, and could raise his charge to such a point that 25 would rather lose their time than pay the fare, or he could wait for competition to take its course, and let the passengers bid for the ride. In this case the situation is not quite so clear and the 200,000 laborers cannot speak with a single voice. Still the price will be substantially regulated by the six companies, and they are quite capable of taking in the situation. So it is very likely to be a question this year whether the profit of the fruit shall go to those who produce or those who harvest it.

In view of this it is not passing strange that we see little in the papers, and nothing in any of the topics for discussion among fruit-growers bearing on the question? They discuss everything else, but what odds does it make whether the black scale destroys the crop, the railroad takes it for freight, the commission-man dumps it into the bay, or John Chinaman takes it for the picking? It goes all the same. Prompt action now might remedy the danger.

Machinery.

Now is the time to discuss machines for picking, paring, etc., methods of handling to save work, the San Jose plan of picking prunes, Mr. Cooper's way of gathering olives, etc., and see if they have any suggestions for handling other fruits. Have driers, platforms and yards ready.

Piecework should be encouraged. By this means two men can often be induced to do the work of three by the day, they getting better pay and the employer cheaper service.

We can get more help if we begin now. Granted that Chinese legislation keeps that factor of the problem constant, we pay about twice the wages for common labor paid at the East, and living is practically the same. Yet they say this is no country for a poor man. In debating this question lately with a crowd of men charmed with the climate but disgusted with the chances for workmen, everything was in favor of California until it came to cost and prevalence of dissipation. That accounted for their want of success. There appeared no way by which the State or individuals could thrive while wasting half they earned. From the hoodlum element we have no hope. But fruit can be handled by women and children, and we want steady families from the East who will turn loose into our orchards. By organized effort and such inducements as can be given for homes and steady work, enough can yet be brought in to save the fruit crop. Manage work on fruit farms so as to keep the adults busy through the year and the children in vacation. Put up tenant houses, advertise, and we can get plenty of help and attract a class of citizens greatly needed.

San Francisco.

An Enterprising Man Wanted.

EDITORS PRESS:—In your last issue, among "Agricultural Notes," I find a report about our fruit prospects which every one who knows the county must indorse. Indeed, the prospects for a fine crop of every branch of agriculture were never better. A bountiful grain and hay crop seems to be assured, and our fields and orchards, as well as our vineyards, promise an unequalled supply of every cereal and fruit. And yet, with a largely increased crop of the finest apricots, cherries, nectarines, plums, peaches and pears, with extensive vegetable gardens, which can supply all the peas, corn, tomatoes and asparagus a cannery could want, right from the neighborhood and fresh—with canneries being established everywhere, with a scarcity of canned goods now in the markets, and therefore the assurance of a ready sale for all that could be put up, our cannery, started two years ago with the brightest hopes, stands idle, and our fruit-men sell their pears and peaches to the canneries of San Jose or Petaluma.

Our cannery, which is fully equipped, capable of turning out any amount of choice goods, and fitted to dry what is not strictly first class or may be too ripe, is offered either for sale or rent, at lower figures than a new one can be started, and there is no one here to take hold of it. In one of the best fruit-growing districts in the State, with plenty of fruit to keep it supplied, in a town of 6000 inhabitants which could supply all the labor in its boys, girls, and poor women, this institution lies idle. It is situated near the railroad depot and the steam-

boat landing, therefore has the best shipping facilities to be found anywhere. All it wants is an enterprising man who understands his business to take hold of it, make money for himself and give a market to our fruits, and employment of the most agreeable kind to hundreds of our inhabitants. That these are facts, not fiction, will be apparent to every one who investigates it. I have no "ax to grind," no fruit to sell, no children who want employment, but I would like to see this institution made useful and prosperous in our midst, instead of being an eye-sore to all who have the welfare of the community at heart. I hope that these few lines may draw the attention of business men to one of the best chances for making money I know of.

Napa, Cal.

GEORGE HUSMANN.

Unpleasant Experiences in the Dried-Fruit Business.

A recent decision in Judge Wilson's court has been regarded with considerable satisfaction by merchants interested in the dried-fruit trade. The action was brought by Wormser & Co. of this city, against a house doing business in Pueblo, Colorado, viz., C. Henkel & Co., to secure settlement for a carload of dried fruit purchased early in the year 1886. From the complaint it appears that Messrs. Wormser & Co. sold and shipped the fruit to Henkel & Co.; that before the fruit reached its destination, a sharp decline in overland freights occurred, which rendered the purchase an unprofitable one. When the car reached Pueblo, Henkel & Co. refused to receive it or pay for same, on the ground that the fruit was wormy and in bad condition. Wormser & Co. refused to make reclamation and ordered the property reshipped to San Francisco. When it reached here, an examination was made, and no defects appearing such as had been claimed, demand was made against Henkel & Co. for damages, in the sum of the expenses incurred. This demand was refused. Subsequently, while Mr. Henkel of the firm mentioned was in this city, suit was brought for the recovery of the amount claimed, and the judgment just rendered gave to Messrs. Wormser & Co. about \$1600, being expenses, cost and interest.

The peculiar interest attaching to this action is that it establishes the liability of purchasers who attempt to evade fulfillment of contract in transactions of this kind. Of late years the experience of merchants engaged in the dried-fruit business who have shipped fruit to Eastern markets on orders has been most unsatisfactory, and in many instances has proved unprofitable as well. The experience here is that on a declining market, claims for reclamation and rejection are so frequent, even among houses doing business in the large Eastern cities, which enjoy high commercial standing, that it is unsafe to ship dried fruit at all, except it is examined and paid for before shipment. So frequently have instances of this kind occurred with some houses, that several of the most prominent buyers have been put on the black list by the trade, and orders unaccompanied with remittance are wholly ignored.

Formerly considerable carelessness in grading fruit was observed. Of late years, however, this has been corrected, and there seems little occasion now for irregularity in this department of business, more than in other branches. It seems as though the dried-fruit business might be so regulated as to avoid the annoyances hitherto connected with it, and unless it can be, the merchants of this city will, for self-protection, be obliged to refuse all orders from the East, except for spot cash, where acceptance is made before shipment. The result of the action mentioned may have a wholesome influence.—*Grocer and Country Merchant.*

Raining Snakes, Frogs, Etc.

A subscriber in Kern county has lately read an account of its "raining snakes," somewhere in the northern part of the State, and asks:

"Did ever such a thing happen? It hardly seems plausible. It was also stated that at some other place they supposed from the quantity of small fish and fishworms on the ground, after a rain, that they had fallen with the rain. I should like to know if this is really so?"

We have seen such stories in print, from time to time, ever since we have known how to read, and the theory, we believe, is generally accepted that small fishes and reptiles are occasionally drawn up in a water-spout from one place and presently let fall in another.

RIVERSIDE PAVILION BURNED.—On the evening of the 12th, while the janitor was preparing to light up the Riverside pavilion for a dance, a lamp exploded and set fire to the building, which soon burned to the ground. The adjoining brick block, in which was Wells, Fargo & Co.'s express office, was also destroyed with all its contents except what was in the fire-proof vault. Nothing was saved from the apartments of J. H. Vandever over the express office. The blacksmith shop of S. Alder was somewhat injured. The Glenwood hotel was on fire several times, but was saved by hard work. The loss on the pavilion is \$5000, insurance \$3000. Wells, Fargo & Co.'s loss is estimated at \$10,000; insurance nearly covers the loss.

THE LUMBERMAN.

The Lumber Business of the Pacific Coast.

The lumber business of the Pacific Coast has already developed into magnificent proportions, and is still growing at an annually increasing rate which bids fair, at no distant day, to constitute the largest local interest of the kind on the entire continent. It seems to have taken a new start during the past few years.

The census of 1880 gave, in round numbers, 693,000,000 feet as the cut of that year on the Pacific Coast. Of this amount California contributed 305,000,000 feet, Oregon 177,000,000, Washington Territory 160,000,000; the balance, 51,000,000 feet, was contributed by Idaho, Nevada and Arizona—the last-named furnishing nearly 11,000,000 feet.

Since 1880 Washington Territory, in which is located the great lumber region of Puget sound, from being the third on the list has made a wonderful development and leads by far all other localities. We append a rough estimate as the figures for 1887:

	Feet.
Washington Territory.....	600,000,000
Oregon.....	300,000,000
California.....	400,000,000
All others.....	70,000,000
Total.....	1,370,000,000

These figures show a wonderful increase in the lumber business of this coast during the first seven years of the present decade, the yield having practically doubled in that time.

About one half of the total lumber product of the coast has long been consumed in California, and the present boom in Southern California has largely increased the consumption during the past year. It is estimated that about one-half the entire lumber used in the State during the last half of 1887 was consumed in the three southern counties. As there is every reason to believe that the great influx of newcomers into the State will continue in an increased ratio for several years to come, we may look for a corresponding increase in the lumber business. People that are coming here must have homes, and our lumber-mills will be taxed to their utmost to keep up the supply. To do this the capacity of existing mills must be largely increased and many new mills must be built. The increase of production during the last year has been about 200,000,000, or a little over 17 per cent. As the influx of people coming to stay is now spreading over the entire State and the numbers greatly increasing, we may reasonably look for a lumber famine for a year or two to come. Either this or our foreign trade must suffer. This last would be a misfortune, as our foreign and Eastern lumber trade promises to be one of the great trades of the future, and one which we ought to nourish with great care. The mills now in operation will be utterly unable to supply the demand, and in all probability it will be impossible to put in operation new mills sufficient to turn out a supply sufficient to meet the urgent necessities of our rapidly growing population. It is a fortunate fact, however, that

Our Forest Supplies

Are equal to the most urgent demand which can be made upon them. We have, first, immense lumber regions, which may be opened up all along the western slope of the Sierras and Rocky mountains by lateral railroads, which may be easily rushed up into their canyons from main lines at innumerable points. These mountains trend along the Pacific Slope from the northern to almost the extreme southern boundary lines of the Union—a distance of some 2000 miles, and are covered for nearly their whole extent by immense forests of the finest timber on the continent. Then we have the Coast Range with even a much larger supply. The average width of this latter range cannot be less than 25 miles by a length of about 2000. Passing on northward and beyond British Columbia, we have in Southern Alaska another forest stretch of absolutely unknown area, probably nearly or fully equaling the two areas already noticed. All this timber is readily approachable by ship or rail, and will all be eventually converted into serviceable values. It has been estimated that when all the available timber in the regions south of British Columbia is converted into merchantable lumber, its market value cannot be less than \$20,000,000,000 or \$25,000,000,000, when placed at tidewater. There is no doubt but that amount of money will be realized from it in the near future by those engaged in the industry. It is almost impossible for the mind to comprehend such immense values. The amount named is fully two-thirds of the assessed valuation of all the property in the United States at the present day. The San Francisco *Journal of Commerce*, in alluding to the magnitude of the forests of the Pacific Slope, says: The principal descriptions of lumber that go to make this up are the pine or red fir, the redwood, the cedar, and the sugar-pine. The pine or red fir is found west of the Cascade range, between 44 and 52 north latitude, 8° or 560 miles in length. All the country round the basin of Puget sound, except in the few clearings, is covered with its stately growth. The redwood is king from 37 to 42 north latitude, and takes in 4125 square miles. Great tracts are covered with trees 200 to 300 feet in height, and a redwood forest is one of the most majestic sights in the world. The cedar is found wedged in between the redwood and the

sea from 40° to 42°. The sugar-pine is the most valuable timber found in the Sierras, and is present in almost inexhaustible quantity. The yellow pine of Alaska is found in extensive forests stretching over a territory almost as large as the whole of the rest of the Pacific Coast west of Nevada.

SHEEP AND WOOL.

The Wool Interest of California.

There is no State in the Union more favorable for either wool-growing or wool manufacture than California. The wool grown in the northern portion of the State is of a very superior quality. It is sound in staple, and possesses great elasticity. It will readily take the most delicate colors and has no superior in its fulling qualities. Sheep may be and generally are sheared twice a year—each shearing giving a staple well fitted for clothing purposes.

The wool product of California has averaged nearly 40,000,000 pounds per annum since 1880, bringing to the State about \$6,000,000 each year. This is about one seventh of the entire wool product of the country. The estimated product of the United States for 1888 is 275,000,000 pounds, which is about two-thirds of our consumption. Nearly all our imported wool comes from Australia.

Woolen Manufactures.

There are now, we believe, ten woolen factories in operation in California, as follows: The Pioneer and the Golden Gate Mills in this city, and one each in Santa Rosa, Petaluma, San Jose, Stockton, Napa, Marysville, Merced Falls and Los Angeles. The Sacramento Mill was recently destroyed by fire, and there are two others in course of construction—one at Los Angeles and one in Woodland. The knitting-mill connected with the Pioneer Mill in this city might be considered a separate institution, which would make the whole number in the State ten. There have also been two other parties in the State looking for some favorable localities for establishing woolen-mills. They represent large Eastern manufacturers who are anxious to enlarge their business and prefer this coast to the East for such enlargement.

Notwithstanding the many failures in the business in past years, the woolen manufacturing industry of the State was never more prosperous than at the present time. The failures that have occurred within the past few years have been due to mismanagement. All the mills now running, with perhaps two or three exceptions, are doing well and making money for the stockholders. No industry can succeed where the business is run in the interest of the officers and managers, without any reference to the rights of the stockholders. Experience has shown that wherever mills have been run on strictly business principles they have done well.

There is not a State in the Union which presents more favorable opportunities for profitable woolen manufactures than California. Tons of wool are being constantly shipped East by railroad and returned to this city in the shape of manufactured goods, which might just as well be spun and woven by our own people. Manufacturers here have two freight tariffs, besides double commissions, in their favor. The best army cloth in the country has been, and now is being, manufactured in this city. The Pioneer Woolen-Mills of San Francisco have for several years held government contracts for navy flannels and cloths, and, of late, we believe these cloths are made altogether from California wools, although formerly the Mission Mills used a certain percentage of Australian wools for such goods. All the world is familiar with the superior blankets which were formerly turned out from the Mission Mills in this city—goods which took the premium against the world in the several international expositions held in London, Paris, Berlin and Philadelphia.

The Tariff Question

Just at this time presents a factor of much disturbance to both the wool-grower and the manufacturer. But in the present state of public feeling it is very doubtful whether any tariff bill can be got through Congress which will have the effect of crippling such a universal and generally profitable business as either growing or manufacturing wools. The wool production of the United States saves to the country from \$40,000,000 to \$50,000,000 annually, and a large portion of that money is earned by small farmers who raise a few sheep merely to give variety to their farm products and utilize land which would otherwise have very little value. The value of the manufactured product reaches to more than double that sum, and is distributed among a great army of workers whose interests no legislative body can afford to ignore. If any change in the tariff is needed in this direction it should be with a view to encourage both branches of this great industry. The few old fossils in Congress and elsewhere who are sitting on the tail end of progress and shouting for free trade, will soon learn their true status and take a more progressive stand, or be whisked off from their present position into political oblivion. The day is past when the working people of this country can be dropped from their present high position of prosperity and independence and relegated to the condition of poverty and suffering which characterizes the working people of Europe and Asia.

THE LOUISIANA TRACT!

City of Sacramento,

SITUATE ONE MILE FROM THE FLOURISHING

With a Population of 30,000, and

 $\frac{1}{4}$ MILE from Terminus of an ELECTRIC RAILWAY, now in course of construction.

SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. 5 ACRES IN FRUIT, well attended to, will make a handsome income. One Acre in Strawberries will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$80, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

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Subdivision No. 1 of the Palermo Citrus Tract, in the heart of the Citrus Belt, 5 miles south of Oroville, Butte County, Cal., on the line of the Northern California Railroad; Depot on the Tract at the new Town of Palermo.

FOR SALE IN SUBDIVISIONS OF FROM 1 TO 20 ACRES

At \$75 per Acre,

Including FREE WATER for four years to all who settle on the land and improve before July, 1889. The land is level and clear with the exception of some giant live and white oaks interspersed through the tract. The soil is a deep, rich, red, gravelly loam and produces the finest of every variety of fruit. It is particularly adapted to the cultivation of the Orange, Lemon, Fig, Grape, Olive, Peach and Apricot. Water piped throughout the tract. Terms only one-fourth cash, balance in from one to four years at purchasers' option, with interest at 7 per cent per annum. Lots in Palermo City, 50x150 in size, from \$50 to \$225 each; all streets to be graded and leveled. One hundred and seventy-five acres at Palermo are now being set out in the choicest varieties of Florida Orange Trees. Maps and further particulars of

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SANTA YNEZ,

Santa Barbara County, California.

THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil. TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for home or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

E. de la CUESTA, Agent, Santa Ynez.

McCLUNG & PRAY, Agents, 325 Montgomery St., San Francisco.

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COOPER & DREYFUS, Agents, Santa Barbara.

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SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

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CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

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CALIFORNIA CHIEF GRAIN CLEANER

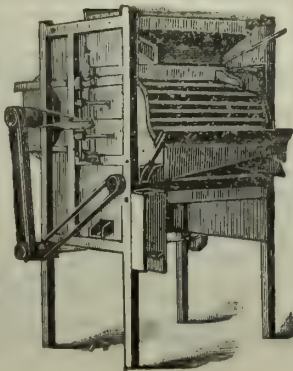
Will Clean 1600 Bags of Wheat in a day.

Manufactured by

HENRY N. DALTON & SONS,

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LITTLE CHIEF GRAIN CLEANER
FOR COMBINED HARVESTERS
WILL CLEAN 600 BAGS IN A DAY

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TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land?

DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10 acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

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FERTILIZERS!

Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

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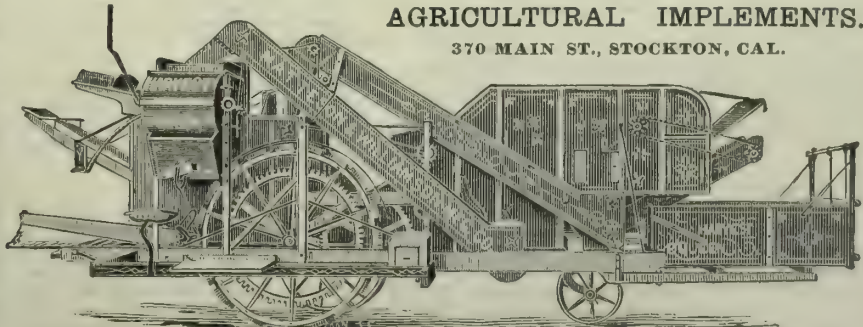
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FOR 1888. THE MOST COMPLETE HARVESTER IN THE FIELD.

AGRICULTURAL IMPLEMENTS.

370 MAIN ST., STOCKTON, CAL.



OUR HARVEST QUEEN (COMBINED) HARVESTER.

Sizes—10, 12, 14 and 16-foot cut. Each Machine has Steel Shafting and Straw Dump, which saves all the Straw and Chaff. Header easily detached to ship or pass through 10-foot gate. SEND FOR PRICE LIST AND TESTIMONIALS TO

M. & W. MANUFACTURING CO.,

Stockton, Cal.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

DRYING WITH TRIMMINGS.—Livermore *Herald*, April 12: J. H. Wheeler has decided to build a fruit-drier on his "Cornelia" estate on West avenue. As fuel he will use the trimmings from his orchard and vineyard. When they were gathered up, he had them made into small compact bundles, tied with bale rope, each about the size of a stick of wood. This was done very quickly, and at an expense of but about \$1.50 per cord, by means of a simple device of Mr. Wheeler's own invention.

Butte.

THIRD DISTRICT AGRICULTURAL ASSOCIATION. Chico *Enterprise*, April 2: The annual meeting of the Directors of the Third Agricultural Society was held Saturday. W. A. Shippee of Nelson, W. M. Billups of Colusa, C. H. Merrill of Willows, Dr. C. C. Mason, G. W. Dorn, T. P. Hendricks and Wm. Hawkins of Chico, were present. D. M. Reavis was absent. The election of officers resulted as follows: C. C. Mason, Pres.; Wm. Hawkins, V. P.; John E. Robinson, Treas.; Jo. D. Sproul, Sec. The date of holding the Annual Fair has been set for Tuesday, Aug. 21, to continue five days. The arrangement of the speed program was then considered, and the unanimous opinion of the board was expressed that it should be the most attractive ever offered in the district. The purses made up amount to over \$5000, and give assurance of a grand gathering of fine stock, and the premiums to \$2000 or \$3000 more.

Colusa.

A MODEL CHICKEN YARD.—Colusa *Sun*: Jos. McVey has a fine residence on his farm on the east side of the river, and has everything about the place kept in first-class order. The chicken yard is worthy of special mention. In the first place, to get into the yard one must go through seven gates, each one opening with a spring, and made so like the fence that one has to know just where it is located to open it. This is to keep out Chinamen and other chicken thieves. The nests are so arranged that each hen is separate from the rest when setting, and the broods of chickens are then graded like our schools. The newly-hatched go into one department, and those of another go into another department, and so on until the young chicken is prepared to take his chances with the rest. The roosting-place is not a mere dirty roost of the ordinary barn-yard, but the chickens go upstairs to bed, as it were. The whole yard is so arranged as to be easily kept clean, and is so kept. Over the top of the whole yard slats are arranged close enough together to keep a hawk from swooping down on the young chickens. An examination of this yard is well worth a trip to Mr. McVey's farm.

HAWKS HELPING FARMERS.—Dr. Jas. Compton in *Williams Farmer*: Two years ago we had 40 acres of wheat seed destroyed by birds. The land was sandy and winter-sown, and as much as nine-tenths of the seed was destroyed. This year we had the same land winter sown with wheat. As soon as it commenced coming up the birds came in tens of thousands and began their work of destruction. The remedy, which was completely successful in my hands, was strychnine; two drachms formed in a solution of water enough to moisten two gallons of wheat. In the morning I scattered about one-half of the wheat across each end of the field, about 100 yards from the ends. By this method the dead birds will lie at each end of the field. Soon after the birds' death the hawks and ravens appear on the field and eat them. Hunting for dead birds, they fly from one end of the field to the other, thereby herding the entire field. I have seen at one time as many as a dozen hawks flying back and forth across the field, the birds being in constant fear without doing any damage. Farmers, don't kill hawks—they are your friends.

Contra Costa.

GLANDERS.—Martinez *Gazette*, April 14: We are sorry to learn that a horse running in a field with a large number of others, near Danville, was discovered last Tuesday to be in a badly diseased condition, and an examination convinced those who saw him that he was afflicted with glanders. He was promptly shot, and a veterinary surgeon, telegraphed for at San Francisco, a few hours after, without hesitation pronounced it a bad case of glanders, and ordered the carcass to be burned. The field has been quarantined, and every precaution will be taken to prevent the spread of the disease. Some little time will necessarily elapse before it can be known whether the contagion has been communicated to other horses in the pasture.

Inyo.

CANAL COMPANY.—The Inyo Canal Co. filed articles of incorporation April 10th. The object of the company is to construct irrigating canals and ditches, and to appropriate, purchase, own and hold water and water-rights, and to furnish and sell water to other persons and corporations, for the purpose of irrigating and reclaiming lands, and for mechanical and manufacturing purposes, and to purchase and sell, own and hold, and to irrigate, reclaim and cultivate lands in Inyo county, Cal. The capital stock is to be \$750,000, divided into 15,000 shares of the par value of \$50 each. Trustees for the first six months, Simeon L. Lee, Simeon Bishop,

Finley McIver, Theodore R. Hofer and Trenmor Coffin. Principal place of business, Carson City, Nev.

Lake.

QUARANTINE GUARDIAN APPOINTED.—*Avalanche*, April 12: W. G. Klee, State Inspector of Fruit Pests, has appointed John Reimus Quarantine Guardian for Lake county. Mr. Klee has made a good selection, as Mr. Reimus is a man who takes a great deal of interest in fruit culture.

Los Angeles.

GRAPE OUTLOOK.—"Borea" in *Anaheim Gazette*, April 12: The grapes are later than usual in putting out, and the time for late frost is past, so the grape crop will likely be a good one. The Fullerton cannery will handle several tons of Muscats daily. Those having Malvoise grapes will dry and stem them and sell them as dried grapes rather than take \$10 a ton. Dried grapes well cared for readily command four cents a pound, which is \$20 a ton, and pay for the work.

POMOLOGICAL.—Los Angeles *Herald*, April 14: The third annual meeting of the Los Angeles County Pomological Society was held at Glendora on Thursday last. A very large delegation was present from all parts of the county. The hall in which the meeting was held was beautifully decorated with flowers and evergreens. The ladies of the neighborhood were out in full force and took a lively interest in the deliberations of the society. Among the Glendora exhibitors were W. B. Collins, bananas; Mr. Gatton, English walnuts, dried fruit and orange marmalade; J. L. Dougherty, Wm. D. Shields, P. Shory, J. J. West and John Bender, Mediterranean Sweets, seedling, St. Michael paper rind, Washington Navel and Australian Navel oranges. H. D. Englehardt's, Sicily lemons were exceptionally fine. C. E. Needham of Glendora contributed strawberries. John T. Gordon of Azusa made an excellent exhibit of lemons and oranges, as did also E. R. Coffman, John Richard, H. T. Thomas, Mrs. D. H. Davis, R. A. Meredith and others. J. Justice of Azusa showed superior walnuts, and H. W. Quitzan exhibited port wine, Zinfandel and brandy. Gladstone's contingent of Washington Navel and Mediterranean Sweet oranges are worthy of mention. Pres. Hiram Hamilton being unavoidably absent, J. W. Salles of Pomona presided. A number of papers of interest to horticulturists were read, and a lively discussion followed, participated in by Milton Thomas, T. A. Garey, M. Baldridge, George D. Whitcomb, W. B. Cullen, D. Elson Smith, J. W. Salles, W. R. Barbour and others. The following officers were elected to serve the ensuing year: Thomas Garey, Los Angeles, president; George D. Whitcomb, Glendora, Mr. Fuller, Gladstone, L. Parker, Anaheim, and A. D. Bishop, Orange, vice-presidents; D. Elson Smith, Santa Ana, secretary; Milton Thomas, Los Angeles, treasurer, and W. R. Barbour, Covina, Entomologist. It was decided that the next meeting be held at Alhambra.

Mono.

LIVE STOCK LICENSES.—Bodie *Miner*: After much exciting debate, many petitions, a great deal of buttonholing, and things, the Supervisors have changed Ordinance No. 22 so as to let the license stand on horned cattle, take it entirely off horses, and raising it to 7½ cents on sheep. We are informed that all cattle-men, both domestic and imported, express themselves as perfectly satisfied with this; and in fact many of them who "happened" to be in Bridgeport at the time applied for their license on cattle at once. Unless the object of the Supervisors was to place the license on sheep so high as to make the driving of outside sheep into this county for grazing purposes only, prohibitory, 7½ cents on that class of animals is too much. If sheep are kept out, however, it will render the grazing grounds of Mono so much more valuable proportionately. Some men who have not yet worn out their pencils, have finally run up the number of cattle driven in here every year to graze to as high as 28,000 head. Capt. J. L. O. Sherwin testified before the board, while the matter was under consideration, that last year he collected toll on 10,000 head of horned cattle driven in from Inyo county alone.

Nevada.

CHAMPION EGGS.—North San Juan *Times*, April 6: Monday last we received a box from James Quick of Badger Hill with the following explanatory note:

O. P. STIDGER.—Dear Sir: You will find in this box two Light Brahma eggs, which I present to you as Easter eggs. I think they will out-measure any eggs Mr. Shoemaker ever had in Grass Valley. You can measure them for yourself. Yours, etc., JAMES QUICK.

We did measure them, and here is the result: Egg No. 1—Longitude, 10 inches; latitude, 8 inches. Egg No. 2—Longitude, 9½ inches; latitude, 7½ inches. The eggs were beautifully colored and astonished all who saw them.

Placer.

FIRST CHERRIES.—Cor. *Chronicle*, April 12: The Newcastle fruit district maintains its claim of being the earliest place in California in ripening its fruits, by producing the first ripe cherries of the season, which were sent out from Newcastle April 11th. They were of the early Lamauria variety and were from the orchard of C. M. Silva & Son.

EARLY STRAWBERRIES.—Newcastle *News*, April 11: Robert Hector brought us a basket of fine, large, luscious strawberries on Monday last. They were as large as English walnuts, and as delicious as they were large. This is the

first basket of strawberries we have seen this season. Thanks, Mr. Hector... The first strawberries brought to this market this year in shipping quantities were from the ranches of W. E. Richey, J. K. Correa, and C. H. Kellogg. They were sold to Geo. D. Kellogg at a good price, and were shipped by him on Monday, April 9th, to the Eastern market.

Sacramento.

ANOTHER POLLED-ANGUS HERD.—*Record-Union*, April 14: Dr. G. M. Dixon of this city owns the Loupvalle stock ranch in Buffalo county, Nebraska, which ranch is well stocked with Polled-Angus cattle. He has recently received from there a draft of 50 head, all young and very choice animals, and they are now quartered on the Brockway ranch, one mile south of the city, on the Freeport road. Dr. Dixon's herd here consists of 34 males and 16 females, and they are doing so well in this climate, he has decided to bring his entire herd of Polled-Angus cattle to Sacramento this fall, and here maintain permanently a large herd. His observation and experience show that here an animal will maintain a steady and uniform growth throughout the year—a very difficult matter in the East, where the rigorous climate checks the growth of the young animal every six months.

San Benito.

HORSE MARKET.—*Free Lance*, April 13: The third monthly Horse-Market, under the auspices of the Hollister Board of Trade, was held last Saturday. By 10 o'clock more than 40 horses had been brought to Kent's livery stable, and having been duly numbered and tagged were led into the stalls. Although there were several buyers present from neighboring towns, no sales of importance were made until afternoon, when a brisk business commenced, bringing fair prices. Many other sales would have been made had not the sellers asked high prices. The next Market Day is Saturday, May 5th. In order that the sale may be a great success, and the presence of outside buyers secured, it is absolutely necessary that the sellers register their horses with Secretary Leggett as soon as possible. A large list of horses sent out the week before the sale will insure the presence of a great many buyers.

San Luis Obispo.

A STRAY COUGAR.—S. L. O. *Tribune*, April 13: Once upon a time wild animals were plenty in San Luis Obispo county. There were grizzlies and black bear, panthers, coyotes and wild cats, but within the last generation anything wilder than a stray hog is as rare as in New Jersey. Still, something of the kind is heard of occasionally. Last week one visited the camp of Mr. H. C. Petty, who was burning lime on the Santa Margarita, and killed a newborn colt, badly injuring its mother, a fine animal valued at \$600, and killing also another horse. Mr. Petty had the satisfaction of laying out the animal the next night with a dose of strychnine with which he doctored the remains of the colt. The lion came back to finish its feast, but after carrying the prepared supper about 50 yards, grew discouraged and concluded to die. It was a female with cubs, as was ascertained from the tracks, and measured six feet five inches in length.

Santa Barbara.

AGRICULTURAL SOCIETY ELECTION.—Santa Maria *Times*, April 11: The meeting of the Agricultural Society at Judge Thornburgh's office on Saturday last, to elect officers for the ensuing year, was well attended. The following are the elect: A. H. Orr, Pres.; Jas. Morse, V. P.; Jos. Kaiser, Treas.; M. Thornburgh, Sec.; W. H. Rice, R. Yelkin, Walter Elliott, Chas. Martin, J. E. Norris, C. W. Merritt, B. Pezzoni, Directors. The officers propose to enter upon active duty, making arrangements for a fair in Santa Maria this fall. The exact date of holding the fair has not yet been determined.

Santa Clara.

THE FLORAL FAIR.—San Jose *Mercury*, April 14: The ladies of the Conservatory of Music Association, who are to give the floral fair which begins May 1st and continues five days, are meeting with success in their endeavors. * * * Arrangements for the grand march of titled flowers, which is to be one of the chief attractions at the fair, are nearly complete, and it promises to be one of the most ingenious scenic displays which the wit of woman could originate and her persistence complete. Fifty of the rarest, richest and most exquisite flowers represented by ladies and gentlemen costumed in tasteful and artistic fabrics! This gorgeous array of titled exotics will be preceded by a host of fairy creatures in dainty dresses whose home will be in an artificial grotto of natural stones, ferns and flowers, forming an ideal fairy palace, whence they will troop forth to lead the grand procession. This will be repeated every evening for the benefit of the sight-seers who may come. The interior decoration of the hall is one of the new departures which the ladies will institute this season. In place of the ever-beautiful but somewhat monotonous decorations of ferns and palms and evergreens, it has been arranged to ornament the walls with mirrors. The scene will be reflected back from every side in an endless succession of bowers and flowers.

HORTICULTURAL HALL ASSOCIATION.—The annual meeting of the stockholders of the Horticultural Hall Association was held Wednesday, with 251 shares represented in person or by proxy. (A representation of only 237 shares was necessary to a quorum.) President Jones in the course of his report says: "The whole

number of shares of stock disposed of to date is 473, there being seven shares still unsold. Your Board of Directors have held three successful fairs during the year, a Floral Fair, held in May last, a Horticultural Fair, held in August, and a Citrus or Winter Fair. * * * Total profit, \$1297.88. We have paid for improvements on the hall, \$1574.47. The building is insured for \$7000, and there is no outstanding indebtedness." * * * As the amount remaining in the treasury equaled a sum slightly over four per cent on the capital stock, a resolution was passed that a dividend of two per cent, or 50 cents a share, be declared and the remainder applied to incidental expenses. The old Board of Directors was unanimously re-elected, and proceeded to business by re-electing the same officers, as follows: Cyrus Jones, Pres.; Capt. Frank Dunn, Sec.; C. T. Settle, Treasurer.

Santa Cruz.

STRAWBERRIES.—Pajaronian, April 12: The strawberry-fields are full of blossoms, and the berries are coming on rapidly. A continuation of the warm weather will give the San Franciscans an opportunity to feast themselves on Pajaro strawberries before the close of next week. The plants are full of berries and the crop will be large. The new fields are all looking well, and will have good crops. L. Martinelli and R. W. Eaton have made small shipments of a few drawers at a time, and received good prices. The last shipment made by Eaton was sold at the rate of \$40 per chest.

THE DRIER A SUCCESS.—A meeting of the stockholders of the Watsonville Fruit-Packing Co. was held Tuesday. A majority of the stock was represented. The following directors were elected for the ensuing year: Jas. Waters, A. Lewis, W. V. Gaffey, G. A. Morehead, Edward White, A. A. Morey, and G. W. Peckham. Sec. Morey's report in reference to the first year's business showed that 135 shares of stock had been subscribed for and paid up, and that 65 shares were unissued; that \$6750 had been paid in for stock; that dried fruit to the amount of \$5867.08 had been sold; that \$500 cash was on hand; that the dried apples in stock were now worth \$1800, and the price advancing; and that wood and lumber to the value of \$200 was on hand. The factory lot, buildings, machinery, boxes, utensils, etc., cost \$4395.19; \$3384.38 was paid for wages; \$4337.97, for fruit. The report shows a profit on the first year's business. Inasmuch as the business was new to all the stockholders, and none of the labor employed had had any experience in the business, the showing is very creditable, and proves conclusively that the business of fruit-drying can be profitably conducted in this valley. The stockholders see enough encouragement in it to warrant running the drier this year on an increased scale, and the suggestion of A. Lewis that they subscribe for the balance of the stock is favorably entertained by many of those who can afford to take more. None of the stock can now be purchased at less than par.

Shasta.

EDITORS PRESS:—Shingletown is situated on a plateau of the Sierras at about 3000 feet elevation. This plateau is out across by several creeks, but otherwise it is quite level for miles. The soil is dark-red, fertile, very productive of alfalfa, potatoes, vegetables, apples, plums, cherries, etc. There is some snow in winter, but no severe cold; summer delicious, especially in strawberry time; water, cool, clear, soft and abundant; soil, easily irrigated, never bakes; remarkably healthy climate—bracing and vigorous. Settlers coming in in considerable numbers. No boom.—P., April 10, 1888.

Stanislaus.

IRRIGATION DISTRICT OFFICERS.—Modesto *Herald*, April 12: In the Modesto Irrigation district election, which took place last Wednesday, the old officers were elected with the exception of J. W. Davison, director of Precinct No. 1, and Mr. Gatlin, of Precinct No. 2. A total of 325 votes was polled. The officers are as follows: Precinct No. 1, G. D. Wooten; No. 2, E. R. Crawford; No. 3, Rob't McHenry; No. 4, A. G. Carver; No. 5, W. H. Finley; Assessor, V. E. Bangs; Collector, T. O. Owens; Treasurer, Isaac Perkins. * * * We were unable to obtain the returns from the Turlock Irrigation district, but the officers elected are as follows: Precinct No. 1, E. V. Cogswell; No. 2, R. M. Williams; No. 3, E. B. Clark; No. 4, C. F. Lander; No. 5, J. T. Dunn; Assessor, J. W. Hanscom; Collector, E. N. Crow; Treasurer, C. N. Whitmore.

Yolo.

THAT HORSE'S LEG.—Davisville *Cor. Democrat*, April 10: The unfortunate horse (whose case, mentioned in my letter of two weeks ago, seems to have excited some little interest) was killed last Sunday, the experiment having failed through an unforeseen accident, which Dr. Bates admits might have been easily avoided. It will be remembered that the appliance to the fracture consisted of a wooden box inclosing the leg, which was filled with plaster-paris; but in order to keep the limb in place, a temporary splint was first applied, and this becoming loosened in some manner, caused a renewal of the fracture after it had almost healed, and rather than renew the effort Mr. Dunfield had the animal killed. Dr. Bates' confidence in the possibility of restoring the fractured limbs of horses and other valuable animals, by this means, remains unshaken, and on the first opportunity the experiment will be renewed with such modifications as his experience in this case shows to be necessary.



NOT ONE!

Not one Agent of OTHER MILLS wrote to us to inquire what Mill it was which was taken down. WE SUPPOSE that each one WAS AFRAID it might be his Mill.

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EVERY CAN GUARANTEED.

We give you our positive assurance that the utmost care is taken in the selection and handling of our meats, and we guarantee you that they are as clean and wholesome as any you might prepare in your own home.

NO PICNIC, EXCURSION, HUNTING OR CAMPING PARTY
Is complete without some of the following:

CORNER BEEF, LUNCH HAM, BRAWN, OX TONGUE,
PIGS' FEET, ROAST BEEF, LUNCH TONGUE,
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There is not an article named but is a feast in itself. Also

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Choice Family Lard,
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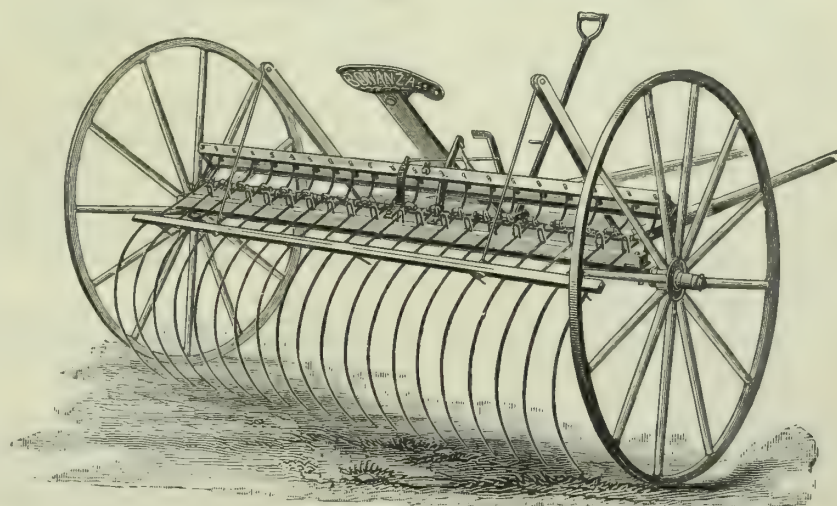
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For either One or Two Horses,
Twenty Oil-Tempered Steel Teeth,
Works on the Roughest Lands,
No More Broken Teeth.
Wood or Steel Wheels.

Overhanging cleaner in place of the old style sticks. Axles made of steel. Wheels are very strong and tires are bolted to rim of wheel. The very best of lumber is used in the manufacture of these rakes. They are painted and varnished in first class style, and are strictly first-class in every way. WE PUT ON THIS RAKE OUR

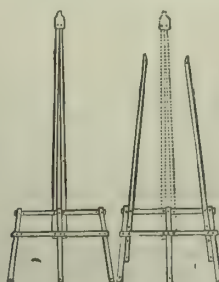
PATENT COMBINED POLE and SHAFTS.

Hay Rakes made with these shafts can be used with either one horse or two horses. The cut at left shows it arranged as a pole, or for two horses; the cut at right shows it arranged as shafts, or for one horse. The same parts are used in both cases. The farmer at all times has all the parts with the rake, to make it either a one or two-horse. The change from one to two-horse can be made in a few minutes' time.

Farmers readily see the advantage of this over other rakes, and will buy only those made with Combined Pole and Shafts.

We have had built especially for Pacific trade a 24-tooth "Bonanza" Rake, which will rake two swaths cut by a 4-foot 6-inch or 5 foot Mower.

This is a very popular size and will pay many times over in a season for its small increased price.



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Our New Illustrated Catalogue mailed to all inquirers.

THE DAIRY.

"Two Blades of Grass."

EDITORS PRESS:—Riding in the cars in sight of some sand hills in the Santa Cruz mountains a few days ago, I looked at the loose shifting sand of a mountain slope, and then at the State Inspector of Fruit Pests in the next seat.

The question was natural: "What are these sand hills good for?" A number of things were suggested besides grapevines. A certain *Acacia* (a *molleissima*) for tanning purposes was said to be hardy, of rapid growth, and would probably grow well in this sand. A forage plant was also named. In the Coast Range the Monterey pine (*Pinus insignis*) and the Monterey cypress (*Cupressus macrocarpa*) would undoubtedly succeed. Their natural habitat is in the sand.

Climbing up and down these sandy slopes about the Bay of Monterey, I have found several species of perennial grasses. They grow in bunches and form a choice bite for horses and cattle. The roots are not easily killed. They send up the blades with the first rains of early winter, and they are the last to disappear with the coming of the dry season.

The only thing lacking is they are too few and far between. Now, the man who can succeed in making these bunches grow near each other, so as to cover these sandy places and otherwise barren hills, will be a benefactor to this region of California, as well as to the world. There are many thousands of acres of just such land almost worthless, without some plant or plants can be discovered suitable for successful cultivation on these sand hills.

Can the experiment stations in different parts of our State find a subject of more importance? At some future time I will make a list of some of the grasses that find a home in such places.

C. L. ANDERSON.

Santa Cruz, Cal.

[The topic broached by Dr. Anderson is very interesting and important. The subject of adaptability of forage plants will be a leading one at the experiment stations, but they will not have shifting sands because such situations would not be suitable for other cultures. The best plants for sand hills will be learned after awhile by individual enterprise in experimenting, and Dr. Anderson can do much by determining the grasses he mentions, and gathering seed, etc. Then will be found some one with suitable land to try the experiment of getting a good covering of such growth on the sand. We shall be glad to hear from him further on the subject.—EDS. PRESS.]

Dairy Doings of Netherland Prince Stock.

Some of our Holstein breeders already have imported animals from Smiths, Powell & Lamb having Netherland Prince blood, and will be interested in the following statements showing, as the breeders claim, "why he is the greatest butter-bull of the breed:"

His daughter, commencing at 28 months old, made 21 lbs. 10½ ozs. of butter in a week and 80 lbs. 6 ozs. in 30 days, averaging for a week a pound of butter from 13 23 lbs. of milk, surpassing all other records made at that age.

His three-year-old daughter made 23 lbs. 10½ ozs. of butter in a week and 93 lbs. 1½ ozs. in 30 days, averaging for a week a pound of butter from 18.44 lbs. of milk, being the largest record of any living cow of that age and breed.

His three-year-old daughter at the public butter trial at the New York Dairy Show surpassed by over six per cent all cows of all ages and breeds, excepting only her own dam.

One of his daughters at 25 months old, on ensilage and hay only, having had no grain for eight months, made 15 lbs. 1 oz. of butter in a week, averaging a pound of butter from 15.44 lbs. of milk, excelling all other records for that age and feed.

Four of his daughters (two 2 years old and two 3 years old) averaged 20½ lbs. of butter in a week, averaging a pound of butter from 15.83 lbs. of milk, far surpassing all other records by heifers of same age and number by any bull of the breed.

Six of his daughters (four 2 years old and two 3 years old) averaged 18½ lbs. of butter in a week; averaging a pound of butter from 16.67 lbs. of milk, exceeding all similar records.

Eight of his daughters, five two-year-olds and three three-year-olds, have records that average 16 lbs. 11½ ozs. for a week, 16.84 lbs. of milk being the average amount of milk to make one pound of butter.

Three of his grand-daughters (two 2 years old and one 3 years old) (the only ones tested) averaged 15 lbs. 10 ozs. of butter in a week, showing that he transmits his butter qualities to the third generation.

Ten cows containing 63 7-10 per cent of the same blood as Netherland Prince, including one 2 years and four 3 years, averaged 20 lbs. 3 6-10 ozs. of butter in a week, a statement that can be made about no other bull of this breed.

His dam, two of her daughters and seven of her grand-daughters (two 2 years old, three 3

years old and two 4 years old) averaged, for the 10 head, 18 lbs. 15 6-10 ozs. in a week, an exhibit which we have not seen equaled by the dam of any bull.

His sire is also the sire of three heifers, which, at an average age of 3½ years, averaged 16 lbs. 11 ozs. of butter in a week, and his grandsire also sired four cows which averaged 20 lbs. 4½ ozs. in a week, showing that his paternal ancestors were remarkable butter bulls.

His grandam is the dam and grandam of five cows which averaged 20 lbs. 2 3-5 ozs. of butter in a week, and his g-g-dam is grandam of three cows which averaged 20 lbs. 13½ ozs. in a week, showing that his maternal ancestors for three generations transmitted butter qualities in a remarkable degree, thus establishing the fact that the rare butter qualities of this bull are not accidental, but the legitimate result of breeding for butter through every ancestral line.

Sixteen cows of the same family have made records which averaged 20 lbs. 1 13-16 ozs. of butter in a week, averaging a pound of butter from 18.82 lbs. of milk, surpassing all other families of the breed.

Smiths, Powell & Lamb, Lakeside Stock Farm, Syracuse, N. Y., have just issued a second edition of their 1888 catalogue, which should be in the hands of all breeders and stock fanciers.

New Mexico.

Perhaps the people of California have but little anxiety to know anything of New Mexico. But the restless Anglo-Saxon is fast invading that knobby portion of Uncle Samuel's domain, and so soon as they get a firm foothold there this State will find in her its most formidable rival in growing fruit and many other of the products of rich soils and sunny climes. The great southern valleys of New Mexico have a vast amount of the richest soils finely placed so as to be covered with water, and plenty of water to bring to them, and when once placed under irrigation they are wonderfully productive of all crops and fruits not strictly tropical. Everything can there be grown to perfection that makes fruit-growing and all other branches of agriculture profitable.

The great valleys of the Canadian, Pecos, the Rio Grande and their tributaries give room for thousands of homes, with a climate the next best—California always first—on the continent for health, comfort and adaptability for all crops. With her mountains—of which she has a great supply, some to spare—filled with inexhaustible mines of the precious and all the baser metals and bituminous and anthracite coals. So long as these minerals last she will have a home market for all she can produce.

There are, besides, millions of acres of high, dry tablelands and mountains for stock range. The soil on many of these high plains is rich—some of it very rich, with the surface in great part finely adapted for cultivation and with a reasonably good climate adapted to the growth of nearly all crops except corn, and lacking only water to become the comfortable homes of millions.

Can water, precious water, be obtained and brought to these grand plains? This is one of the questions our Uncle Samuel should solve, and if the best engineering skill can take it there in plenty it should be done. These thoughts are suggested by the following letter. We have not the pleasure of acquaintance with the writer, but if the statements seem attractive to any reader we suppose they can easily be verified:

EDITORS PRESS:—I will thank you if you will place me in communication with a reliable and experienced nurseryman who would like to establish himself in this inviting and promising field. This is one of the finest locations in the whole country for a nursery.

This place is in the heart of the Pecos valley, whose soil and climate are especially adapted to all kinds of fruit, plant and vegetable growth. It abounds in never-failing streams, which are admirably adapted, as are the lands, for irrigation. Ditches are being rapidly built, and soon an immense area of the best lands will be under water. But a few years ago the country was occupied by Indians. Now good order and security reign, and soon it will be filled with industrious people planting orchards and cultivating vegetables and the vine.

Enough has been done by farmers to demonstrate the excellence, variety and wealth of production of every kind of fruit, plant and tree, not tropical. There is great demand already for fruit and shade trees, for planting on a large scale. Yet there is not a nursery within 250 miles by wagon, and they are not satisfactory. Apple trees—and this is the home of the best apple—are worth 50 cents apiece. Everything else is in proportion.

There is a fortune for the right kind of a man who will establish himself here and prepare for the immigration which is setting in. A gentleman here will put in 160 acres of the best land, under never-failing ditch, owned by himself, and take an interest in the nursery plant. It is a splendid opening for a man who has intelligence, skill and energy. There is no better climate on the continent, and no place where a man can be surrounded by greater promise and possibilities of the future. Any one interested in this proposition can address the undersigned.

JAMES H. HOPKINS,

Roswell, Lincoln Co., New Mexico.

GOOD HEALTH.

The Human Stomach.

Dr. C. N. Ellenwood of this city, in a recent lecture before the Cooper Medical college, gave the following description of that wonderful organ—the stomach: The doctor described the average healthy stomach as a muscular sac, lined with a mucous surface, the whole resembling the winding of a Scottish bagpipe. It is from 13 to 15 inches long, and its walls are of the thickness of about three sheets of blotting paper. In a transverse direction it is about five inches and its normal capacity is about five pipes. Experience or education has incurred in the stomach the habit of distension, an important function of which the old nomads have availed themselves. But in our present felicitous condition, when three meals are taken daily and easily obtained, there is no need for such an education of the stomach, and five pipes is even sufficient capacity for any Thanksgiving dinner.

The wonderful activity of the stomach in the assimilation of food, the revolving of the latter in from about one to three minutes in order to be completely churned up to facilitate digestion, the expulsion of the soft particles of food into the intestines, the retention of the hard substances followed by their expulsion, if not of too great caliber, were in turn described.

The muscular fibers producing the churning process and the propulsive power in ejecting the juice to precipitate digestion, were treated of in turn.

Considerable attention was also devoted to the wonderful structure of the mucous membrane, the depressions in whose surface resemble vaccine scars, being open mouths, 1.400 of an inch in diameter. They are thickly placed, and are in close relation with the blood-vessels, supplying the material by which the gastric juice is elaborated. How these glands form the juice, the speaker said, was extremely difficult to explain, but he made the comparison to the growing and nutrition drawing roots of plants, the blood in the glands furnishing the nutritive material.

During the intervals of digestion the stomach is inactive, and the membrane is covered with a translucent, viscid, alkali fluid, furnished by the goblet cells. Fright from a sudden shock arrests at times for hours the process of digestion; so does any depression of the system. Fear, rage, excitement, stimulants, or the overloading of the stomach have the same effect, all of which teaches that we must, when sitting down to the table, be free from the depressing influences of the mind over business or other matters, and appreciate the danger of depressed physical or mental conditions of every kind. Busy people who are the ones to abuse their stomachs most by quick eating and by having their minds weighted with the cares and troubles of business, are the first to complain.

The daily secretion of gastric juice in the stomach is 14 ounces, which is passed off with the assimilated food, and the secretion is proportionate to the amount of food taken, but less when eating is observed too frequently, while overloading likewise delays digestion.

The process of the transformation of foods in the stomach and their dissolution into component parts to be absorbed and serve the purpose of nutrition to the body, were elaborated upon, but the lecturer freely admitted that these chemical and physical changes were not yet thoroughly understood. The speaker inveighed against the use of condiments, highly seasoned articles of food, and the pleasures of the table generally, asserting that the consumption of plain, simple and wholesome viands, intelligently cooked and gracefully served, are by far more conducive to good health and sound intellect, between which and the stomach there is a close relation.

The speaker also ridiculed the saying that to eat well is to leave the table with the feeling that one could eat more. His advice was to eat enough to satisfy the appetite, but not leave the table either hungry or feeling stout, heavy, or uneasy.

TOO MUCH HUGGING AND KISSING OF CHILDREN.—It is precisely in that natural aptitude for emotion, in that type of mind which is exquisitely sensitive to impressions and generously swayed by sympathetic feeling, that one of the great dangers to the perfection of womanhood, physical and mental, may be said to reside. Many and varied influences tend to increase this emotional excitability until it often becomes a fixed habit of mind; as undue sensibility of the supreme centers to emotional ideas is created, which can only be maintained at the expense of sound health of body and of mind. First among these are certain home influences that are brought to bear upon a little girl from her earliest childhood, which foster in her self-consciousness and introspection. Dr. Taylor says: "In my large practice among children I am certain that scores are literally killed by the excessive amount of emotional excitement which they are forced to endure. All this hugging and kissing and talking to them is to excite responses of the same emotional nature in the child for the pleasure and gratification of the parents and friends." And again he says: "I believe that three fifths of the spinal diseases which occur in children are directly traceable to mental overaction. And this because a large proportion of these cases get well without other treatment than a withdrawal from the exciting cause of emotional disturbance."—*Pop. Science.*

Paine's Celery Compound

For The Nervous
The Debilitated
The Aged

CURES Nervous Prostration, Nervous Headache, Neuralgia, Nervous Weakness, Stomach and Liver Diseases, and all affections of the Kidneys.

AS A NERVE TONIC, It Strengthens and Quiets the Nerves.

AS AN ALTERNATIVE, It Purifies and Enriches the Blood.

AS A LAXATIVE, It acts mildly, but surely, on the Bowels.

AS A DIURETIC, It Regulates the Kidneys and Cures their Diseases.

Recommended by professional and business men.

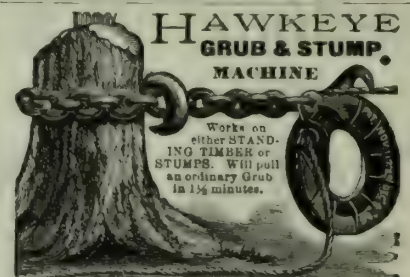
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THE H. H. H. Horse Liniment puts new life into the Antiquated Horse! For the last 14 years the H. H. H. Horse Liniment has been the leading remedy among Farmers and Stockmen for the cure of Sprains, Bruises, Stiff Joints, Spavins, Windgalls, Sore Shoulders, etc., and for Family Use is without an equal for Rheumatism, Neuralgia, Aches, Pains, Bruises, Cuts and Sprains of all characters. The H. H. H. Liniment has many imitations, and we caution the Public to see that the Trade Mark "H. H. H." is on every Bottle before purchasing. For sale everywhere for 50 cents and \$1.00 per Bottle.

For Sale by all Druggists.



Makes a clean sweep of two acres at a sitting. A man, a boy and a horse can operate it. No heavy chains or rods to handle. The crop on a few acres the first year will pay for the Machine. It will only cost you a postal card to send for an Illustrated Catalogue, giving price, terms and testimonials. Address the Manufacturers.

JAMES MILNE & SON, Scotch Grove, Iowa.

WINCHESTER HOUSE,

44 Third Street, San Francisco, Cal.

This Fire-proof Brick Building is centrally located, in the healthiest part of the city, only a half block from the Grand and Palace Hotels, and close to all Steamboat and Railroad Offices.

Laundry Free for the use of Families
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ROOMS WITH OR WITHOUT BOARD.

FREE COACH TO THE HOUSE
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AGENTS LOOK HERE

and farmers with no experience make \$2.50 an hour during spare time. J. V. Kenyon, Glens Falls, N. Y., made \$18 on day, \$76.50 one week. So can you. Proofs and catalogue free.

J. E. SHEPARD & CO., Cincinnati, O.

HALL'S SARSAPARILLA!

THE BEST BLOOD PURIFIER AND

TONIC ALTERNATIVE IN USE.

It cures disease originating from a disordered state of the Blood or Liver. It invigorates the Stomach, Liver and Bowels, relieving Dyspepsia, Indigestion and Constipation; restores the Appetite and increases and hardens the Flesh.

It stimulates the Liver and Kidneys to healthy action, Purifies the Blood and Beautifies the Complexion.

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From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING APRIL 10, 1888.

- 380,843.—ORE PULVERIZER—Baratini & Stevens, Murphys, Cal.
 380,744.—TWO-WHEELED VEHICLE—K. A. Brigham, Gilroy, Cal.
 380,745.—SPECULUM—P. Chamberlin, Santa Cruz, Cal.
 381,059.—METALLIC RAILWAY TIE—W. H. Donaldson, S. F.
 380,888.—STEAM-ACTUATED VALVE—W. W. Hanscom, S. F.
 380,895.—GANG PLOW—H. M. Irwin, Hanford, Cal.
 R. 10,921.—FLOOR, ROOF OR AREA COVERING—P. H. Jackson, S. F.
 380,782.—SHOWCASE—Chas. F. McGlashan, Truckee, Cal.
 380,918.—ENGINE INDICATOR ATTACHMENT—J. R. Mitchell, Oakland, Cal.
 380,763.—FRUIT LADDER—M. H. Murphy, Portland, Oregon.
 380,820.—PRESERVING SUBMERGED TIMBERS—H. L. Ricks, Eureka, Cal.
 380,821.—CRUSHING-MILL—A. E. Roe, S. F.
 381,032.—CABLE GRIP—A. E. Roe, S. F.
 380,700.—DENTIFRICE—J. Schwartz, Portland, Oregon.
 380,774.—FEEDER FOR CAN-BODY MACHINES—Jos. Stevens, S. F.
 380,831.—CASH REGISTER—E. T. Taylor, Oakland, Cal.
 380,840.—HORSE-POWER PUMP—H. D. White, Cottonwood, Cal.
 380,842.—APPARATUS FOR EXAMINING ORES—Williamson & Hickies, Oakland, Cal.

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 It is impossible to give proper credits unless people will send their names with the remittance. Let all subscribers take notice.
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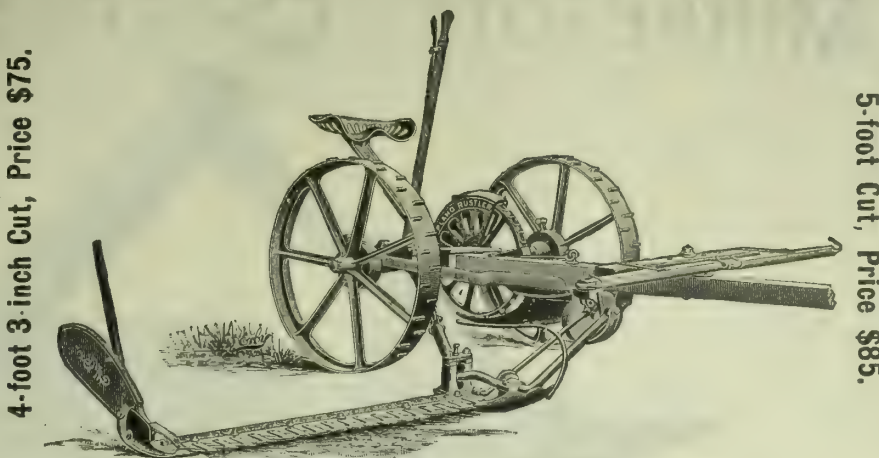
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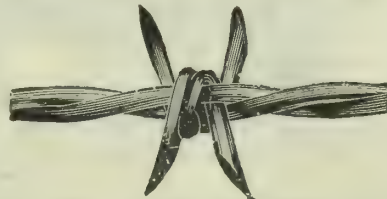
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The Arcadia

—OF THE—

SAN JOAQUIN VALLEY!

THERE DOES NOT EXIST IN THIS VAST extent of country a section so manifestly destined for the site of

A PROSPEROUS TOWN,

Supported by the demands of a rapidly and steadily increasing population, as Alila. THE ENCOURAGING NUCLEUS is already there, for Alila now possesses a well-conducted and

LIBERALLY FURNISHED HOTEL,

Several well-appointed stores, and, in addition to these, that most important feature and best evidence of progress, a

Handsome and Spacious Schoolhouse,

Which stands nearly, if not precisely, in the center of the town-site. Alila is envied by

A MOST FERTILE COUNTRY,

A soil of surpassing richness, with the capacity of sustaining, in comfort and prosperity,

Thousands of Industrious Settlers.

The resources of this land are illimitable. At this season, in the surroundings of Alila, the plow is busy in every direction.

MILES OF GRAIN,

Soon to wave in luxuriant beauty above the sod now decked with wild flowers, will be a most substantial ornament to

ITS BROAD ACRES.

This scene of agricultural activity and brisk and intelligent cultivation is

A GRAND ASSURANCE

Of what the future must bring forth. The Southern Pacific Railroad

PASSES THROUGH ALILA,

And the stations and sidings there are about the best on the line.

ALILA

Is in Tulare County, 22 miles south of the city of Tulare, on the main line of the Southern Pacific Railroad.

Bovee, Toy & Co.,

19 MONTGOMERY ST.,

Are now offering a limited number of lots at private sale in ALILA, and intending purchasers should not delay in making their selections, as a

SERIES OF IMPROVEMENTS

Have already been inaugurated, consisting of grading streets, planting them with shade trees, increasing the irrigating facilities, and shipping material for the

ERECTION OF BRICK STORES

Upon the main street of Alila. This is a

Superb Opportunity for Investment,

Because the time is close at hand when

Wave after Wave of Eastern Immigration

Will fill up the great San Joaquin Valley, and every dollar placed in real property there will yield a four-fold return.

There are a few facts in connection with this property to which we desire to call particular attention:

First, the extreme richness of the soil has attracted a superior class of population, who are farming the land in an intelligent and progressive manner.

Every section in the vicinity of Alila and for miles around contains from two to four houses, presenting a prosperous and comparatively well-settled country, owing to the fact that the land is held in small holdings, and not in those immense tracts of single ownership which characterize other portions of the valley.

There is no other locality so well adapted for successful fruit and raisin culture.

Again, Alila lies in the direct line of Walker's Pass, the lowest point in the Sierras through which other overland roads coming into the valley will in all probability lead.

For maps and further particulars apply to

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GREAT ARTESIAN BELT,

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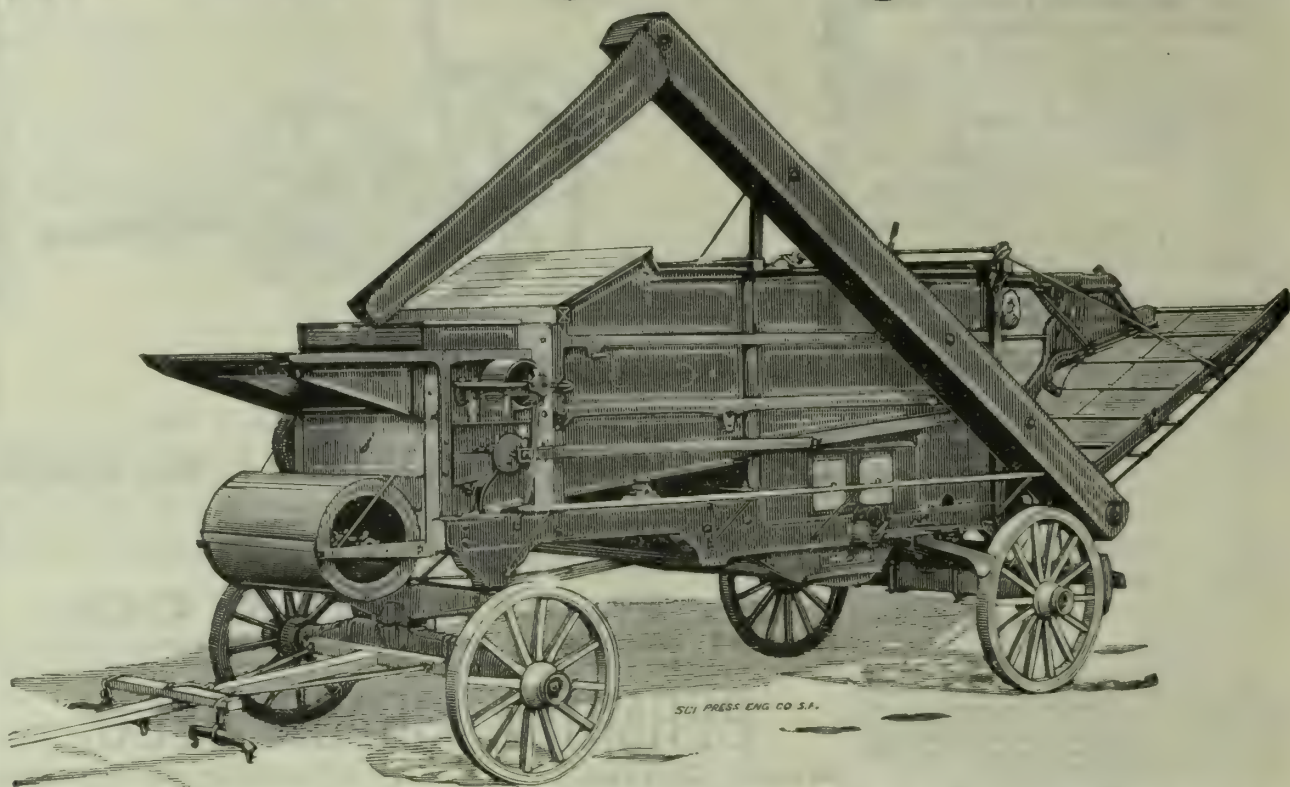
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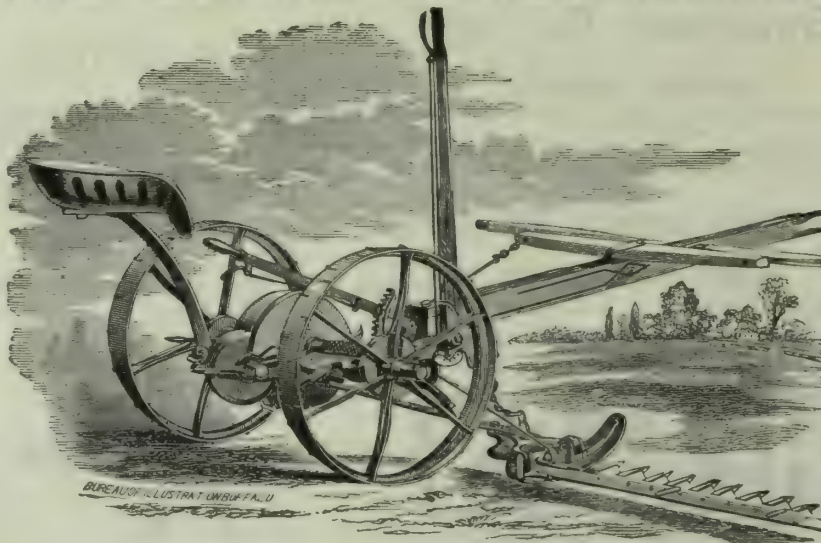
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CHIEF SELF-FEEDERS AND IMPROVED HORSE POWERS.

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No Grass grows that it will not cut. The only machine with Enclosed Gear, having only two wheels and two pinions. Perfect Rocking Bar, Adjustable Pitman and Crank Shaft B x s.

PRICE, \$75.00.

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MONARCH OF THE ROAD,

Stands to-day at the head and front of all competitors, and is known far and wide as the

Strongest, Most Durable, Best Ironed, Best Finished and Lightest Running Wagon in the world. IRON AXLES, TUBULAR AXLES, STEEL and CAST SKEINS always in stock. Buy the Mitchell and have no other.

If there is no Agent near you for the Mitchell Farm and Spring Wagons and Empire Mowers, write direct to

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General Agents and Dealers in Farm Machinery,
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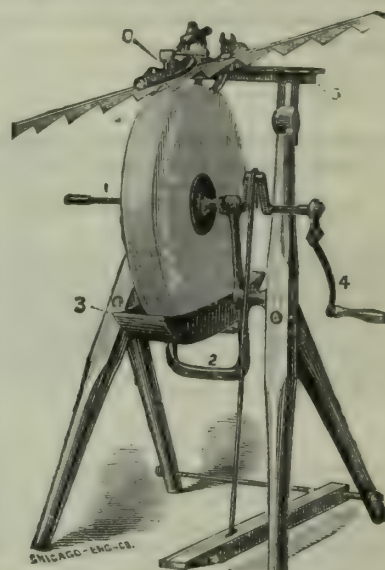
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Every Machine Warranted. There are more Boss Sickle Grinders sold every year than all others combined.

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Board by the day, week or month. Rooms may be engaged by telegraph or letter.

R. DIEFENDORF, Proprietor.

This paper is printed with Ink Manufactured by Charles Eneu Johnson & Co., 500 South 10th St., Philadelphia. Branch Offices—47 Rose St., New York, and 40 La Salle St., Chicago. Agent for the Pacific Coast—Joseph H. Dorey, 529 Commercial St., S. F.

Santa Barbara Flowers and Fruit.

That was a happy arrangement by which Santa Barbara's yearly festival of flowers was held at the same time with the Fruit-Growers' Convention; and the dear old Rose Fair appears to have been as successful as ever, though handicapped with the ponderous modern title of "Tenth Annual Floral and Citrus Exhibition of Santa Barbara County."

Before the pavilion was thrown open, Tuesday afternoon, April 10th, the deft and busy hands of many tasteful and devoted workers had transformed its barn-like interior into a charming tropical garden.

The space was divided into different sections, which were allotted to the five wards of the city and to the surrounding districts of Goleta, Carpinteria, Montecito and the Mesa. The floral exhibits were disposed around the edge of the hall, leaving the center for the fruit display.

The first thing to catch the eye of the entering visitor was "Flora's Greeting," in great letters of bright yellow marigolds on a background of dark-green parsley, which covered the front of the stage, with a Maltese cross of marguerites, and a shield of marguerites, geraniums and violets at either end.

To the right of the entrance was the Mesa table, heavily hung with tree moss and trimmed with smilax. The name "La Mesa" was worked out in delicate yellow blossoms on a green cypress bed. A basket of beautiful "Gloire de Jon" roses from the Meigs place were from a bush planted 35 years ago. This display embraced a variety of roses, a large bed of ferns and flowers, and a number of callas, some of which measured over nine inches in diameter.

The Fifth Ward made a superb exhibit, in which Cherokee roses from Mission canyon, and Miss Julia Noble's pansies, were especially admired. Its most striking feature was a huge elevated basket, overturned, out of which poured a copious stream of roses to the floor, ten feet below.

In the booth of the Second Ward was a large mirror, encircled with smilax, ferns and callas, and surmounted by a great basket of roses. On one side was a panel of delicate blue wisteria, and stands beneath were freighted with cut roses in variety, wild red-flax blossoms and grasses, while at each end of the booth stood a vase of calla lilies.

In the Goleta display was a pagoda, seven or eight feet high, built of roses and honeysuckle, and thatched with palm leaves. Within was a figure representing Santa Barbara clothed in flowers. On the table, among several other designs, was a pair of scales, composed of small white flowers on a green bed. One scale bore a leaf inscribed "Santa Barbara," which seemed to outweigh the "world" in the other. Jos. Sexton's fine output, beside all the choice roses and carnations, included a magnificent display of Mammoth verbenas in pots. They were raised from seeds sent out by Henry Dreer of Philadelphia. Some of the blossoms are larger than a quarter dollar and the colors are gorgeous.

The Montecito exhibit was a dainty arrangement of wild and cultivated flowers and young palms in pots, under an arch of orange and pepper branches. A plate of large white Sharpless strawberries grown by G. B. Parma attracted much attention. Edward Herr had an exhibit of ferns from the Yosemite mounted on cards, and rare specimens of ferns from New Zealand and Australia, among them the unique kidney-fern.

The wall behind Carpinteria's floral table was almost hidden by palm leaves and orange boughs with clusters of the golden fruit. Here H. C. Ford exhibited a vase of La France roses, which were pronounced the largest grown in Santa Barbara this season.

The display from the Third Ward was arranged in the shape of a V, and looked like a nook in some dark canyon, the sides covered with ferns and delicate plants. There were roses in abundance, and rare flowers of several kinds. Overhanging these were some sprays of yellow banksia roses, four or five feet long, and a solid mass of bloom, which were much admired.

Against the wall in the First Ward's booth hung a picture—a bunch of roses on a canvas of white magnolia with a frame of yellow marigolds. The name of the ward appeared in letters of ivy and ferns against the arch of evergreen that spanned the tables. Here were some of the finest roses in the fair and a large variety of garden flowers.

In the alcove assigned to the Fourth Ward, under a palm-leaf arch, was a table covered with baskets of roses in great variety, and flowers of many kinds in baskets, vases and graceful designs. Several specimens of the bird-of-paradise flower proved especially attractive to stranger guests.

To the left of the entrance was an exhibit from Orchard Dale, containing a great number of named roses, besides dishes of pansies and a collection of wild flowers, among which were larkspur, tidytips, white flag, wild lilac and buttercups. A miniature adobe house, with pillars in front and red tile roof, was a feature of the exhibit.

In front of the last-named booth was a charming display of flowers from the Ontare ranch, among which Dachesse de Brabant roses were eminent.

By the fountain in the middle of the hall were set tables of fruit from Montecito, Goleta

and Carpinteria, among which were fine specimens of loquats, sweet limes, oranges and apples. The Cooper ranch table was covered with oranges, lemons, sweet limes, Mexican limes and olive oil. There was also a good showing of preserved fruits from the Mesa.

The evening attendance was very large; the scene was then brilliant under the rays of five 2000 candle-power electric lights; and the City Guards orchestra enhanced the delights of Flora with strains of music.

The Merced Real Estate Sale.

What was the largest and most successful real estate sale by auction which ever occurred in California, took place last week at Merced. Our readers are aware of the extensive improvements in the way of introducing water for irrigation, which has recently been inaugurated in that county by the introduction of a very large body of water from the Merced river. Ever since the great celebration which attended the introduction of this water into Lake Yosemite, the attention of capitalists has been directed to the advantages which this point presents for manufacturing purposes and for the supplanting by grape and general fruit culture of wheat-growing, which has hitherto been almost the only industry known in that portion of the San Joaquin valley. By the introduction of a plentiful supply of water the rich soil in and about Merced may be made to produce abundantly almost every variety of fruit—not excepting the orange, the lemon, and the fig. The soil is generally composed of a reddish sedimentary deposit, several feet in thickness and very similar both in color and substance to the famous orange-land of Los Angeles and San Bernardino counties. Scattered here and there through the town of Merced, the visitor may see numerous orange trees, young and old, which have withstood the severe test of the past winter, without any damage from frost. At the time of our visit—during the recent land-sale—there was no fruit upon the trees; but we learned from unimpeachable testimony that the fruit produced is not only fair to the eye but delightful to the taste, while the trees are annually loaded with an abundant crop. A sufficient extent of vineyard and orchard has already come into bearing to give practical and indisputable evidence that the locality is eminently suited to such culture.

In addition to the large supply of water provided by the Canal and Irrigation Co., which, through Crocker & Huffman, have spent over one and a half million of dollars in such improvements, there are other and abundant supplies of water on the west side of the railroad by other canals. Flowing artesian water is also obtained at moderate depth at a distance of about two miles west of the railroad. With this water natural gas is also found. Over one of these wells a gasometer has been placed to collect the gas, which is conveyed a short distance to the residence of the proprietor, where it is used for cooking and heating purposes. This is a heat-producing rather than an illuminating gas; very little light is produced. The writer had the pleasure of examining the way in which the gas is used for cooking purposes.

It is the plan of the promoters of the Canal and Irrigation Co. to utilize their water largely for manufacturing purposes, which can be done without any loss for irrigating purposes. It is expected that by this advantage and the fact that the railroad passes directly through the place, quite a manufacturing town will be built up at Merced.

A number of centers for separate colony enterprises have been laid out at points surrounding Merced, and at distances varying from two or three to six or seven miles from the town. There has already been quite an active inquiry for lands in these colonies, which are being disposed of in blocks of 10, 20 and 40 acres or more. The famous Buhach ranch has been made the center of one of these colonies, and the indications are that fruit-growing there will be found much more profitable than the culture of the famous plant which is adding so much comfort and relief to our people from its deadly effect upon insects, when properly prepared for that purpose.

These varied advantages have formed the inducement which has recently attracted so much attention to Merced, and which has created such a desire to invest in town lots and blocks at what must in the early future become an important center of business for the large and industrious population which will soon occupy the six or eight miles square or more surrounding the present town.

When the intention of the promoters of these varied enterprises was made known through the newspaper notices, advertisements, posters, etc., so great an interest was created that what was at first expected to turn out only an ordinary sale became the largest and most remunerative auction sale which ever took place at any interior point in the State. This was made possible from the fact that capitalists some days before the sale went to Merced, looked over the country carefully and satisfied themselves fully with regard to the future possibilities and probabilities of that growing town. The value of town lots and blocks were estimated by a careful examination of the farms, colony tracts and other outside lands in the surrounding country, for which there could be no other possible business center than the present town of Merced.

Although the crowd which assembled at the

sale was not large, it was composed of substantial men. We noticed among the buyers such men as Greenwood & De Wolf, Dr. Cornwall, H. J. Craig, T. V. Hogan, J. Newman, L. Hamilton and others of San Francisco, Mr. Wilson of Solano, F. J. Field of Monterey, Dr. Barton of Fresno, Mr. Hastings of San Jose, and many others from abroad added to a large number of local buyers.

The sales footed up a total of \$376,000. Single lots averaged from \$350 to \$1000, while blocks sold for from \$7000 to \$12,000. One very eligible block near the El Capitan hotel and railroad station was knocked down for \$46,000. This was an exceptional block near the center of the town and one which has been heretofore reserved for sale.

Much credit is due to the indefatigable energy and skill of Briggs, Fergusson & Co., real estate agents of this city, who had the sole charge of promoting and managing this important sale. Judicious advertising in honest and reliable phrases and through the medium of well-known journals, with straightforward and manfully fair dealings at the sale, together with the intrinsic merits of the property, was what led to a success which more than doubled the result that had been expected from the enterprise by those who were most largely interested in the outcome. We understand that Messrs. Briggs, Fergusson & Co. contemplate other important sales in the near future, of which we shall from time to time inform our readers.

Burlap Bags.

NEW YORK, April 18.—The hand of California has been felt in this market for several days. The flour-mills sent out orders for all second-hand burlap bags that can be had, and the result of this has been to make the price very firm at 5½ cents each. Albert Weiler, broker and commission merchant, who represents the mills in this matter, said that he has contracted since this demand began for probably 250,000 bags, at prices ranging from 4½ cents each to 5½ cents. One order alone was for 100,000, and contracts already cover the April and May shipments.

Orchard Cultivation.

EDITORS PRESS:—In your issue of April 7th I noticed an article on "Orchard Cultivation." I will agree to a great deal contained in the article, but I cannot agree with the writer when he says that no one machine is capable of doing the work after the plow. He bases his judgment on 15 years' experience from working one kind of soil. I, too, have had about 15 years' experience in cultivating the soil of all kinds to be found in the State of California. I have used all kinds of cultivators and harrows, including the Lubin pulverizer, which I have been using almost continually for the last three months. I must say that I have never seen any machine or combination of machines that can do the work done by the Lubin, at the same expense. I have found from practical test; that fully 20 per cent can be saved in the cost of cultivating an orchard or vineyard by the use of the Lubin over other machines.

Time is a very valuable factor in the cultivation of an orchard, and I find the secret of successful cultivation is to apply the best machinery at the proper time. I consider the Lubin the best machine, because it cultivates, pulverizes, and harrows the ground at one operation, and who can dispute that a machine capable of doing such work is of inestimable value? The Lubin will certainly do this work, if used at the proper time. The San Jose and Acme machines are good machines, and will, under certain conditions, do good work, but for all kinds of work on all kinds of soil, I think the Lubin is the chief.

Sacramento.

F. A. JOHNSON.

Hints to Inventors.

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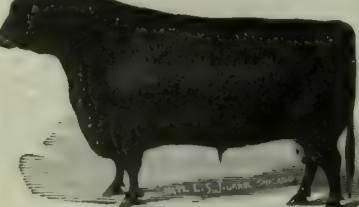
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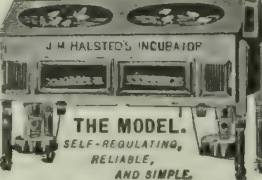
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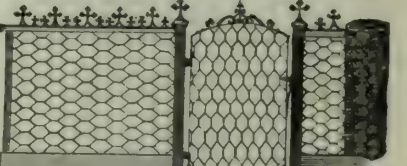
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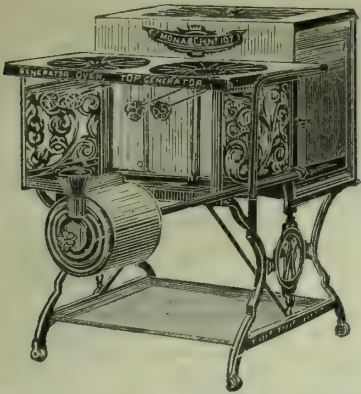
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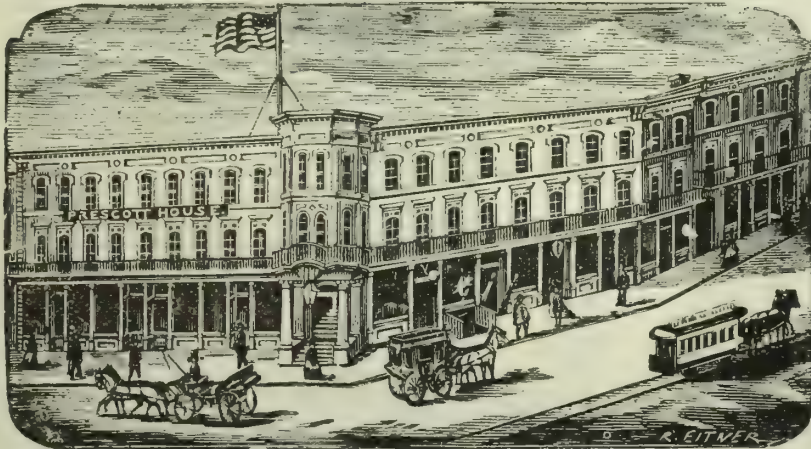
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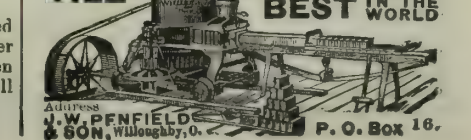
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 18, 1888.

Continued hot weather up to Sunday caused considerable complaint from nearly all grain-growing sections, but with cooler weather since they are less pronounced, although all concur in saying that rains are sadly wanted in fully one-quarter of the localities, wanted in one-half very soon, while in the other quarter they can do without rains the remainder of the season. Trading the past week in farm products has been quite large, owing to the forcing weather being in favor of garden truck and small fruits for early marketing. European telegrams have given a uniformly strong market for wheat throughout the week. The following is today's cable.

LIVERPOOL, April 18.—Wheat—Rather easier. California spot, 6s 6½d to 6s 9½d; off coast, 33s 3d to 33s 6d; just shipped, 33s 0d; nearly due, 33s 0d; cargoes off coast and on passage, firm; Mark Lane wheat, firm; wheat on passage to Continent, 32s 0d to 32s 6d; wheat and flour on passage to U. K., 2,204,000 qrs.; French country markets, firm; wheat in Paris, firm; flour, turn dearer; weather in England, showery.

Weather and Crops.

WASHINGTON, April 15.—The weekly weather and crop bulletin says: The weather for the week has been favorable for growing crops in all agricultural districts. Reports from the Southern States show that it was favorable for cotton and cane, and that small grain crops have been affected favorably. The season is probably 10 days late in the middle Atlantic States, and from 15 to 20 days late in the Northwest, where seeding is progressing slowly.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Date.	Cash.	April.	May.	June.	July.
12.....	98½	91½	91½	90½	89½
13.....	98½	91½	91½	90½	89½
14.....	98½	91½	91½	90½	89½
15.....	98½	91½	91½	90½	89½
16.....	98½	91½	91½	90½	89½
17.....	98½	91½	91½	90½	89½

The closing prices for wheat have been as follows, at Chicago:

Date.	Cash.	April.	May.	June.	July.
12.....	74	73½	73½	73½	70½
13.....	74½	74½	74½	74½	80
14.....	75	74½	74½	74½	81½
15.....	76½	76½	76½	76½	83
16.....	76½	76½	76½	76½	83
17.....	76½	76½	76½	76½	83

CHICAGO, April 18.—Wheat—Easier; cash, 79½c; May, 80½c; June, 81c. Corn, lower; cash, 55½c; May, 57c; June, 54½c. Oats, easy; May, 32½c.

NEW YORK, April 18.—Wheat—95½c to 95½c for cash, 92½c to 92½c for May, 92½c for June, 92c for July and 90½c to 91c for August.

NEW YORK, April 17.—The market opened wonderfully excited, and the members of the Exchange violated the rules in their efforts to buy. At this point an early rumor of the death of Emperor Frederick and the excitement of the crop situation, together with the buying craze which comes with any successful bulge, caused prices to jump at one time nearly 2 cts over the outside prices on Monday. The realizing later brought a sharp reaction which wiped out part of the advance. The close at 1 P. M. for May was 82c, or ½c better than the top and closing price of last night. The close for the day was ½c less. The feeling just before the close was heavy. Generally conspicuous on the bull side to-day was John Cudahy, Armour's partner, who was backed by the country and the local bulls. Another leading figure was Leopold B'um, who closed out a line of about 1,000,000 bu. of May at 82c. While other market were not as strong as here, everything at home and abroad helped the upward tendency.

Valencia Raisins.

NEW YORK, April 17.—Advices from Denia show the quantity of Valencia raisins shipped to the United States and Canada, up to March 24, to have been 1,125,516 boxes; this is about 2000 boxes less than for the corresponding period the preceding year.

Eastern Wool Markets.

NEW YORK, April 16.—Wool has been without much attention in the market, business for the most part being in small lines and prices barely steady. Sales—42,500 lbs domestic fleece, 31¢ to 31½¢; 10,000 lbs unwashed fleece, 26¢; 30,000 lbs Texas, 18¢; 15,000 lbs Oregon, 23¢; 25 bags scoured Texas, 44¢; 50 bags scoured Colorado, 46¢; 75 bags scoured Utah, 55¢; 100 bags scoured Montana, 53¢; 12,000 lbs Southern, 17¢; 36 bags super, 31¢; 62,000 lbs New York scoured; Texas, 3000 lbs scoured; pulled, 12,000 lbs Territory, 50,000 lbs spring California, 15,000 lbs Australian, 85 bales East India, 97 bales Persian and 90,000 lbs domestic pulled on private terms.

BOSTON, April 14.—The wool sales during the week foot up 3,667,000 lbs, including 985,000 lbs foreign. There were sales of 40,000 lbs California spring and Oregon at 14¢ to 14½¢, and 80,000 lbs California fall at 12¢ to 12½¢.

California Products in Chicago.

CHICAGO, April 14.—California oranges sell well with the exception of seedlings. Quotations are: California Riverside oranges, 128 and 226, \$3.50 at 3.75; other sizes, \$3.35 to \$3.50; do seedlings, \$2.75 to \$3. Riverside Navel, \$4.50 to \$5.50; do other kinds, \$3.50 to \$4. California lemons, slow, \$1 to \$1.50 per box.

California dried fruits are in moderate sale. The market rules steady, with the present supply about fair, but considerable less than some time ago. We quote: Apricots, sun-dried, ½ lb, 10½¢ to 11½¢; bleached, prime do, 14¢; do choice, 14½¢ to 15¢; do evaporated, unpeeled, 13½¢ to 15½¢; do peeled, 17¢ to 22¢; plums, unpeeled, ½ lb, 6¢ to 9¢; pitted, 10½¢ to 11¢; prunes, small, ½ lb, 7¢ to 9¢; fancy large, 11¢ to 13¢; raisins, loose Muscatels, 2-crown, ½ box, \$1.35 to \$1.45; do 3-crown, ½ box, \$1.50 to \$1.65; do London layers, ½ box, \$2.25 to \$2.35.

The market for beans is quiet. A few days ago a carload of California beans was sold, and this is the only sale of any importance during the week. The inquiry is rather moderate, for most jobbers are supplied for the present. The arrivals are small, and

parties who hold beans are, as a rule, rather firm in their views, and in consequence of this former prices are maintained. California, according to quality, \$2.15 to \$2.75.

Trade is very fair for choice grades of hops. Of these the supply is gradually becoming smaller, and is now rather light. Prices rule steady and firm. Common qualities do not share in the firmness, for of these there is a good stock, with little or no inquiry. Quotations range: Pacific Coast, choice, 12¢ to 13¢ ½ lb; common to prime, 9¢ to 11¢. New California potatoes, 4¢ ½ lb. California strained hops, 7¢ to 8¢ ½ lb.

Miscellaneous.

NEW YORK, April 16.—The best marks of 3-crown raisins are: stiff at \$2; 2-crown, \$1.40 to \$1.55. All are jobbing well, with but few Malagas to come. Fresno layers are worth \$2.40 to \$2.50.

There is no movement in dried fruits except apricots, which sell at 14½¢.

Lima beans fell off to \$2.80 to \$2.85, under fresh supplies. The season has been late, and green stuff has divided the trade.

There is a steady brewers' demand for hops. State new range, from 9¢ to 14¢; Pacific, 8¢ to 12¢; old, 3¢ to 6¢; German, 16¢ to 22¢. The estimated stock here and in the interior is placed at 18,000 bales.

Local Markets.

BAGS—The market under strong outside selling broke on last Friday to 7½ July delivery and on Monday to 7½ and 7½ June and July delivery and to 7c spot. Yesterday and to-day they were stronger. The pool are holding at prices heretofore quoted, and to get buyers discredited bad crop advices.

BARLEY—The market took quite a jump the past week on Call for futures, due to decreasing stocks, strong holdings, large consumption and poor crop prospects. The bears tried to hammer prices down at each advance and succeeded to some extent yesterday. At to-day's Call the following transactions are reported to have been made:

Morning Session: Buyer season—200 tons, 83¢; 100, 83½¢. Buyer 1888—400 tons, 94¢; 400, 93½¢; 100, 93½¢; 140, 93½¢. Afternoon Session: Spot—100 tons, 81¢ ½ cts.

BUTTER—Light receipts; up to Monday caused the market to hold strong at a slight advance, but heavy receipts on Monday and yesterday create a weaker tone, as buyers hold off and sellers are more anxious. At anything over 24c dealers will not pack, but when prices drop there is considerable packing.

CHEESE—The market continues heavy, with prices still settling under large supplies and poor demand.

EGGS—The market has fluctuated some. There are liberal supplies of Eastern on the market, which operate against prices.

FLOUR—The market has a stronger tone. It now looks as if better prices may obtain.

WHEAT—The jump in wheat futures took the bears by surprise, and many have been caught short on the market. The advance is due to poor crop prospects and very light supplies of choice grades of wheat in this State. At to-day's Call, the following are the reported sales made:

Morning Session: Buyer season—100 tons, \$1.33; 10, \$1.32; 200, \$1.32½. Buyer 1888—200 tons, \$1.45; 100, \$1.45½; 200, \$1.45½; 200, \$1.44½; 100, \$1.44½; 400, \$1.44. Afternoon Session: Buyer 1888—100 tons, \$1.44½; 200, \$1.44½ ½ cts.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to April 16, '87.	July 1 '87 to April 14, '88.
Flour, qr. sks.....	3,684,149	2,985,189
Wheat, cts.....	11,313,231	7,610,680
Barley, cts.....	2,000,554	1,973,649
Oats, cts.....	116,063	146,275
Potatoes, sks.....	721,834	954,658
Corn, sks.....	82,194	186,088
Rye, sks.....	21,497	15,968
Buckwheat, sks.....	5,865	3,054
Beans, sks.....	410,695	378,053
Bran, sks.....	382,293	410,029
Hay, tons.....	84,665	98,677
Salt, tons.....	19,273	13,390
Wool, bales.....	53,936	47,121
Hides, No.....	91,003	87,763
Raisins, 20-lb boxes.....	135,911	109,923
Quicksilver, flasks.....	15,119	25,056
Hops, bales.....	12,965	15,192

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to April 16, '87.	July 1 '87 to April 14, '88.
Flour, sks.....	134,891	275,356
Wheat, cts.....	666,437	994,685
Barley, cts.....	5,253	75
Oats, cts.....	303,016	232,180
Corn, cts.....	112,504	12,590
Wool, bales.....	9,123	7,372
Bran, sks.....	27,918	54,930
Hops, bales.....	754	508
Hides, No.....	28,114	24,237
Rye, cts.....	5,154	5,154
Potatoes, sks.....	119,007	73,684

Cereals.

London mail advices to March 25 say: The weather remained very cold up till Wednesday, with further heavy snowfalls in most parts of the country, thus rendering field-work impossible. To-day, however, the weather is considerably milder, with rain. The young wheat plant is generally reported to be in a good position to withstand this severe weather, but spring field-work is getting sadly in arrear, except in some favored districts in the South of England. In France there has also been a renewal of very severe weather, further delaying spring field-work, which is now said to be nearly a month behind-hand. The winter-sown wheat continues to be favorably spoken of upon the whole. Floods and snowstorms are reported from Austria-Hungary and South Russia, doing serious local damage, and in

Germany the weather has again been very severe.

The New York Produce Exchange Reporter, just to hand, says: By Western and Southern mail we have late wheat crop advices. The change in the temperature since Monday has produced quite a change in the appearance of the growing crop; in some localities the plant is found to be seriously injured, while in others the damage is not as great as many farmers feared. The early sown wheat has not been so much injured in Ohio, Michigan and Pennsylvania as in Indiana and Illinois, but the late sown is greatly hurt, and this opinion is quite generally expressed. It is too early to give an opinion as to the extent of the damage. A considerable portion of the area sown did not come to anything, owing to the protracted drought and complete absence of moisture during the autumn. Farmers in the States of Ohio, Indiana, Illinois and Missouri are not selling their reserves which are extremely limited, and most of them are waiting to learn the extent of the damage to their growing crop. In the Spring wheat States the movement has been more liberal, and country elevators have reduced their stocks materially, though on some roads stocks are still large. More land will be put under corn and flaxseed than ever before, as they prove far more reliable and profitable crops.

A leading Chicago firm writes as follows on the wheat situation: It has been patent for some time that stocks at leading storage centers were firmly held in order to secure carrying charges, and that in many instances the inquiries by millers have been met with a demand for May prices which has impelled them to greater exertions in securing supplies from first hands, and has doubtless contributed largely to the slow decrease witnessed during the winter months. The fact that they have begun to draw supplies from visible winter wheat supplies seems to indicate that they have about exhausted mill stocks, and that supplies from other sources are unobtainable, strengthening the proposition presented in our recent letter, that reserves of winter wheat are quite small. While supplies are sufficient to meet current demands without materially trenching on in-sight stocks, small invisible reserves are ignored as a price-making factor, and are potent only when inadequate for the demand, which, in consequence, must be supplied from the visible supply. If such a condition now exists the further depression of values is unwarranted, and if next year's supplies are to be curtailed by decreased production, higher prices should obtain.

The States of Ohio, Indiana, Illinois, Iowa, Missouri, Kansas and Nebraska had on hand on March 1, 1884, 308,000,000 bu. of corn. Their crop in 1884 was 1,176,000,000 bu., and the sum of these two is their supply from March 1, 1884, to March 1, 1885, or 1,484,000,000 bu. Deducting 437,000,000 bu. remaining on March 1, 1885, we have, as entering consumption and removal in one year, 1,047,000,000 bu. In a similar way, with crop of 1,240,000,000 bu. in 1885, and holdings March 1, 1886, of 481,000,000 bu., we determine 1,196,000,000 bu. as entering consumption and removal in the succeeding year. With 344,000,000 bu. on March 1, 1887, and crop of 1,000,000,000 bu. in 1886, we ascertain consumption and removal of 1,137,000,000 bu. for another year. With 344,000,000 bu. in holding on March 1, 1887, and a crop of 780,000,000 bu. in that year, and remaining in farmers' hands 240,000,000 bu. on March 1, 1888, we have 884,000,000 bu. as another year's consumption and removal. The average of these four seasons gives, in holding March 1, 392,500,000 bu.; crop 1,049,000,000 bu., and consumption and removal, 1,066,000,000 bu. The latter has exceeded production, and the reserves, or holdings, on March 1, 1884, appear reduced 144,000,000 bu. up to March 1, 1888. Corn from the crop of 1888 will hardly be available before November, or say 8 months from March 1. On the basis of year ending March 1, 1888, we have a monthly average of over 73,000,000 bu., which would give for 8 months' consumption and removal nearly 590,000,000 bu. to be drawn from a supply of 240,000,000 bu. The above statements exhaust the old corn in the country. There will always be some in holding, and there may be some new corn used before November and these features may cancel. In the States outside of the 7 surplus States, the production in 1887 was increased but 11,000,000 bu. over 1886. I make it the consumption in the 7 surplus States has been recently, 940,000,000 bu., and removal from those States some 126,000,000 bu. annually. With a crop of 780,000,000 bu. in them in 1887, this indicates a demand within those States for 160,000,000 bu., because of under-production, against a lessening of demand from other States, from over-production, of 16,000,000 bu., or as 15 to 1.

In this crop advices are conflicting. As a rule the wheat and barley plant in Tulare, Fresno, parts of Stanislaus, Merced, San Joaquin, Sacramento and Colusa counties are sadly in want of rains. Many fields are past redemption, while many more can be made to produce half a crop with early rains, but if delayed long they will also be a failure. It is now claimed by the best informed that even with rains next week the crop will not be more than 80 per cent of what it promised a fortnight ago, and with rains deferred for a fortnight the crop will hardly go as high as 70 per cent. Many fields are being cut for hay.

The market the past week for wheat tended up in sympathy with options, which were advanced under strong buying, due to bad crop advices and the very strong probability of a war in Europe. Stocks in this city, at Port Costa and interior warehouses are light and under good control. Choice grades, suitable for milling, are very hard to get, even at an advance in bids. Trading is light in shipping grades, due to an advance in holders' views and also that the bulk of No. 1 shipping available is held against Call Board contracts.

Receipts of barley the past week were light, not enough to meet current consumption, consequently the reserve stocks had to be drawn on quite freely. The consumption of feed continues free, while brewers have been taking more liberally choice brewing even at advanced prices. The supply of choice grades of both feed and brewing is light, but large for the season of poor to fair. It is claimed that the bulk of the warehoused barley is held against Call Board sales. It is said that new barley will come in earlier than last year and perhaps than any former year.

Oats have held to steady prices throughout the past week. Choice grades are strongly held, but poorer grades favor buyers. Receipts have been fair.

Rye moves slowly, even at the lower quotations.

Fruits.

Strawberries are coming in more freely, and selling by chest. The quality shows an improvement. Gooseberries come in sparingly. Cherries have been sent in from Newcastle, but they were only sent in as samples and not for the market. A few blackberries are also said to have come to hand as samples not for the market. All kinds of berries will soon begin to come in freely.

With warm weather, there is a still continued free demand for citrus fruits, with the price of limes and lemons slightly higher. From the North a good call still obtains.

From all advices at hand, the writer is drawn to the conclusion that present prospects warrant the belief that the apricot crop will not be as light as many have claimed, owing to more bearing trees of Royals and Blenheims coming in this season. The crop will probably be about 75 per cent of last year's. The plum crop will be large, as will that of cherries. Peaches will probably be more than last year, owing to more trees bearing. Of other large fruits, not particular advices have been received.

Dried fruits are quiet but steady. The stock of choice bright sun-dried is light, and as for that, the supply of all kinds is light.

Raisins are without change. The market is quiet but firm under light supplies and strong holding. At the East the market continues to gain strength.

Feedstuff.

Bran and middlings are moving off more freely, and as receipts are only fair, the market is stronger. Ground barley is in sympathy with the cereal, which has been advanced under stronger buying. Feed corn is easier, but not quotable lower.

Notwithstanding haying is reported in some localities, yet old hay holds to strong prices, with no disposition manifested to shade prices. The dry weather and short grass are the prime factors in producing the strength of the market.

Live-Stock.

Bullocks are easier, with some shading in prices of those that cut up with wastage. Medium-sized bullocks that cut up without wastage fetch better prices than others and find a quick market at all times. Oregon advices report a weak market for range cattle. Mutton sheep are offering fairly free. The market is without change in quotations, although it is said that prices are inclined to favor buyers. Calves and lambs are weaker. Free receipts of dressed hogs caused prices to shade off some, which also unfavorably affected live hogs. The principal buying is still done by Chinamen, although fair sales are made for the block. Prices, it is claimed, are still too high to admit of packers buying. In milch cows the inquiry is slower, consequently any selling pressure would be met by lower bids. In horses a good demand is reported for all kinds, but so far as can be learned prices are about the same as heretofore reported.

Since putting the above in type, a more thorough canvass of the market shows that choice, well-conditioned bullocks are stiffer, with the tendency upward.

The market for dressed meat is quiteable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed and one-half from the price of grass-fed, that is, animals running at large).

HOGS—On foot, grain-fed, 6¢ to 6½¢ per lb.; dressed 9¢ to 9½¢ per lb.; soft, 5¢ to 6¢ per lb.; dressed, 7½¢ to 8½¢ per lb. Stock hogs, 3½¢ to 5¢ per lb.

BEEF—Stall-fed, 8¢ to 8½¢ per lb.; grass-fed, extra, 7½¢ to 8¢ per lb.; first quality, 7¢ to 7½¢ per lb.; second quality, 6½¢ to 7¢ per lb.; third quality, 5¢ to 6¢ per lb.

VEAL—Choice, 9¢ to 11¢ per lb.; fair to good, 7¢ to 8¢ per lb.

MUTTON—Wethers, 7¢ to 7½¢ per lb.; ewes, 6½¢ to 7¢ per lb.; lamb-spring, 9¢ to 10¢ per lb.

Vegetables.

New potatoes are coming in freely. The quality shows quite an improvement. For good-sized, fairly-matured, there is a free demand for shipping to distant points. Considerable is going forward by rail to Chicago and distribution points west of the Missouri river. Owing to the low water in the rivers, the crop on the river lands will be large.

Cabbages continue in good request for shipping to Chicago and other Western distribution points. As the supply here is light, prices are higher.

Onions are very firm for the more choice good keepers to fill more distant orders.

The warm, forcing weather up to last Sunday brought garden truck well along, and naturally there was a decided increase in receipts, with a low range of values for several kinds. Tomatoes continue scarce and high. Cucumbers are coming in more freely, but prices shade off slowly.

Canners are packing asparagus and expect to start in on sweet peas a week from next Monday.

Miscellaneous.

Poultry ruled fairly steady throughout the week. The supply is not equal to the consumption, and consequently any glut in the market is only temporary.

In hops both the Eastern and European markets are reported about bare of choice but over-supplied with poor. In this market buyers say there are no choice straight parcels to be found. Wool comes in in a straggling way. There are no Eastern buyers here yet and few Eastern orders. All advices report the stock at the East, both in commission merchants' and manufacturers' hands, very light, but owing to the latter buying in a hand-to-mouth way prices do not appreciate. It begins to look as if at the manufacturers' meeting about a year ago they formed some kind of trust to keep prices down by not bidding against each other. In the absence of business quotations are nominal.

Quite a large consignment of Missouri river chickens came in to-day, alive, which tended to break prices on hens. Roosters and other fowls were unchanged.

Old potatoes are slow and in buyers' favor. The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way.....	413,383	207,663
In port, disengaged.....	62,246	104,085
In port, engaged.....	10,108	10,543

Totals..... 485,737 322,291
To obtain the carrying capacity, add 60 per cent to the tonnage.

Tonnage on the way to Oregon, 22,835; tonnage at Portland, Oregon, loading and to load, 19,572. Total tonnage, 42,407.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

Table with 2 columns: Item, Price. Includes Beans and Peas, Bayo, Butter, etc.

Table with 2 columns: Item, Price. Includes Lima, Fld Peas, do green, do Niles, etc.

Table with 2 columns: Item, Price. Includes Broom Corn, South'n perton, North'n perton, etc.

Table with 2 columns: Item, Price. Includes California, German, Dairy Produce, etc.

Table with 2 columns: Item, Price. Includes Cheese, Cal. ranch, do store, Ducks, etc.

Table with 2 columns: Item, Price. Includes Feed, Bran, ton, Feed meal, etc.

Table with 2 columns: Item, Price. Includes Hay, Middlings, Oil Cake Meal, etc.

Table with 2 columns: Item, Price. Includes Extra, City Mills, do Country Mills, etc.

Table with 2 columns: Item, Price. Includes Grain, Barley, feed, etc.

Table with 2 columns: Item, Price. Includes Corn, Yellow, Small Round, etc.

Table with 2 columns: Item, Price. Includes Nebraska, Oats, mulling, etc.

Table with 2 columns: Item, Price. Includes Choice feed, do good, do fair, etc.

Table with 2 columns: Item, Price. Includes do black, do Oregon, Rye, etc.

Table with 2 columns: Item, Price. Includes Wheat, mulling, Gilt edged, etc.

Table with 2 columns: Item, Price. Includes do fair to good, Shipping choice, etc.

Table with 2 columns: Item, Price. Includes do good, do fair, HIDES, etc.

Table with 2 columns: Item, Price. Includes Dry, Wet salted, HONEY, etc.

Table with 2 columns: Item, Price. Includes Beeswax, Honey in comb, Honey in comb, etc.

Table with 2 columns: Item, Price. Includes Oregon, California, ONIONS, etc.

Table with 2 columns: Item, Price. Includes Pickling, Red, Silverskins, etc.

Table with 2 columns: Item, Price. Includes NUTS-JOBBER, Walnuts, Cal. lb, etc.

Table with 2 columns: Item, Price. Includes Almonds, hds, Soft shell, etc.

Table with 2 columns: Item, Price. Includes Apples, bx com, do choice, etc.

Table with 2 columns: Item, Price. Includes Apricots, Bunch, Bananas, etc.

Table with 2 columns: Item, Price. Includes Blackberries, ch, Canteloupes, etc.

Table with 2 columns: Item, Price. Includes Cherries, white, do black, etc.

Table with 2 columns: Item, Price. Includes do Royal Ann, Cherry plums, etc.

Table with 2 columns: Item, Price. Includes Crabapples, Cranberries, Currants, etc.

Table with 2 columns: Item, Price. Includes Gooseberries, Figs, black, etc.

Table with 2 columns: Item, Price. Includes do white, Grapes, white, etc.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

Table with 12 columns: Location, Rain, Temp, Wind, Weather. Includes Portland, Eureka, Red Bluff, etc.

EXPLANATION.—1. for clear; Cy, cloudy; Fr, fair; Fy, foggy; — indicates small to measure. Temperature, wind and weather at 12:30 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

WAKELEE'S THE BEST IS THE CHEAPEST. SQUIRREL AND GOPHER EXTERMINATOR! IN 1-LB. AND 5-LB. CANS. PERCHERON HORSES. FRENCH COACH HORSES. 511 PURE-BREDS Now Actually on Hand.

HOLSTEIN CATTLE AUCTION! Thursday, May 3, 1888, At 11 A. M., at RAILROAD STABLES, Cor. Steiner & Turk Sts., San Francisco.

J. H. WYLIE, SUCCESSOR TO BATCHELOR & WYLIE, ACME STEAM HEAT EVAPORATORS. SOLE AGENTS FOR THE PACIFIC COAST OF THE. ABSOLUTE SAFETY FROM FIRE. EASILY OPERATED.

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Seeds, Plants, Etc.

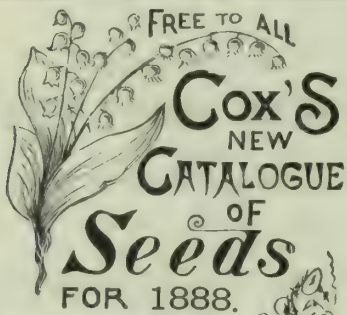
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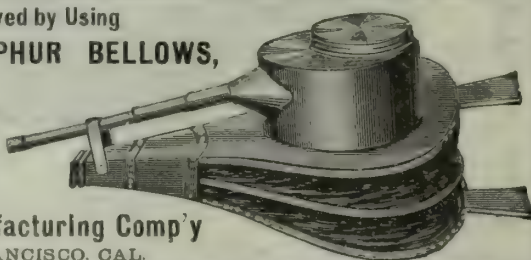
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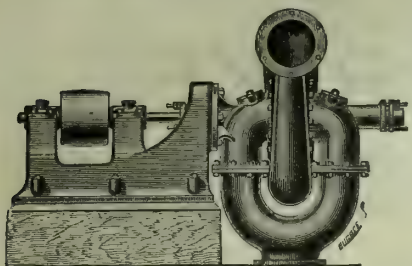
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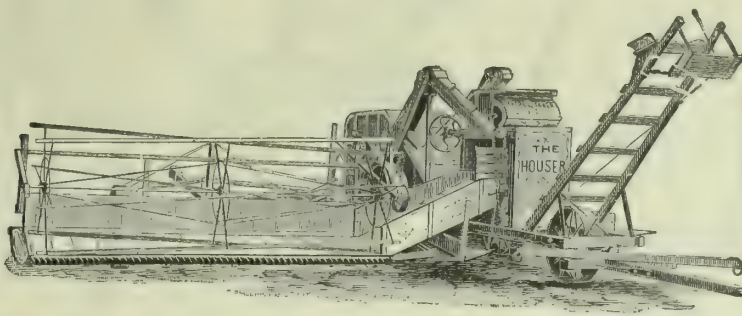
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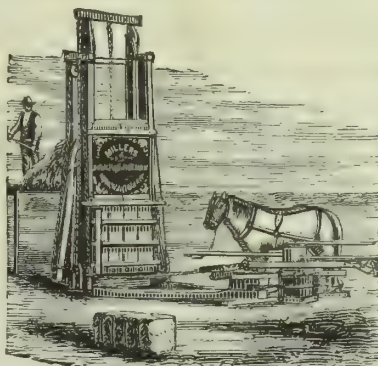
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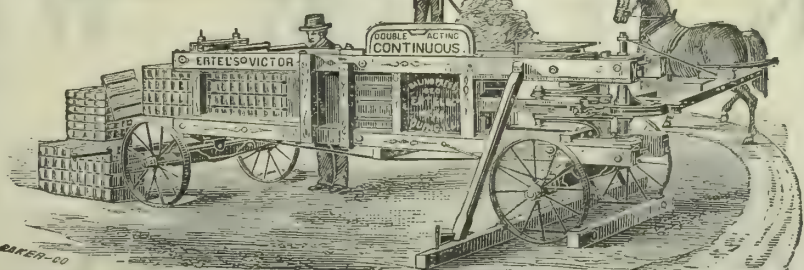
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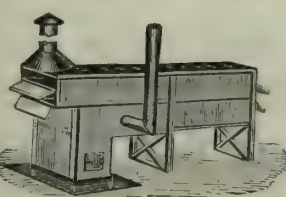
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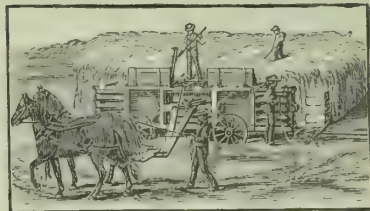


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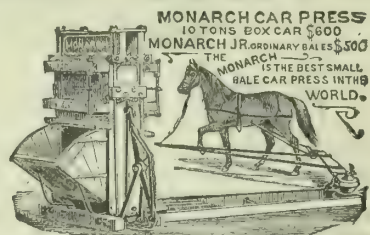
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bale, 220 pounds. Capacity, from 16 to 25 tons per day.
Uses 4 men and works with 2 horses. Requires no
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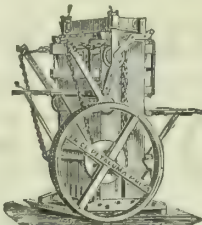
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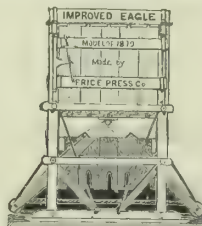
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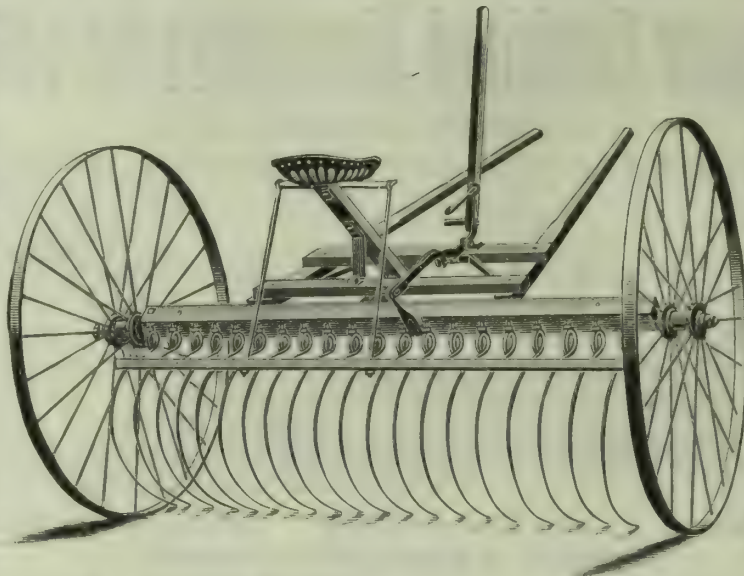
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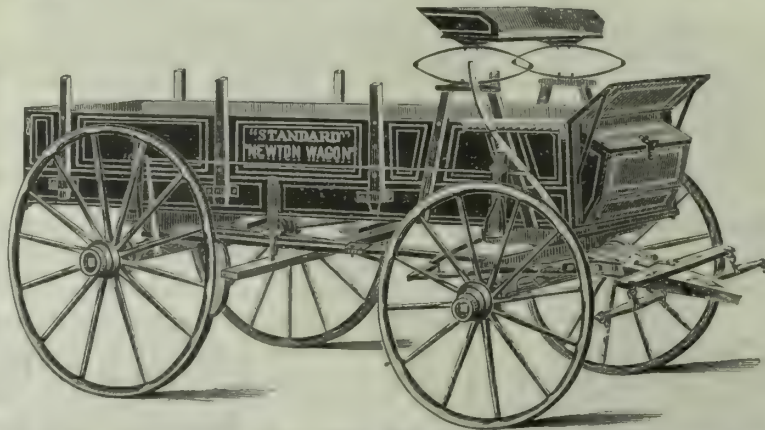
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California Maple Sugar.

A very interesting product was received at the Agricultural Laboratory of the State University last week from Placer county, in the form of maple sugar made from the sap of one of our native California maples, *Acer macrophylla*, or, as it is commonly called, the broad-leaved maple. The *Foothill Tidings* says that in spite of the declaration of old sugar-makers from the East that the trees were not sugar maples, Mr. Moulton, who lives about four miles southeast of Grass Valley, determined to try the sap and found that he could make syrup and sugar of excellent quality. Three University students—Cornelius Lakenan, Herbert Fletcher and Burton Hall—went out to the Moulton place and found that good sugar and syrup had been made by Mr. Moulton from the sap of the native maple. They secured specimens of the sugar and syrup and branches of the trees, and brought them to the University that the sugar might be chemically tested.

We had the pleasure of sampling this sugar the other day, and of seeing the leaves and bloom of the trees. The latter show that the trees are the *Acer macrophylla*, as we have stated. The sugar has the true maple flavor, grain, etc., and leaves, no doubt, of the sugar property of our native maple, if, in fact, doubt generally existed. Maple sugar has been made in this State before. We recall one case in the neighborhood of Santa Cruz a few years ago. It remains to determine how great is the yield of the native tree of certain size and whether the manufacture of the sugar and syrup can be profitably prosecuted.

Our broad-leaved maple is one of the best sidewalk and shade trees in regions where it does well. It has a wide range, too. It attains considerable size and a very beautiful and symmetrical shape. It grows very readily from the seed, which is produced in large quantities. Every spring, under the trees, on the University grounds, the young volunteer seedlings come up thick as a sowing of buckwheat, which the plants much resemble when they put forth their first pair of leaves.

We have always looked upon this maple as one of the most promising trees for timber culture planting as well as for wayside, street, or lawn shelter, or ornament. It attains size very quickly in a favorable situation, and its seedlings seem quite hardy.

In clearing up land it will be well to save the maples where their presence can be tolerated. This is already being done in some cases. The *Foothill Tidings* has heard of at least one clearer, Michael Manion, who found many maples while clearing and saved them all. "They make a beautiful shade tree, even if they should not prove to be sugar maples," said Mr. Manion. We are glad that opportunity thus offers to call more general attention to this very beautiful and useful native tree.

FINE WOOL.—We have received very handsome specimens of merino wool from the fleeces of the rams Batavia and Monroe, the animals owned by L. C. Walbridge of Russell, Kansas, which were shown on our first page in the issue of April 7. We shall be pleased to show them to any interested party who may call at our office.

RABBIT-DRIVES are so many and frequent nowadays in the Upper San Joaquin valley that we no longer try to keep track of them.

The Twin Leaf.

Many housewives who had a predilection for "roots and yarbs" in their old homes east of the Rocky mountains, will recognize the plant of which we give an engraving on this page. It is ranked as a native medicinal plant by Dr. Vasey of the Department of Agriculture, and

into two halves, giving rise to the name "twin leaf." As a whole the leaf is round-ovate in form, with the base deeply heart-shaped. When mature it may be six to nine inches in diameter. It is smooth and with the margins entire or wavy-toothed. There are three to five principal veins to each half, which proceed from the point of junction and ramify to the surface.



TWIN LEAF OR RHEUMATISM PLANT—*Jeffersonia diphylla*.

is included in an enumeration of such native plants in a recent publication by him. The common names are "twin leaf" and "rheumatism root." Its scientific name is *Jeffersonia diphylla*, the genus bearing the appellation of the distinguished statesman, Thomas Jefferson.

Twin leaf is a small herbaceous perennial, of the order *Berberidaceae*. The rhizoma or root-stalk is thick and short, emitting a mass of matted fibrous roots. From the root-stalk is sent up a number of long-stalked, erect leaves, the leaf and stalk when mature being a foot or more in length. The leaf is curiously parted

The flowers come from the root on one-flowered naked stalks (scapes), which rise nearly to the height of the leaves. The flower has about four linear-oblong sepals, which drop off upon its opening; within these are eight oblong white petals, three-fourths to one inch long, and spreading and soon falling off. There are eight stamens, one before each petal. The ovary is roundish-oval, one-celled, becoming obovate, and when ripe opening at the top by a transverse lid. This plant grows in rich, shady woods, from Western New York to Wisconsin, and sparingly southward along the Alleghany

mountains. It is most abundant in the Western States, from Ohio to Illinois and Kentucky. It has a popular reputation as a stimulant- tonic, especially for the cure of rheumatism.

Droughts That Have Occurred Before American Settlement.

In studying the records of the California missions, Hubert Howe Bancroft has brought to light the interesting fact that droughts have occurred here during the past century at comparatively regular intervals. In 1809-10 the missions and presidios suffered greatly on account of the shortness of pasturage and crops. Difficulty was experienced in obtaining food enough for the horses of the troops and mission vaqueros. In 1820-21 there was another visitation of the same kind, but more severe. The live-stock of the missions, which had increased to 400,000 head, had much difficulty in finding grass enough to keep them in a condition fit for food. Past experience had taught the missionaries the necessity of laying up grain, dried meat, fat, etc., for two years. They had also trained fishermen to furnish food from the sea, not only for use during Lent and on Fridays, but also in order that mussels and fish, so abundant on the coast, should help to economize the laid-up stores. A special dispensation was issued by Senan, the father-president, in 1823, to use meat, eggs, etc., on forbidden days, owing to the scarcity of maize and beans. But heavy rains came in 1824-25, making the season the best one known in California till 1864. Pastures and crops continued in good condition till the great drought, extending from 1828 to 1830, when there was no rain for 22 months. The wells and springs of Monterey gave out, and water for the use of families had to be brought from the Carmelo river, three miles distant. Hardly any crops were obtained; it was estimated that fully 40,000 head of horses and neat cattle perished throughout the province. Hundreds of mares were killed, and many were sold by the missions at 25 and 50 cents each. At Paraisima several large droves were driven over the cliff into the sea, so as to kill them speedily and save the pasture for the cattle and sheep. However, the grass to the north of San Juan Bautista was better than it was to the southward. In another decade the season of drought came again. In the season of 1840-41, no rain fell worth mentioning for 14 consecutive months. It was severely felt, particularly south of Soledad; but not nearly so many animals perished as in the previous dry season. This smaller loss was due in a great measure to the fact that the number of head owned by the missions had decreased in numbers greatly. Besides the large number that had died during the previous visitation by starvation, many had been destroyed afterward through neglect, by wolves, coyotes and bears, so that from 153,000, in 1830, the number of head had fallen to 20,000. The subsequent droughts fall within the period of American settlement, and it is needless to mention them.

THE BOGUS-BUTTER LAW ENFORCED.—It is telegraphed from Springfield, Ohio, that Thomas Dugan and C. A. Bird, prominent hotel proprietors, have been fined \$50 and costs each and sentenced to 10 days in jail for using oleomargarine on their tables without posting a notice in their dining-rooms.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Notes in the Mediterranean Region.

EDITORS PRESS:—Shortly after forwarding you the last communication, we left Cordova for Seville, and thence through the far-famed valley of Andalusia to Malaga, from whence we took steamer for Oran, in Algeria. At Oran we went by rail to Algiers. From Algiers we came to Marseilles and from Marseilles by rail to Nice and the "Riviera."

The valley of Andalusia is composed almost entirely of redland, which is generally of a gravelly nature.

Rocks and even small stones have been carefully gathered from the land out of which fences and plastered walls have been made. No wooden or wire fences are to be seen.

Tillage appears to be a laborious grubbing process rather than the systematized mode of implement labor as practiced in California. The old-fashioned wooden plow mentioned in my last letter appears to be the mainstay, and with the exception of an occasional harrow it would seem that no other implements are used. There are, of course, a few proprietors who indulge in the luxury of a Swedish or even an English plow and cultivator, but these compose an infinitesimal number.

Plows and Plowing.

I found, however, that the orchards of Andalusia were well and thoroughly cultivated. I could find no hardpan underneath the plow-point level, and the soil is thoroughly mixed and fine. The effect of this thorough tillage is mainly due to the efficient and laborious hand labor. The ground between the trees and vines is most generally hoed by hand, and often crops of beans are raised between them. From observation in the field, I am inclined to think that there is one element in the old-fashioned wooden plow that might be introduced in the modern ones, and that is to have the plow constructed to ride on the "nose" in place of the almost triangular base line common to all modern plows.

The "surface" execution of the modern plows is far more effective and conducive to good tillage than is that of the old-fashioned wooden plow, for the modern plow cuts evenly, and turns weeds and soil, which things cannot be done by the old wood plow, but when the "under surface" is examined it will be found that the triangular base line of the modern plows scrapes over, or as Gen. Bidwell calls it, "trowels" over the under surface—the same as a plasterer runs his trowel over moist plaster, thereby closing up the pores of the under surface, causing a hardpan to follow. The hardpan in time renders the land sterile. This defect has, to some extent, been remedied by the Swedish plow, in which the "nose" is an inch or more lower than the mold-board, but in this plow the mold-board is not constructed to turn soil and weeds as thoroughly as in the American plow. Our thoughtful farmers, implement manufacturers, and inventors, have in this a fruitful and, perhaps, profitable field of practical work before them, and it may be hoped that in the near future a plow will be produced that will do equally as good surface work as is now done by the best make plows, but at the same time obviate entirely the tendency to create hardpans.

The Algaroba.

Inclosed I send you leaves and a pod of the Algaroba tree. It is grown quite extensively in Andalusia, makes a fine shade tree, is evidently an evergreen, and the crop, consisting of pods about three times the size of the sample, makes excellent food for cattle and horses. [This is the carob tree which has already been introduced in California by the University and by individuals, and succeeds admirably here.—EDS. PRESS.]

The great and glaring defect in Spain is the absence of forests. Trees will grow and thrive there, as is shown by the thriving condition of the trees planted by order of the Duke of Wellington on the hills of Granada near the Alhambra. The people of France evidently understand and appreciate the value of forestry and its relation to agriculture, for the hills and mountains are covered with growing and thriving forests, and laws are strictly enforced for their preservation.

A large portion of Andalusia is given over to sheep pasturing and cattle raising, and from what I have seen of it, I feel that it is safe to say that California has not alone a valley of like extent and richness within her borders, but that she has a half-dozen of them, and has besides, a better climate.

Value of Climate—The Riviera.

Many Californians too are in the habit of sneering at climate, as if climate had no value. They would change their mind—and that quickly—if they attempted to buy a 160 acre ranch or even a town site in the "Riviera." Not that the land is so fruitful here; on the contrary, from Marseilles to Monaco almost every acre of tillable land was, as it were, manufactured artificially. The original owners evidently took a barren, craggy hill, and after blasting or shattering the rocks they made shelves or terraces, and on these shelves or ter-

aces they must have deposited the earth that is to be seen there.

Many of these "home-made" ranches are no larger than an average back yard in Sacramento. Just try to buy one and you will hold your breath at the price. You will be reminded—should the price seem outrageously high—that this is "The Riviera." What about the Riviera? Well, nothing more than this: It is reputed to have the mildest winter climate in Europe. Now mark you, they have the mildest winter climate in Europe. Well, California has the finest winter climate in America, and in addition to this it can furnish on the same spot the finest summer climate also.

Happy the poor man that secures a home in God's favored land now. No time should be lost in securing it, for the time will shortly arrive when homes will be as expensive as in "The Riviera." Not alone is California destined to become the home of millions, but even the despised desert lands of Arizona will shortly begin to show their real value. The Riviera may have the mildest winter climate in Europe, but it cannot begin to "hold a candle" to Fort Yuma. I was in Yuma in January and found the air like that of mid-May in the East, whereas here on April 1st it is decidedly winterish in the shade, and the few orange and lemon trees here look as if they could not make up their mind what to do—whether to live or die, so they keep up a kind of average. They are all but dead, and the numerous undergrown lemons and oranges on them show clearly that they are not grown for profit, but as a blind—that this is a citrus belt, as it were.

I was in hopes that I would have reached Spain in time to have sent cuttings home, and in fact promised Mr. Platt of W. & R. Strong & Co. some. Unfortunately the steamer I intended taking at Havana for Southern Spain had gone, so I was obliged to take one for Northern Spain instead, which brought me to Andalusia after pruning-time and too late for cuttings.

In Africa.

Algeria is a very important colony to France. From Oran to Algeria, a distance of nearly 250 miles, there was almost an unbroken array of vineyards and orchards. The color and texture of soil there resembles that of Andalusia, and may be found to correspond to the foothill lands of Placer and El Dorado counties.

The African, Spanish and French lands bordering the Mediterranean are almost altogether composed of redlands. The Algerian vineyards appear to compensate the French people somewhat for the losses the phylloxera has caused them in France, and for aught we know the vin du France comes from Africa. Why not? Who knows?

This reminds me of a story (chestnut). Several years ago the writer was in the private office of a banker in San Francisco, noted principally for his millions and his bluntness. Observing some bottles of wine in a corner, a would-be "connoisseur" remarked:

"Rare wine that, is it not?"

"So so," replied the banker. "You can taste it."

The "connoisseur" hastened to "taste." Filling a glass full, he held it to the light, looked at it critically one way, then another, sipped it, smacked his lips, looked again, sipped again and exclaimed: "Very rare indeed; delicious, superb."

"Bosh!" said the banker. "I paid 75 cents a gallon for it at Kohler's; it is for my servants." How many drinkers, think you, "sip" and "look" and "smack" their lips at "Chateau la Rose" or "Chateau la Fete" at \$2.50 per bottle that comes from Algeria?

If we must drink wine, why can we not have sense and drink California pure and straight at 50 or 75 cents a gallon? In two things the people of Southern Europe have an advantage over us. Firstly, they appear to be better merchants. They know how to interest some titled bilks who do the "lip-smacking" and the "looking" and the "tasting" of their wines, and then their wines are "famous." Secondly, they have an unlimited supply of shipping to reach our market whereby they can land green fruits (especially grapes) at 60 cents per 100; whereas we have neither the titled bilks (and we don't want them) to give "character" to our wines nor have we transportation facilities to compete with them. Our misfortune, although of a temporary nature, is yet a real hindrance to our progress. "Let the traffic stand all it can bear" is the rule of the chief arbiter of the present "cock of the walk."

Do they not know that by transporting green fruits East at the lowest rates it would tend to bring hither a large and desirable population, enhance the value of real property, accomplishing the very ends hoped for?

They must surely know that. Then why do not the managers of the Central Pacific Railroad Co. grant these reductions? Can it be other than that they fear if prosperity came it would bring new roads, hence competition to them?

It can only be this and nothing else that prevents them from giving the fruit growers the rate they should have in order to compete with the Mediterranean growers, but California will advance in spite of them. O her roads will come and then they will come down. Nice, Italy, April 1st. D. LUBIN.

QUICK WORK.—In Augusta, Ga., a tree felled in early morning was before nightfall of the same day converted into paper and sent out bearing the current news.

THE ORNITHOLOGIST.

Useful Birds.

We have never listened to the complaints of farmers and fruit-growers about the depredations of the Baltimore oriole, the cat-bird, cedar-bird and many others, without feeling convinced that the complainants make themselves guilty of the basest ingratitude. (1) Without the assistance of these friendly birds in our warfare against injurious insects, all our efforts to raise good fruit would soon end in failure; (2) and if the birds take a small share of the fruits we do raise, they take no more than they are justly entitled to. In fact, we believe that it would not only be proper, but also decidedly profitable, for every farmer and gardener to plant some cherry, mulberry or mountain-ash trees, and a grapevine or two, in a spot most convenient for the birds, and chiefly for their benefit. Call the birds to your place of feeding them, and by providing them with nests where they may breed in security. (3) Fruit is so cheaply and easily grown that one should not begrudge to our little feathered friends what little they need and desire for their own use. It is giving them only a rather inadequate pay for their effective work. (4) The purple martin eats rose-bugs, and even potato-bugs. (5) The cedar-bird eats elm-beetles, besides lots of other injurious insects, and does not object to a dessert of cherries, which he richly deserves. (6) The oriole is fond of tent-caterpillars, fall web-worms, etc., and devours them by thousands. This is heavy food, and some grape juice may be required to aid in its proper digestion. (7) The cat-bird eats pear-slugs. The robin, the brown thrush, bluebird, wren, woodpecker, jay, chickadee—all these do a vast amount of good to the fruit-grower. (8) Some grape-growers complain especially of the oriole, which sometimes punctures grapes. We would not kill an oriole for five times the amount of grapes that it may injure. We hope our readers will endorse our views on this question and protect these birds, provide them with breeding-places and with feed, that is so easily produced for them. The house cat is one of their most destructive enemies, and should be watched and restricted.

EDITORS PRESS:—We find the above as an editorial in a prominent Eastern exchange. It is a fair sample of what men write on subjects they know little or nothing about.

Let us look into the facts a little and see how near this editor is right. To save space and repetition we have numbered the assertions made that do not agree with the facts as we have observed them.

1. Birds do not, as a very general rule, feed upon and therefore destroy what are generally known as injurious insects. This is readily proven by asking what birds are known to feed upon, to any extent, the most noxious insects, those known to be most injurious to our crops and fruits? What birds feed upon the Colorado potato beetle, chinch bug, codlin moth, plum curculio, scale bug, leaf lice, root lice, canker worm, wood and root borers of our fruit trees, the Hessian fly? In fact we may go on and name nearly every insect injurious to man, his crops, fruits and animals. And if we look into the facts carefully we will find that the birds are very careful to let these insects alone. There are very few of them that birds can feed upon at all. Why? Because the majority of them are poisonous to the birds, and the birds know it. Others are so distasteful, so acrid, so blistering (like the cantharidaceae), so incased in shells as to have no temptation for the birds, or are so hidden away that they cannot reach them. And exactly these are the reasons why these insects are noxious, for if they had no natural defenses of the kinds named, and were good and acceptable food to all birds alike at all times, then the birds would soon make way with them, and the birds in the mean time would increase very fast, only to starve themselves, perhaps, when this food was destroyed.

No, it is not true that the birds do destroy and hold in check any of our best-known noxious insects. But it is true, perhaps, that the birds do feed upon and hold in check a few insects that would become noxious if the birds did not feed on them, but even this point needs much more careful study.

The great enemy of insect life is other insects; if it was not for insects preying upon and destroying each other the world would soon be in a sad condition indeed. Many of our most noxious insects are held in check by other insects feeding on them. Others, some of them very injurious, are nearly completely defended against all enemies in the shape of other life. As an example, the well-known chinch bug may be named. It, so far as we know, has but two enemies, namely, weather unsuited to it and contagious disease, and it is not often that the conditions are right for these to destroy it; therefore it breeds, prospers and becomes fearfully destructive. Its particular protection, a very acrid taste and very disagreeable smell, protects it from, we may say, all living enemies. The same is true in a great measure of the great family of true bugs (hemiptera) to which it belongs, such as bedbugs, squash bugs, plant bugs, etc.

2. The birds, if let alone and protected, are very liable to take a good deal more than a small share of the fruit. In fact, with a very little protection they would soon take it all. The writer many years ago was a great lover of birds, and held very much the views that this editor writes. He planted a large orchard of cherries—2000 trees for the birds and 2000 for his own use; or, in other words, planted so great a number of trees that he thought the birds could have no effect on them. The result was that he soon found that the more trees and fruit, the more birds. Perhaps this was owing

to the peculiar environment of this orchard, but he found that unless he protected this great orchard of cherries from one particular bird, the cedar-bird or "wax-wing," they would have taken every cherry. They came in myriads, attracted by some peculiar instinct known only to feral life. Other fruit-eating birds seemed to gather in to feast in this great orchard proportionally as they did in smaller ones.

3. Yes; fruit is easily and cheaply grown in some places, and it is often the case that in those same places the birds find it to be very convenient to be around when it is ripe and "gobble" or ruin the whole thing. We have known of many cases where men were forced to abandon fruit culture where all else was quite perfect except that the birds would eat or destroy the fruit as fast as it ripened.

4. The purple martin eats no rose bugs (beetles) or potato bugs (beetles). It fact it, nor none of the family to which it belongs, the Swifts, which includes the martins, swifts and swallows, though they feed entirely, we think, on insects, eat none except such as they catch on the wing.

It is a fact, that so far as we can learn, one species of this very common family has never been seen to alight except within its natural home—a chimney or hollow tree. We refer to the well-known chimney-swallow or swift.

None of this family, as far as observed, ever take food except when flying, and the insect also in flight. When our astute editor sees a swift of any species gathering "bugs" and worms off of the ground and plants he should call in some competent naturalist so that a strange fact in natural history may be duly recorded.

And right here comes in a question of fact of great importance. The food of these aerial-feeding birds has never been fully investigated, and it is a question whether this same Swift family are not very injurious instead of beneficial. We know that their food is entirely insectivorous, but what kind of insects? That is the question. As before stated, our very best friends in holding in check noxious insects are other insects; many of these are small ichneumon gnats and flies, parasitic on other insects. These are destroyed, there is no doubt, in myriads by the swifts during the mating flight of the gnats. It is also true that the swifts and other aerial-feeding birds may destroy also many noxious gnats, such as mosquitoes, gall gnats, etc. The bee-martin and even the red-head woodpecker take their food usually on the wing.

5. Neither does the cedar-bird eat elm beetles or any other beetles or insects in its adult state. Its food, so far as observed, is entirely fruit, and fruit alone. Fruit, as the term is commonly used, as it does not even accept as food what we term seeds; or at least competent naturalists have not recorded such facts, and the writer has examined hundreds of specimens and never found anything in their viscera except the pulp of fruits.

6. Nor is the oriole "fond of tent-caterpillars, fall web-worms, etc., and destroys them by the thousand." And here is a chance for a most valuable lesson. Some one told the late Benj. D. Walsh of Illinois, America's first great practical entomologist, that he had seen the oriole feeding on the tent-caterpillar. O. D. Ben was too good a naturalist to believe any such stuff, and determined to investigate the matter. He found that the oriole did visit the nests of this caterpillar, each time carrying away a worm, but he noticed that the oriole alighted, tore open the worm, and left the carcass uneaten; investigation proved that each worm the bird carried off had been parasitized, and the oriole was after the nice white, fat grub inside the caterpillar; by this destroying and holding in check the parasite that would have kept the noxious tent-caterpillar within bounds. The oriole, or Baltimore oriole we suppose is meant, also known as hang-bird or hanging-bird, is so numerous in many places East as to render it useless to try to grow grapes for market.

7. The cat-bird may possibly eat pear-slugs, but we guess not; at least he would probably be very hungry before accepting so disgusting a grub. The cat-bird is the most injurious bird to the fruit-grower of all in the Mississippi valley, and is of no practical benefit whatever. The robin is about neutral. The wren, bluebird, chickadee, and many other small birds, may be called beneficial only from the reason so far as known they do no harm. Many of the small birds are lively, pretty creatures; they delight us with their sweet music and pretty colors, the great mass of them do us no harm, a very few of them may do us great good, therefore they should be allowed to live. There is exactly enough of them, none too few, none too many; possibly if even the seemingly most innocent species of them should greatly increase in numbers they might prove very noxious. As an instance, the terribly injurious rice bird or bobolink of the south Atlantic coast, where it renders the great industry of rice-growing unprofitable, is known in the north in summer as an innocent, welcome bird. But on its southward immigration in autumn, it attacks the rice-fields in countless millions, and sweeps many fields clean of nearly their entire crop.

8. We hope our readers will not adopt the views of this Eastern editor, but will manfully protect their crops and fruits from all destroyers if possible, be they birds, bugs or beetles or what not. Don't be afraid of destroying the equilibrium of nature by killing a few birds that are eating up your substance, the results of your toil and capital, but use judgment in ac-

cordance with these lessons and be careful what you do kill. Be sure you are right, then go ahead. But take no life unless you know it to be noxious. Kill no innocent birds, lizards, toads, frogs, snakes, hawks, owls, buzzards, nothing, take no life unless you are positive it is worth more to you and the world dead than alive. And give up, now and forever, the false idea that the safety of the world from being destroyed by noxious insects is dependent upon the birds. It is safe to say that if every bird on the face of the earth was destroyed to-day, the world after a brief commotion, or irruption, with perhaps some loss, would move on as well without as with the birds. But this is no excuse for the wanton destruction of birds or any other life. D. B. W.

San Francisco, April 20th.

HORTICULTURE.

The Future of California Citrus Fruits.

[Essay read at the Santa Barbara Convention by DR. O. P. CHUBB of Orange.]

The rapidity with which California citrus fruits have, within the past five years, gained a foothold in Eastern markets has greatly surprised not only Florida growers, but importers from the Mediterranean. That oranges, lemons and limes were produced on this coast had, of course, long been known, but active competition in quantity throughout the States east of the Rockies was neither suspected nor feared.

Florida, however, cannot be materially affected by the increasing importance of our trade, since her output is nearly or quite consumed before ours is sufficiently mature to take its place. The only point of contest at issue between these two sister States in the citrus trade seems to be one of quality and beauty, or, in other words, a matter of "points," concerning which a committee expressed an opinion at New Orleans not long since. The Atlantic cities appreciate fine fruits, and in this respect there is an opening for our growers to meet Florida in her own chosen markets, and before her season closes. The lateness of California's main crop is her strong hold in those cities west of the Atlantic seaboard. This climatic advantage is an important one, and should be well considered in the selection of varieties for planting, since the later the shipments are made the better the prices obtained (at least such has been the case in past seasons) up to the middle of July, when strawberries and other small summer fruits interfere. The great Northwest is, however, capable of absorbing our entire product at remunerative prices, as early, or late, as it is in fair or fit condition to place. The States west of New York and Pennsylvania are depending more and more each year on California for spring shipments of oranges, and the heavier consumption is steadily pushing westward. The people there are all interested in California and her fruit products, and will choose her oranges in preference to Mediterranean fruit of like quality and price.

Varieties.

By intelligent propagation of imported varieties and stocks, aided by peculiar adaptation of climate, soil, and methods of cultivation, our horticulturists have developed new types of flavor, pulp and peel, which Western taste is not slow to recognize and appreciate. The Washington Navel stands to-day the peer of any orange known in the market, and is really the autocrat of the price list. Following this winner of gold medals and golden opinions come the luscious St. Michael, the sprightly Mediterranean Sweet, the handsome and characteristic Valencia, and late and various improved selections from the older orchards of seedlings, not to mention the average seedling, of a quality equal to anything grown on the coast or islands of the Mediterranean.

Hygienic.

All these varieties, as the product of California soil and climate, possess that happy combination of sugar and acid, of flavor and aroma, which not only pleases the palate but corrects the bile of the Eastern consumer as he emerges from the ruins of a supertonic winter into the malarious tendencies of a radical spring warmth mixed with the vagaries of an obstinate liver.

And so he comes to recognize the California orange as not only the proper thing, but as coming in at the proper time, and he proceeds to put it where it will do the most good. It is a new and popular prescription from Nature's California laboratory, and he cries for it daily. The great and growing cities of the Mississippi valley are learning to appreciate and consume increasing quantities of this class of fruits, filling the gap as they do between the ham fat of winter and the chicken broth and fresh vegetables of the heated term in July.

The Markets.

Chicago alone marketed 500 carloads of oranges for us in 1887, but our best markets are coming still nearer the source of supply. Not long will St. Paul, Minneapolis, Sioux City and Omaha, St. Louis and Kansas City, Denver and Pueblo, Salt Lake and Helena depend on New York or even Chicago for their supply of citrus fruits. With additional competing lines of railroad, speed and efficiency become important factors; low rates and prompt delivery are then subjects of vital interest to common carriers of perishable commodities. "From the orchard to the fruit-stand in five days" will constitute the banner of the train, and contracts to deliver at speci-

fied dates may yet solve the problem of shrinkage and fluctuating prices. Bright, clean fruit and systematic handling are only requisite to insure a steady demand and profitable returns for all the oranges and lemons we can grow.

Lemons.

Our lemons do not, as yet, compete as successfully with the foreign product as our oranges have done, but the cause lies, in my opinion, wholly with us in our imperfect methods of curing and handling. I have seen California lemons selling at \$10 a box in the city of Omaha for short periods, but only because the foreign stock was entirely exhausted. Such as were still undecayed were repacked in foreign boxes and sold at the above-named price with no suspicion on the part of the retailers and consumers of the fraud practiced.

During the past winter good prices for our oranges have been steadily maintained, and I have been besieged with personal letters from dealers in Cleveland, Cincinnati, St. Louis, Omaha and other Western cities, asking for shipments, or consignments on commission, and promising returns at from two and a half for fair seedlings to six dollars per box for choice Riverside Washington Navels. But the day is past when fine clean fruit, in good condition, need be risked with commission houses. All that we have to do in placing ourselves upon a permanent basis of prosperity in the citrus fruit trade is to grow good, clean fruit, improve our methods of curing and handling, systematize the transfer and distribution of the crop, and pocket the cash at "free on board" rates.

The Northwestern States and Territories will take care of it all, leaving the Atlantic Coast to be supplied with Mediterranean and Florida stock, excepting when fancy prices for our fancy fruit may warrant a longer haul at a better profit.

Under a perfected system of cold storage and the use of refrigerator cars, such results may be definitely secured as to give us the choice of markets, according to any special demand of the season or locality. This industry is yet in its infancy on this coast, and we may rest assured that the demand for choice fruit at high prices will always remain in advance of the supply.

Apple Culture.

[Essay read at Santa Barbara Convention by O. N. CADWELL, Carpinteria.]

The apple is monarch of fruits for the temperate zone. Much is expected of the apple, and no fruit responds more bountifully for labor bestowed upon its culture. I believe the apple has a bright future even in Southern California. If I were about planting trees for profit, apples would come first, and more of them.

As to varieties, let us see what kinds do the best in our vicinity. Many varieties that do well further north may fail in some respects here. Here the yellow bellflower excels. You may start at the northeast corner of Maine and look carefully all the way to the Pacific, you can find no bellflowers more luscious or beautiful than those grown here. I have seen many of other varieties just as good as need be grown anywhere.

We can select varieties that do well here that will give us apples from July to April. Every owner of a few rods of land for a home should raise at least apples for the family. If your room is limited, do not let the ornamental crowd out the useful. A nice apple tree is very pretty, and none more useful.

Red Astrachan comes first for early, giving fruit every year and a good grower.

Yellow Harvest is of better quality and a little later.

Fall Pippin is a splendid apple for the family.

Yellow bellflower and White Winter Pearmain, with those already mentioned, make up a good variety for home use. More apples and less pork brings more health and pleasure for the children.

For the market there is such a thing as having too many early apples at one time in the season with the rush of other fruits, but as yet we have not been able to supply the market for late-keeping apples; some other place has furnished the apples and taken the money. With proper care and selection of varieties we can raise the apples and keep our money at home.

Planting, Pruning, Etc.

Be sure you have good trees with strong clean roots to begin with.

For a family orchard, trees of three years or more growth can be safely moved and have fruit right along.

For the orchard, good strong trees one year from bud or graft is best. Twenty to twenty-five feet each way is near enough to plant, and often thirty feet or more is better.

Be careful not to set your trees too deep.

As to pruning, I have no arbitrary rules except I want my trees branched near the ground. After planting, cut your trees off 20 inches to 2 feet above the ground. Use your judgment about the number of branches to let grow, but keep the tree well balanced so as not to grow too much one-sided. Cut back enough to keep the branches strong and trust a good deal to nature to make a good tree after getting a start in the way a tree should grow. If you are going to put a two-story top on your tree, do so at once, or as soon as the body will be strong enough to carry it. Cut the branches well back, or the first heavy crop of fruit will either break or bend the branches down all around the body of your beautiful tree.

A low-branched, well-formed tree will hold twice the fruit of the high-branched ones of the same age. After a few years some tire of cultivating the low-branched trees and go to work and prune off all of the lower branches, leaving a tuft of twigs at the top. That tree is a ruin, as there never can be a good head formed after such work. The little that may set on the little top will either bend down or break off. That pruner has been at least twice successful; he can plow up to his tree which is ruined.

Renewing Orchards.

I favor thinning the fruit to cutting back the wood enough to hold it. Give plenty of room, as the best of fruit cannot be grown on crowded trees.

Young trees produce the best fruit, so it will pay to have more planted to take the place of those first planted 16 to 20 years ago.

The old trees have done well. Many of them have been ill-treated, cut and slashed, allowed to break down with their heavy loads, so the apple crop will grow less until young trees can be brought to work.

If we will properly use our experience with our old trees which have served us so well, we can select varieties that will find a paying market, and not have to lie on the ground to rot during the rush of other fruits.

Seedling Apples.

I must say a few words in favor of some of the seedling apples I have grown in this county. The largest, the tastiest, the sweetest, the best, and the most beautiful apples I had were among my seedlings. Unfortunately they come and go with the rush of fruits, so there has not been much account made of them.

Some of the seedlings began to fruit four years from the seed. The seedling apples remind me of the good apples that used to grow in New York State and Michigan.

It has been said we cannot raise good apples. I claim we can, and every year. After some of our visitors from the famed apple-growing country of the East have started in among our apricots and tasted all the way along through pear, peach and nectarine, through the vineyard of luscious varieties of grapes, to the apple orchard, I claim some of them are not in a fit condition to act as judges of the flavor of our apples.

One more reason our apples get a bad reputation, that when most of our visitors and tourists are here our apples are old and have lost their best flavor. Apples have their season and must be tested then, to judge rightly of them.

Notwithstanding the adverse criticism our apples may have, we can raise good ones, plenty of them, and every year. As yet but little has been done that may be done in apple culture in Southern California.

Pruning Citrus Trees.

[Essay read at Santa Barbara Convention by J. W. SALLIE of Pomona.]

In the matter of pruning trees, as in all other matters of horticulture, there are fundamental principles of nature underlying all methods, and the nearer the method corresponds with the fundamental principles the better the method. Then the first thing to learn in pruning any kind of a tree is to know the nature of the growth of the tree, and the second thing to know is the object for which you prune.

The orange tree is a native of a tropical country, with abundant rainfall. The foliage is very dense, thoroughly protecting the body of the tree and ground beneath the branches from the sun's rays; hence the roots grow near the surface of the ground. It is therefore a great wrong to expose the tree trunk or ground around the same to the scorching rays of a noonday sun.

To secure a good stock to begin with, the seedling should be four years old before the bud is inserted. The seedling stock should be well cultivated, irrigated and manured, so the growth is vigorous. No pruning should be done to the seedling stock, for the growth of both top and root depends upon the healthy condition of both, and the more abundant the foliage the better. If it grows scraggy, let it grow.

If a seedling tree is desired, cut the top and branches from the seedling stock the winter after the fourth year's growth; allow but one bud to grow the following season. This will grow six or eight feet high—straight and beautiful. Transplant the following season, i. e., when the root is five years old.

If a budded tree is desired, bud into the best portion of the seedling stock the fall after the fourth year's growth, and cut all the seedling stock away to within six inches of the bud. Allow no other bud to grow save the one inserted, and in one season this will grow five or seven feet high. Transplant when this bud is one year old. Drive a stake by the tree and tie the tree to the stake; that is, if the tree is crooked or too slim to support itself erect. The same instructions for pruning apply to both seedling and budded trees. We have now a beautiful, tall, straight stock to build a tree upon. This straight stock is very important, for without it we cannot make a handsome and symmetrical tree.

If the bud is put into a seedling stock only two or three years old, we will not get a handsome stock to build a tree upon; it will be low and scrubby and is difficult to prune properly. But in any case, observe the following

Rules for Pruning Young Trees:

Allow the branches all to grow unmolested

for three years, at least. Do not pull buds which come from the tree above the union of bud and stock. Below this suckers should be removed. The better way, however, is to wrap paper around the tree from the ground up about eight inches. Do this when the tree is first set in orchard. This prevents the suckers and unnecessary buds from growing, and also protects the tree trunk from the sun and from gophers and rabbits.

If you desire your trees to form a head about three or four feet high—which, however, I do not recommend—you should not pull or break off the young shoots which will grow thick all along the tree trunk from the paper to the top of the young tree, but allow them to grow until the foliage thoroughly protects the body of the tree, say let these branches grow to be about two feet long—then cut off the ends of these low branches, and cut repeatedly as they grow—but at no time cut them away so the body of the tree is exposed to sun. Remember, too, that the more foliage you have on the tree the better will be the growth. If you want to spoil and dwarf your tree, just keep these low branches trimmed off to the height you want the top or head of the tree. Your tree will not grow at all—or but little—for several years, and while your neighbor, who allowed his trees to have their free will in growing, has been getting profits from his orchard, you will still be trying to make your trees grow as nature never intended them to grow.

I much prefer the branches to put out near the ground—say about eight inches above—and from that height to the top of the tree the branches should put out at regular intervals from the trunk. The lowest branches will drop to the ground the first season. They will be the first branches to bear fruit and will bear two or three crops before nature is through with them. These low branches will not grow much after the second or third year, but the growth will be upon branches higher, which, like the first, will droop and overshadow the lower or first branches. This will be about the third year; then is the time to begin the use of the shears.

Cut away such branches from the bottom and inside of the tree-top as nature seems to be through with, and which do not appear to be vigorous, and are useless in affording either fruit or protection to the tree. It will not require an expert to discover which they are. But in no case cut away a vigorous branch just to make the tree look pretty, or to make the top high enough to plow under.

As the tree grows older, these same instructions should be observed. As the tree grows taller and larger, and the towering branches overshadow and dwarf the lower ones, and as these lower ones cease to bear fruit, they may be thinned out. Take a principal branch, for instance, and follow it outward from the trunk, and you will find many small laterals which nature seems trying to choke to death. These are the first members of this principal branch, and in their time bore the fruit and foliage, but now have been superseded by larger and more vigorous ones—and these old ones should now be cut away—but at no time thin the body of foliage so that an open window is left that the sun may shine through upon the inner branches or trunk of the tree.

The tree, when well trimmed, if 10 or 12 years old, should present the appearance of an umbrella. The inside branches and trunk of tree, clean and smooth, with a dense foliage on extremities, and the top should come within three or four feet of the ground. But to let the top at all times rest upon the ground is a better way to secure a large amount of fruit, and then, too, no props are necessary, as each branch touches and rests upon the lower one, and the lowest rests upon the ground.

In this case the ground never becomes foul or hard under the tree. I like this method best. However, the inside trimming should be done as above described.

Never should there be pruning done known as "heading in," unless it is with lemons. This method is sometimes necessary with lemon trees, as they grow much more rapidly and branches longer than orange trees do, and in order to have them grow stronger we sometimes "head them in." The same general instructions apply to lemon trees as to orange trees. Remember at all times to be sparing with the shears.

You are sure to dwarf the young trees by too much pruning. If you expose the trunk of a young citrus tree to the sun, the first thing nature will do is to attempt to cover it again, and as often as you remove this covering you injure the tree. And so likewise when you thin the top of the old tree to excess.

The advantages of low pruning are these:

First, the growth is much more vigorous and healthy.

Second, the tree will bear much earlier and more fruit.

Third, the fruit is much more easily and cheaply gathered.

Fourth, the tree is better balanced and grows straighter.

Fifth, the pruning is more easily and cheaply done.

Sixth, the wind will have less effect on both tree and fruit.

Seventh, the body of the tree is protected from sun and kept free from disease.

Eighth, the ground beneath and around the tree is protected from sun and not so apt to form hardpan in cultivation.

Finally, it is nature's plan, and you cannot depart from it without injury or loss.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Interstate Commerce.

It is stated on the authority of Chairman Cooley that the Interstate Commerce Commission has recommended to the Congressional Committee on Interstate Commerce an amendment to the Act to cover the transcontinental competition of Canadian roads. The principal feature is that no U. S. railroad shall charge more for local freight than their share of rates charged on the Canadian freight they have received. The commission has also made suggestions looking toward the control of express companies, pipe lines, and other forms of special service.

Representative Amos Cummings of New York has introduced two amendments to the Interstate Commerce bill. One provides that all contracts between a railroad and others for freight or passenger traffic shall be public; the second prohibits all such transportation in bond through Canadian territory as now takes place between San Francisco and Eastern cities by way of the Canadian Pacific.

Indorsing the Governor.

At the Grange reunion held last week at Enterprise hall, large delegations being present from Elk Grove, Florin, American River and Sacramento Granges, the following preamble and resolutions were introduced by the County Lecturer and adopted without a dissenting vote:

WHEREAS, Governor B. F. Waterman has, through his letter directing the Warden and Directors of the State Prison, shown that he is opposed to monopolies, and further, that he is the friend of agriculture, by requesting said Warden and Board of Directors to give the preference to orders for grain-sacks coming from farmers; therefore be it

Resolved, That we, the farmers of Sacramento county, assembled at Enterprise hall on this, the 20th day of April, 1888, do indorse the action of Governor Waterman upon this question. We therefore recommend to the farmers that they give their orders for grain-sacks to the State Prison authorities, and thus show by our action that we appreciate his efforts to help us to obtain cheap sacks.

Bait for Gudgeons.

The San Bernardino *Index* exposes another of that class which gains a livelihood from others without returning value received. The individual is named David Corrigan, and the game he works is very smooth, often catching the most cautious citizen. Corrigan is crippled in one of his legs, is a typical tramp in appearance, has a keen eye, and is evidently a good judge of human nature. His is the diamond-ring trick. He will be walking along the road when some one is approaching; he suddenly makes a dive into the dust and picks up something. He blows at it, holds it up to the sun, and scrutinizes it closely until the party or parties reach him. It is a ring. They all take a look at it. It is a gold ring with a diamond setting, apparently worth \$75 or \$100. He doesn't want it. He's a tramp. What will they give for it? To one not properly on it, it might be taken for a sure-enough stone. Nine times out of ten he produces \$10 or \$20 and moves on, believing that he has struck something pretty fine through a measly old tramp. When he discovers his mistake he goes out into his back yard and gets an able-bodied man to exercise his leg-power on him.

When Sheriff Cole saw him at Old Town yesterday he recognized him and concluded to take him in. He held his hands heavenward, and the sheriff went through him. All kinds of traps and calamities were found upon him, together with nearly \$400 in coin and certified checks. Then there were two dozen of the alleged diamond rings, besides a little memorandum-book, which contained an account of his "catches" since 1885. It is itemized in good form, and shows that Corrigan has been roping in suckers all along the coast, and that his earnings were from \$100 to \$400 per month. * * *

It looks as though the oily Mr. Corrigan will have some difficulty in explaining why he should not be sent up for obtaining money under false pretenses.

CONTRA COSTA COUNTY Grange Picnic will be held on the first Saturday in May, place as yet not fixed. Committee will determine during the coming week. It will, no doubt, be at the San Ramon valley.

Grange Work and Progress.

[By Mortimer Whitehead, Lecturer National Grange.]

The pages of the *Congressional Record* must be interesting reading these days to members of the Grange. The measures the Order is advocating, and the letters, memorials and petitions of members of the National, State, County and Subordinate Granges in support of the same, occupy whole pages, and hardly a day passes now but something relating to farmers comes up in Congress.

The fractional silver-certificate bill, which has passed the House by a vote of 177 to 67, was in answer to a call from the organized farmers.

The reduction of postage on seeds, plants, cuttings, etc., from 16 to 4 cents per pound, is now almost sure of success, and united farmers have brought it to the front.

Fractional Currency.

As many farmers and Patrons do not see the official reports of Congress, a few extracts from the *Congressional Record* will give some idea of how the farmers are being heard from.

On the fractional currency bill:

Nelson Dingley, Jr., of Maine:—The large number of letters and memorials from Granges, farmers and residents of rural communities asking for this bill, attest not only to the existence of a wide demand, but also a conviction, wide and deep, that it is the duty of the Government to meet this want. The money-order and postal-note, inconvenient and expensive for small sums, can be obtained only at one out of eight postoffices in the country. I hope this bill will receive the necessary two-thirds vote, so that Congress will give a favorable response to the requests from the farmers and rural communities of this country for a currency which can be conveniently and economically used for transmission through the mails in sums of less than \$1.

William Walter Phelps of New Jersey:—I want to vote for the farmers, the class that need this accommodation. There are plenty to speak a good word for the laborers of cities. Hundreds of organizations look to their rights—Knights of Labor and brotherhoods of every name. But the scattered farmers, the dealers in little villages, have no organizations to help them. I am always glad to aid such. I wish I had often the opportunity, both by my voice and vote. I am not sure that the voice would help, but the vote does, and they shall have it every time. I am glad they get it this time.

Mr. Dargan of South Carolina:—The object of the bill is not to supplant the fractional coin now in existence, but to supplement it. It is demanded by the people living in the country and in small towns, who wish to have the advantage of trading in the great money centers and getting their commodities on the best terms possible. On account of the extraordinary development of our mail system a very large retail trade has sprung up through the mails, and we have no currency suitable for the transaction of this class of business.

Postage on Seeds.

On the bill reducing postage on seeds, plants, etc., Hon. B. A. Enloe, chairman of the committee that had reported the bill, in his remarks said: "I call attention to the accompanying correspondence as evidence of the demands upon Congress. It was voluntarily addressed to me, and is important information. Out of the great mass of correspondence addressed to me on this subject, I will only present communications of State and National organizations." Then follow nearly two pages of official letters respectfully demanding reduced horticultural postage, written by officers of the State Granges of Maryland, Oregon, Indiana, Nebraska, Connecticut, Vermont, Missouri, South Carolina, Texas, Ohio, Rhode Island, Iowa, New Jersey, Massachusetts and Delaware; also from the National Agricultural Wheel, the National Farmers' Alliance, and the Secretary of the United States Postal Improvement Association.

Hon. Charles H. Allen of Lowell, Mass., in his speech supporting the measure said:

There is a large proportion of our people who are interested in one way or another in this matter of cheap postage. As far back as 1873 Congress recognized the wisdom of giving to the farmers of this land reduced postage on agricultural seeds and plants, bulbs and cuttings, and authorized the passage of an Act in that year placing the rate of those articles at one cent for every two ounces. This was further recognized in the Act of June, 1874, and the farmers enjoyed the reduced postage until the legislation of 1875, when the rate was put at one cent an ounce. From that time to this there has been continual discussion over this question

of reduced postage, but owing to the comparatively unorganized condition of the farmers, this remedial legislation has never been effected.

But last year this matter was taken in charge by the National Grange, and in November, by vote, it demanded a reduction.

This action has been followed by the State Granges of Colorado, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia and Wisconsin, at their annual meetings, since the National Grange (28 States).

The State Boards of Agriculture of New Jersey, Pennsylvania, Vermont, New Hampshire, Maine and several other States, together with almost innumerable other State, county and local horticultural and agricultural societies, farmers' clubs, Granges, alliances, etc., have voted in favor of this object, and in so doing they have simply represented the wishes of the great body of the people who make up their vast membership.

I state this, Mr. Speaker, to the House to show that this attempt for reduced postage does not come from the seedsmen, who are not to profit by that reduction, but from the people themselves, who make up in vast numbers the organizations of the character which I have mentioned, and who pay the postage, and these people will see to it that they get the benefit of the reduction.

I do not propose to stand here at this time, sir, to discuss the merits of a bill for the reduction of postage on seeds, bulbs and cuttings from the present rate to four cents per pound, but I trust that a measure of that importance and magnitude will receive, at an early date, a favorable action in this body, and that the House may soon have an opportunity of voting upon it.

Progress.

Eighteen more new Granges—four in New York, three each in Pennsylvania, New Hampshire and Michigan, two in Colorado, and one each in North Carolina, Maine, Ohio and Massachusetts.

The Proceedings of the last meeting of the North Carolina State Grange show a gain in membership above losses of over 1000.

Sebastopol Grange.

With that enthusiasm in social affairs for which the Grangers are proverbial, says the *Santa Rosa Republican*, Sebastopol Grange, P. of H., is arranging for a grand picnic to be held at Morris' Grove, Sebastopol, the 12th of May. All the Patrons in the county and the people generally will be invited. The address of welcome will be by John W. Graeff. E. W. Davis, Overseer of the State Grange, will be the Orator of the day, and S. T. Coulter will also deliver an address. The Sebastopol cornet band and the Sebastopol Grange choir will furnish the music. The literary and musical program will be followed by lunch, and the afternoon will be devoted to dancing. They will have a good time, so let there be a large attendance.

A TEXAS MONOPOLY ENJOINED.—An Austin telegram says that on the 21st instant District Judge Towles rendered a decision in the case of the Attorney-General vs. the Texas Traffic Association. The Court granted a perpetual injunction against the association as prayed for by the Attorney-General. The Court ruled that the association contravenes the Constitution, holding that the articles of association assuming to themselves exclusive control of the entire railway traffic of Texas tended to create a monopoly, and were therefore void and contrary to the State Constitution forbidding monopoly. The Traffic Association, by its attorneys, excepted to the ruling, and gave notice of an appeal to the Supreme Court.

MERCED GRANGE will celebrate the 15th anniversary of its institution on the 5th of May. The 3d of May is in fact the anniversary, but it comes so near our regular Grange day that the Grange decided to celebrate on that day with literary exercises and a feast. All Grangers will be welcome.

BENNETT VALLEY GRANGE is considering the subject of a picnic for the 27th of May. Last Saturday the fourth degree was conferred, and the usual enjoyable harvest feast followed.

THE Granges of Sacramento county have arranged to hold a joint picnic at Beach's Grove on Thursday, May 3d. Prizes will be awarded for the various games and a good time is assured for all who attend.

A Life With a Lesson.

There is an invaluable lesson in the newspaper reports of the effect produced by Conkling's death. No young man, beginning life and hesitating between principle and policy, can afford to neglect it.

Roscoe Conkling was, above all things, a man of principle. He was aggressive and intolerant in asserting what he believed to be right. He never, in the whole course of his life, had any mercy for time-servers or trimmers. He hewed straight to the line he had marked out for himself, without regard to the consequences to himself or others. When he was one of the powers behind the throne, during the reconstruction period, he never for an instant abated one jot of his purpose to secure to the North and to the freedman the full results of the war, though his course caused some Northern merchants to denounce him as impracticable, and Southern ex-Confederates to declare that he was vindictive. He would not listen to any talk of compromise or treaty with those who had betrayed the country. To him certain Democrats were still rebels. When others wavered—when Raymond got up his Philadelphia Convention, and Greeley accepted the Democratic nomination—Conkling stood up all the straighter, like a great requalia, against whose massive trunk weak men might lean, and under whose spreading branches the faint-hearted might gather. It may be said of him that never once in his whole career did he perform an act or speak a word for the purpose of gaining favor or popularity, or, indeed, from any other motive than a conviction that he was right.

Now he is dead, and people are passing sentence on him. With one accord all men speak in his praise. The dispatch which was sent him from the Senate Chamber expressing a hope that he would recover was signed by the very Southern Democrats who had struggled for the destruction of the Union. Of his nine pall-bearers, four are Democrats. In the Republican State Convention of Ohio the memory of the man who had denounced Garfield's administration was so tenderly cherished that one who ventured to criticize him was nearly thrown out of the window. The very men who complained of his domineering behavior, and of his unwillingness to conciliate an enemy with smooth words, are now the first to do honor to his name and to pronounce him the typical American statesman. Whatever they may want in their living leaders, it seems that the quality they admire most in them when they are dead is honest fearlessness. In a political convention, filled with persons to whom the spoils are of more importance than principles, the man who is most "available" may poll the most votes. But when men's eyesight clears, and the film of office is brushed away, the average American chooses for his hero the leader who never flinched and never bartered his sense of right for political honors. *S. F. Call.*

From Tulare.

In a private letter, April 16, Bro. J. W. Mackie writes: Invitations have been sent to Lucerne and Buena Vista Granges to cooperate (in preparation for the State Grange). Lucerne Grange proposes having a picnic in the early part of May, somewhere near Tulare, and then talk up what is best to do. We have accepted the proposal and will select the picnic ground probably next Saturday.

FROM VENTURA.—We lately received a call from Mr. John S. Collins, for a long time Secretary and Past Master of Temescal Grange, the occasion of his return to Oakland being the marriage of his brother Edward, which occurred recently. Mr. Collins is the popular cashier and manager of Wm. Collins & Sons' bank in San Buenaventura. He speaks well of Ventura county and its prospects, and old friends will rejoice to learn that he is still prosperous.

DANVILLE GRANGE had a social on the evening of the 20th inst., which from all accounts was an enjoyable affair. The program was composed of vocal and instrumental music and a drama, which were well rendered by members of the Order. It resulted in adding about \$90 to the Grange funds.

It is with sorrow we report the death of Margaret Roache-Curn, mother of Bro. A. P. Roache. The host of friends who have become acquainted with and learned to honor and respect Bro. Roache and family will sincerely sympathize with them in their affliction.

YUBA CITY GRANGE has resolved to hold its annual picnic at Hock Farm on May 15th.

Do Not Set Gum Trees Around Your Orchard.

EDITORS PRESS:—I have a small orchard that was set out 18 years ago. Most of it has been worthless for three or four years past. The fruit was small and tasted like the bark. The peaches, at least the top limbs of some of them, were dying. Others seemed healthy, but did not bear.

I account for it by the fact that ten years ago I set gum trees on two sides of the orchard. As soon as the gum trees got two years old, the outside rows of fruit trees began to fail. The fourth year I dug those rows up. I thought the rest were far enough from the gum trees to escape damage, as they were 32 feet distant. But alas! every year since, up to the present, they have kept failing, until the three rows nearest the gums are utterly worthless, and the remainder so damaged as to be hardly worth trying to save.

I have dug up three more rows, and dug a hole around the tree from four to five feet across and three to four feet deep. Then wheeled two or three barrow-loads of well-rotted stable manure into each hole (except two into which I put a half-bushel of slacked lime) and filled with earth.

As to those that are not dug up, I carefully removed the earth to the depth of two feet around each tree, put in a couple of buckets of well-rotted manure (except two trees on and around whose roots I put nearly a patent bucket of slacked lime), then filled with earth, to see what the effect will be.

The land where the trees are dug up I have plowed twice since the holes were filled—the first time six inches deep and the second time about eight inches—and pulverized thoroughly each time. I am going to cultivate several times yet, then put a good coat of rotted manure all over the surface, and as soon as the first rains come next fall, plow it under deep.

After that treatment, do you or any of your readers think it will be safe to set young trees next spring?

I am going to cut down the gum trees next August. If that does not kill them, I am going to dig the stumps out.

Have any of your readers had a like experience? If so, they will confer a favor by answering through the PRESS.

SUBSCRIBER.

Brentwood, Cal., April 13, 1888.

SAN DIEGO AT CINCINNATI.—A great exposition, to commemorate the centennial of the Ohio valley and Central States, is to open at Cincinnati July 4th and continue to Oct. 27th—100 week days—under the management of special commissioners appointed by the Cincinnati Chamber of Commerce, the Board of Trade, the Ohio Mechanics' Institute, and honorary commissioners from Ohio, Kentucky, Indiana, Tennessee, Illinois, West Virginia, Pennsylvania, Michigan, Iowa, Missouri and Kansas. A fund of over \$2,000,000 has been subscribed by the people of Ohio, Indiana, Kentucky and West Virginia to guarantee the success of the exposition, and it is expected that, first and last, a million or two of people will attend. The San Diego Chamber of Commerce has appointed a committee, consisting of Frank A. Kimball, William A. King and George W. Hazzard, to arrange for and supervise a county exhibit there and then. Mr. Kimball was made chairman of the Supervising Committee, for the reason that, besides being one of the foremost horticulturists in the county, he will contribute largely to the proposed display of fruits and other products.

BRICKS FROM SLICKENS.—Some one writes the Bee from Wheatland: "A gentleman was here a short time ago investigating the slickens, of which we have an abundant supply in this vicinity, as to its fitness for the manufacture of bricks. Experiments with this substance in the past have resulted in the production of an excellent quality of fire-brick. Should the gentleman's researches be of a satisfactory nature he will probably establish a kiln here and enter extensively into the production of brick. It is said that 'everything is useful, and nothing was made in vain.' If this theory is correct, we can supply the world with brick!"

SHORTHORN AND JERSEY SALE.—On another page there is an advertisement of a sale of Shorthorns and Jerseys by Killip & Co., to which reference is made. The correct date of the sale is May 4th, and the number of Shorthorn cows is 20 instead of 30, and there will be several grade Jersey cows, but not the exact number of 10, as stated in the advertisement. We trust readers will notice these changes and attend the sale.

THE SAN JOSE FLORAL FAIR will be opened on Saturday, April 28th (instead of May 1st), at the solicitation of gentlemen who have arranged an excursion from San Francisco to Santa Clara valley on the earlier day.

M. M. ESTEE has declined the appointment tendered him by the Governor, of Viticultural Commissioner at large, in place of Arpad Haraszthy. He assigns the press of private business as a reason.

AMERICAN PATENTS.—The United States Government granted 21,378 patents during the year 1887.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

BIG DRAINAGE SCHEME.—Livermore Herald, April 19: The owners of the Rose and Black tracts, near Pleasanton, had surveys made last summer for a canal to drain their lands. As there is upward of 2000 acres in the two tracts, nearly 1000 of which are covered with willows, subject to overflow, and therefore unfit for cultivation, it will be readily seen that a drainage ditch would prove a great investment. When properly drained and cleared of willows, there is no better land anywhere than this. The plans which were made by County Surveyor Nusbaumer are for a canal 20 feet wide and about 3½ miles long. The contract for excavating this canal has been let to Geo. C. Stanley of Livermore, who will begin work on Monday next, with a force of men and teams. Numerous small lateral ditches will be cut, and the entire tract thoroughly drained. The owners of the Rose tract let on Tuesday a contract for clearing 400 acres of land of willows, and putting same in condition for cultivation. There were a number of bidders, but the lowest was Geo. C. Stanley. This work will also be completed this summer. The cost of the canal and clearing this land will aggregate fully \$25,000, nearly all of which will be distributed among the laboring men, and find its way at once into the channels of trade.

HEAD OFF THE PASSERINE PESTS.—"Subscriber" in Oakland Enquirer: I notice the sparrows are busy building their nests all over this fair city, which means a large increase in their numbers this year. Now if the good people who are allowing this to be done on their house-eaves, or wherever it may be, knew what a serious thing this will be in the future, they would destroy every nest and keep doing so until the sparrows get tired, and we will get rid of a tremendous nuisance.

Butte.

ORANGE BLOSSOMS.—Biggs Argus, April 19: Notwithstanding Butte county had quite a cold snap last winter, which pinched the leaves off and probably destroyed a few young sprouts of the orange trees, we believe in the main the cold snap was a benefit, as every tree has thrown out new and vigorous shoots, the new leaves are fresh and full of life, and what is still more pleasing to the eye and sense of smell, is the unusual amount of blossoms.

Contra Costa.

GOOD GRAIN.—Martinez Item, April 22: A specimen of growing wheat brought into town yesterday by Mr. Griffin from Dr. Carothers' farm near town, shows a growth of nearly four feet, well headed out. The condition of the grain goes to show that it will fully mature without some unforeseen accident of adverse weather. Mr. Griffin states that there is fully 150 acres of growing grain on the doctor's farm up to the average of the sample shown.

COUNTY ASSOCIATION AND FAIR.—Concord Sun, April 21: On Saturday, 14th inst., at Wiechers' hall, Concord, an organization was effected by the Board of Directors of the Contra Costa Agricultural and Industrial Association, electing R. C. Terry, Pres.; Wm. Craven, V. P.; C. S. Lohse, Treas., and S. Farjeon, Sec. . . . At a meeting of the Board of Directors at the fair grounds yesterday, it was decided to hold this year's fair from Sept. 24th to 29th inclusive.

El Dorado.

STRAWBERRIES.—Placerville Observer, April 17: There was placed on our table last Saturday a box of delicious strawberries raised on the Veerkamp farm at Granite Hill. The berries had been picked nearly two days, and were as plump and rosy as when picked. If we mistake not, these are the first raised in this county. The fact is being yearly demonstrated that El Dorado can and does raise small fruits and berries as early as any county in Northern and Central California.

Fresno.

THE GREAT VINEYARD.—Fresno Republican, April 20: W. C. West, manager of the California Fruit and Wine Land Company, informs us that work on their great vineyard and orchard enterprise is progressing steadily and satisfactorily. The immense estate of this company is located in what is known as the Smith Mountain country, and lies between the '76 canal and the east branch of this water-way. Nearly the whole of 12 sections is irrigable from these canals, and there is not a finer body of land to be found. It all lies within Fresno county, just north of the Tulare county line. About 300 acres were planted this season, a considerable portion in raisin grapes, but partly to oranges, olives, peaches, prunes, apricots, nectarines, and almonds. About 70 men and 100 horses are still employed, and will continue during the summer preparing ground for planting next season. A number of buildings of various dimensions have been completed, and viewed from a distance on the plains, present the appearance of a village.

COLORS HELP.—Rather unexpectedly the 25 colored people ordered by Messrs. Ownby & Williams from South Carolina, arrived in this city yesterday. The laborers were soon cared for, however, and during the afternoon were distributed among the various parties having contracts for them. The gentlemen mentioned have contracts for about 40 more negroes, which

will be sent for the latter part of this week. So far the darkies have given excellent satisfaction.

Humboldt.

A DAIRY ON MAD RIVER.—Eureka Standard, April 19: We learn from S. S. Loveren, owner of the Bay View dairy, on Mad river, that cheese-making will commence there next week. Dick Cleary, who for 14 years was cheese-maker for Steele Bros. of San Luis Obispo county, has charge. This is a guarantee that cheese turned out from there will be second to none made in the State. Mr. Loveren says this has been the most favorable season for farming operations he has ever known in Humboldt county. Our farmers this year have seeded an unusual amount of land and generally have put in varied crops. On his farm, besides the usual beet crop, barley and oats have been sown, and are all looking very fine. The thoroughbred Short-horns at the Bay View dairy never looked better than now. Mr. Loveren breeds for dairy purposes, and in this line his stock is equal to any in our county—he having spared neither expense nor time to secure the best and keep them pure and in good condition. We wish more of our dairymen would take the same pains. It would prove more profitable.

Inyo.

OWENS VALLEY ITEMS.—Independent, April 21: It is estimated that Owens valley will have to import about 150 tons of flour to carry us over till the new crop is ready. Farmers are sowing less wheat every year; they find it more profitable to grow alfalfa and make beef or raise horses. . . . The flock of graded Angora goats belonging to Horace Bellows multiply rapidly. This year the number of kids is not less than 1600. . . . Early this spring Lank & Kehoe got a lot of young fruit trees from R. P. M. Kelley of Reno. They were planted at Independence and quite a number of the young apple trees are now in bloom and will evidently bear fruit this year. All the trees are doing well. . . . Mr. McKnight will come down from Bishop Creek about a week hence to survey the various locations to be irrigated from the Stevens ditch. The ditch is nearly completed, and water will soon be turned into it.

Los Angeles.

CANNERIES.—Orange Tribune, April 21: At the adjourned meeting for the purpose of organizing a fruit canning and preserving company, held at the Water Office on Saturday last, the 14th inst., all present favored the enterprise. Messrs. Joslin, Chubb, Adams, Osburn and Trunnell, the Committee on Plan for Organization, reported as follows: That a stock company be formed with a capital of \$50,000, fully subscribed, and that 30 per cent of the amount shall be assessed the first year. Ten per cent of this shall be cash; the balance of the 30 per cent payable in marketable fruit or cash. Report adopted and committee discharged. Dr. Warner of Garden Grove; James McFadden, Westminster; J. W. Osburn, T. J. Lockhart, Charles Seba, J. B. Adams, Orange; and N. D. Ellis, El Modena, were appointed a committee to canvass for stock and report at an adjourned meeting. . . . The proposition for a cannery at McPherson is meeting with eminent success. Already a large part of the stock is taken. The McPherson Fruit and Canning Co. is organized with a capital of \$50,000, divided into 5000 shares of \$10 each. These 5000 shares represent two classes of stock—common and preferred. One thousand shares are common stock, which is for the purchase of plant; 4000 shares are preferred stock, and this stock is for the running expenses of the company and has this advantage, that it draws out at close of each season the principal and profits—in fact, it enables the producers of fruits, as well as the capitalist, to enjoy all the benefits of the enterprise pro rata for the number of shares owned. Here are buildings, together with rigs for drying part of the fruit that may be desirable, and a large amount will be dried by this company; here also are thousands of sweat-boxes and trays to convey fruit to and from the packing-house. Before any goods will be ready for shipment the S. P. R. R. from Anaheim to Tustin via McPherson will be completed, and the track will run alongside the packing-house. This is a very important and laudable enterprise.

THE ANAHEIM IRRIGATION DISTRICT.—Gazette: As will be seen by reference to our advertising columns, the Board of Supervisors have fixed upon May 4th as the time for the election to determine whether the Anaheim Irrigation District shall be organized under the Wright Irrigation bill. There are five precincts in the district. * * To all who know the topography of the country and the value of water in summer months, the exclusion of the Yorba precinct from the district where in all reason it belongs is a matter of much speculation. Under the law of riparian ownership, water at the Yorba precinct during the summer is abundant, and is also said to be allowed to run to waste, while the fertile valleys to the south are left practically without water. After the Yorba precinct is supplied, the stream is turned into their ditch and allowed to sink in the sands of the river-bed. A protest from the precinct was filed with the Board of Supervisors to be excluded from the Anaheim Irrigation district, and the board has so ordered. The board has included in the new district the precinct of Carlton, which cannot be irrigated with the present system of ditches. It is not now desirable, owing to the above facts, to incorporate under the Wright Irrigation bill.

(Continued on page 380.)

News in Brief.

THE new city of Elsinore proposes to the saloon in its new charter.

GROUND has been broken at San Diego on the Cuyamaca and Eastern railroad.

THE outlook for the salmon business on the Columbia this season is not promising.

GENERAL COOK, the new Major-General, will be placed in charge of the Division of the Missouri.

AMERICAN capitalists have invested \$80,000,000 in railroads in Mexico within the past few years.

SEVERAL lumber-mills at Emigrant Gap, that have been idle for years, will be started up this season.

THE inauguration of Rev. Dr. Stratton as president of Mills college will take place on May 4th.

A \$10,000 BATH HOUSE, with private baths and large swimming-tank, is to be erected at Fresno at once.

NUMBERS of families in the Western Highlands and Scottish Isles will settle in the Canadian Northwest.

CHAMBERLAIN, the Texas wolf-bitten patient who has been treated by Pasteur in Paris, has been discharged as cured.

MR. WILDERMOUTH, living near Campo Seco, Calaveras county, has six fig trees from which he dries 20,000 pounds of figs yearly.

FRESNO people say the newly-arrived colored field laborers do more work than Chinese, do it better, and give better satisfaction all round.

THE San Bernardino Index says: There will be no fruit cannery erected in San Bernardino this year, and perhaps in no other year to come.

CHINESE pheasants have increased so rapidly in some parts of Oregon that the farmers complain of them as a nuisance. They are said to destroy much grain.

THE California Steam Navigation Co. is building a new steamer and three large barges, for carrying grain, etc., between Stockton and San Francisco.

DURING one of the races in San Francisco last week, one of the horses jumped the fence near the finish and killed one of the spectators. Several persons were injured.

AN effort is being made by the New York Working Women's Society to have the factory inspection law amended so as to give women power to act as deputy inspectors.

THE Occidental and Oriental Navigation Co.'s steamer San Pablo while on a voyage from this city to Yokohama went ashore and is a total wreck. Her value was about \$600,000.

HENRY W. CADMAN of San Francisco takes the \$1000 prize offered by the American Sunday-School Union for the best essay on "The Christian Obligations of Labor and Capital."

THE steamship Eurica completed the run from Sandy Hook to Queenstown in six days, four hours and 40 minutes, beating the previous best record, made by the Umbria, by two minutes.

THE A. O. U. W. society of Portland, which has raised \$100,000 to build a temple, will in all probability increase the amount to \$150,000 and build a theater in connection with their temple.

A NUMBER of Grass Valley merchants are considering the advisability of forming a Merchants' Protective Union, an organization that shall put a limit to or entirely abolish the system of giving credit, and shall endeavor to close all stores all day Sundays.

IN the last five years \$60,000,000 worth of diamonds have been taken to England from the African diamond-fields. Since 1871, \$100,000,000 worth, or three and a half tons, have been taken from the Kimberley mine alone.

THE San Francisco resident Consul, Barroilhet, of Chili is prepared to furnish information as to the 800 miles of railroad for the construction of which his Government has lately advertised for bids. It is estimated that the work will cost about \$7,000,000.

NEAR Bodega, Sonoma county, John H. Miller was engaged in mowing hay, and had cautioned the children against running through the clover in front of the mower. Later in the day his three-year-old child playfully attempted to run in front of the machine, when it was caught by a knife and both legs were instantly severed from the body.

THE total shipments forwarded East by the Southern Pacific during March amounted to 43,661,220 pounds. This is a very large total for the month of March, during which East-bound shipments are usually light. It was occasioned by the tremendous shipments of California products made by merchants who were anxious to take advantage of the low rates ruling previous to March 10th.

GENERAL GONZALES, formerly President of the Republic and now Governor of the State of Guanajuato, has taken a bold and decisive step in decreeing the suppression of bull-fighting in that State. He declares that the sport is demoralizing, and is leading people into habits of wastefulness and disorder, and the employment of large sums for constructing bull-rings and maintaining them is entirely improper in the present state of civilization.

DEATH OF A WELL-KNOWN PIONEER.—It is telegraphed from Drain, Douglass county, Oregon, that Jesse Applegate, one of the oldest, foremost and best-known Oregon pioneers, died suddenly April 23d at his home, aged 78 years. He was known throughout Oregon as "The Sage of Youcalla," and did more than one man's share to lay the foundation of this State.



(Original.)

The Sioux Chief's Daughter.

[This little poem has been so much improved (?) by various readers and compilers of recitation-books that it seems to me to be almost senseless as it now reads in the various "One Hundred Choice Selections." As the lines appear with my name tacked to them, it is but natural that I should insist on restoring them to their normal state so far as I can; and if the lines are read or republished, I humbly submit that they ought to be perpetuated as I wrote them.—JOAQUIN MILLER.]

Two gray hawks ride the rising blast;
Dark cloven clouds drive to and fro
By peaks pre-eminent in snow;
A sounding river rushes past;
A lone lodge tops a windy hill;
A tawny maiden, mute and still,
Stands waiting at the river's brink,
As weird and wild as you can think.
A mighty chief is at her feet;
She does not heed him wooing so—
She hears the dark, wild waters flow;
She waits her lover, tall and fleet,
From o'er yon beaming hill of snow.

He comes! The grim chief springs in air—
His brawny arm, his blade is bare;
She turns; she lifts her small, brown hand;
She looks him fairly in the face;
She moves her foot a little pace
And says, with coldness and command,
"There's blood enough in this lorn land."

"But see! a test of strength and skill
In storm-born waters, now I will
Give you, and you. Stand either side!
Stand left and right. Now peer you low
Across the waters wild and wide.
See! dipping, dripping in the stream,
A bough of blood-red berries gleam!
Now this, brave men, shall be the test:
Plunge in the stream, bear knife in teeth
To cut yon bough for bridal wreath.
Plunge in! and he who bears him best,
And brings yon ruddy bough to land
The first, shall have both heart and hand."

Now one throws robes with spiteful air,
And winds red fox-tails in his hair;
But one with face of proud delight
Entwines a plume of snowy white.
And swift each proud, impatient brave
Leaps headlong in the sounding wave.
And now they dive, dive long, and now
They shake the foam from dripping brow.
They near the shore at last; and now
The foam flies spouting from a face
That laughing lifts from out the race.

The race is won, the work is done!
She sees her lover's plume of snow;
She cries aloud, she laughing cries,
And tears are streaming from her eyes:
"I see him clutch the bended bough!
'Tis cleft—he turns! is coming now!"

"Oh come! my white-crowned hero, come!
Come back to me! my lips are dumb,
My hands are helpless with despair;
The hair you kissed, my long, strong hair,
Is reaching to the rushing tide,
That you may reach it when you come."

"How slow he buffets back the wave!
O God, he fails! O Heaven! save
My brave, brave love! He rises! See!
Hold fast, my love! Strike! strike for me!
Strike straight this way! Strike firm and strong!
Hold fast your strength. It is not long—
O God, he sinks! He sinks! Is gone!"

"Great Spirit, what is this I dread?
Why, there is blood! the wave is red!
That wrinkled chief, outstripped in race,
Dives down, and, hiding from my face,
Strikes underneath! . . . He rises now!
Now plucks my hero's ruddy bough,
And lifts aloft his red fox-head,
And signals he has won for me. . . .
Hist, softly! Let him come and see."

"And did I dream, and do I wake?
Or did I wake and now but dream?
And what is this crawls from the stream?
What, you! The red fox at my feet?
Oh, here is some mad, mad mistake!
That blade has blood between your teeth!
What! You have brought your bride a wreath?
You sly red fox, revenge is sweet!"

"Lie still! lie still! till I lean o'er
And clutch your red blade to the shore. . . .
Ha! ha! Take that! and that! and that!
Ha! ha! So! through your coward throat
The full day shines! . . . Two fox-tails float;
And drift and drive far down the stream,
And all life seems some dreadful dream."

"But what is this? What snow-white plume
Climbs up from out the watery tomb,
So weary, wounded, bent and slow?
It is! it is his plume of snow!
His feet are on the land, his hand
In mine, his face is to my face,
And who shall now dispute the race?
My love shall heal his wounded breast,
And in yon tall lodge two shall rest."

A young lady of Atlanta, Ga., Miss Sallie Autman, lately married Samuel Fleming, an old man 50 years of age and blind. Miss Autman is 15 years of age and some one insinuatingly inquires, "Was it for love?" Of course it was. Fleming has wealth and owns several gold mines, and Sallie became deeply attached to them at first sight. She loves them ardently.

At the Art Museum.

John and me, we didn't call late on stayin' so long in Boston, but it was our first visit, an' we staid on an' on, till finally I says to him:

"Johnson Winterbottom," says I, "I'm clean tuckered out with Boston. It's high time we was to home in Pottsville, Vermont. The candles ain't run, the sarsages ain't all made, an' here I be, gaddin' round Boston."

"I think we'd better go this week," says he. It was to the breakfast table, and Cousin Sarah spoke up an' says:

"But you haven't been to the Art Museum yet. If you are going home so soon, hadn't we better go, to-day, to the Museum?"

I felt as if I couldn't see another sight, and said so.

"Oh, but you must go there," she cried. "There is so much to be seen! And it would be a shame for you to go home and say you didn't go to the Museum of Fine Arts. Why, everybody goes there!"

"Is there a show there?" asked John.

"Show?" said Cousin Sarah. "Oh, you mean a play? No, but you will see a great deal of both ancient and modern art."

"What is art?" says I, "or who is he?"

She stared at me as if I had been a great curiosity of some kind—a two-headed woman, or a human-headed calf—centurion, I believe they call 'em.

"Art?" says she, finally, "why, it's—it's pictures, and pottery, and statuary, and—mummies, and things."

"Oh!" says I, an' I confess I was relieved. "I've heerd so much talk about art since I come to Boston, I was wonderin' how many folks really knew what it was, or is. It's mighty easy for some folks to talk about what they don't know nothin' about; and then ag'in it's mighty hard for others to express what they do know. Well, if it's pictures you want me to see, I'll go. I'm a master hand for 'em. But are you sure they are good ones?"

"Good ones!" she exclaimed in a kind of shocked way. "Why, there are no better."

"Because," I went on, "they ain't chromes? They ain't speakin' portraits of martyred presidents in seventeen colors? They ain't high-colored pictures of painfully bloated children pickin' blue roses in yellow grass, or life-like representations of abnormally developed young women walkin' out under old-fashioned parasols? Because, nothin' would tempt me to go if they are."

"Why, Philura!" says she, in very astonished and mortified tones, "why, the greatest artists in the world, past or present, are represented there. It's an extremely fine collection. How can you talk so?"

"Because," I breathed a sigh of relief, "up to Pottsville, Vermont, we have talk of art, too. Several families have works of art (bought of a peddler) in their parlors that I wouldn't want in my pig-pen."

"Not unless you wanted ter stunt the pigs," broke in John.

"And we are allus havin' agents come along with magnificent works of art that he offers—seein' it's me—for fifty, or even twenty-five, cents a dozen. Land! If you know how I'd been pestered with art peddlers I guess you wouldn't blame me for bein' shy of whole museums full of art."

She laughed.

"You're so funny," says she. "You needn't be afraid of that kind of art there. Works of art, indeed!" an' she laughed again.

To tell the truth, I really wanted to go. I hated to go back to Pottsville without havin' seen all the art there was in Boston. For 'long back when I first come, Cousin Sarah had said to me, says she:

"Nobody is anything in Boston unless they own fine pictures and bronze casts."

An' although I couldn't own 'em I'd made up my mind to know something about them. Johnson said it wa'n't necessary, he didn't believe, to understand 'em; for he'd asked Sarah what the bronze image in the front entry was, an' she said she'd forgot; but I said it seemed a pity for us to come to Boston an' stay a hull month an' not know any more about art than we did when we come. So we went.

An' although Pottsville's ideas of art would have kep' me away, I trusted to Cousin Sarah, and we went.

I felt kittish, as we went in under a big arched doorway, an' I didn't know what to say after we got in. It was different from any art I'd seen in Pottsville Four Corners. Some of it was a thousand times better, and some of it a sight worse.

We went first into a room full of broken statues. Some had their arms broke off, an' some their legs. Some of 'em were without heads, an' others were in middlin' good repair. One would have been considerable good-lookin' if she'd had her dress made higher in the neck and hadn't lost her nose.

"These rooms," said Cousin Sarah, "contain antiquities from Greece and Rome. They are very old."

"Land!" says I. "They look it. They show their age plain. One look at 'em is enough to keep me from ever wantin' to be a Grecian or a Roman Catholic, even if I'd no religious principles to keep me straight."

"They show you," she went on, real smilin' an' kind, "what the old sculptors could do—Praxiteles and the rest. It is strange that none of our modern sculptors catch their grace and remarkable truth and sincerity."

"Yes," I says, "they could sculp very well; but I should think somebody would sculp some new noses an' other members, an' glue 'em on to these broken things. I can make a kind of glue, now, that'll stick forever. Squire Stofflebran's folks sent down for the recipe just before we come to Boston."

An' then we found ourselves in a room where there was some mummies. Now, if there was anything in this world I'd allus wanted to see, it was a mummy! An' here they was!

But I should have walked right by 'em if Cousin Sarah hadn't pointed 'em out.

"You mustn't overlook the mummies," she said. "They are in those glass cases."

I went over and took a good look at 'em. They aint handsome. Whatever them old Egyptian kings and queens may have been in their day, they'll never be hung for their beauty now; especially the one with her head smashed in. But as I leaned over the case and viewed the remains, I said to myself:

"Here you be, poor creature, a thousand miles from home, an' more too;" that is, if they're Egyptians an' not American Injuns, which they looks like. "There you was kings an' queens of the realm. Love an' sorrow, happiness an' trouble, joy an' grief, good health an' poor, chickenpox an' measles, all checkered your career just as they do our'n now-a-days. In them old days when Egypt was the hull world, an' the rest of the airth a heathen wilderness, what would you have said if you'd been told that 3000 years hence you'd be layin' under glass cases as curiosities in the most cultured city of the hull world? You wouldn't a-believed it. No, an' I, Philura Winterbottom, what if I, 3000 years from now, should be dug up and carried off, say to the Feejee islands, to take life easy under a glass case?"

The thought was too much for me, an' I wiped my eyes. As I stood with my handkerchief to my eyes, Cousin Sarah spoke up:

"Come, Philura, you look like the chief mourner at a funeral. You're attracting attention, too. Your husband has gone along; let us join him."

I looked round and saw a fellow with specs on laughin' to himself; but says I:

"When folks are laughin' at me, they aint doin' nothin' wuss. An'," says I, lookin' him right in the eye, "I've seen 'em that looked capable of a good many wuss things."

We went on and found John standin' in a crowd up close to a burst, gazin' at it apparently not seein' anything around him. I went up to him and says I:

"John, who be you interested in? Do you want an introduction to that party, or be you already acquainted?"

"Philura," says he, "don't laff. I'm studyin' art—with an eye to business. I'm looking into this thing to see how bursts are made. They say these things are just made out o' clay. Now you know that clay-bed over back of the east lot? I'll bet I could make as good-lookin' a burst as any o' these, an' mebbe a darn sight better. I'm goin' into the burst business another fall, myself, Philura. I can supply all the museums in the United States and still have clay enough left to build a few more. I tell ye, Philura, there's money in it—whe-e-w!"

He stopped, lookin' so wild an' excited, I laid my hand on his arm, an' said:

"Good gracious!"

They are the strongest words I ever use—bein' a member—an' he knows it. I went on:

"If you, Johnson Winterbottom, go to dabblin' in art, you'll 'burst' the farm an' what little we've got in the bank besides. An' as for your moddin' in clay, I'd give more for a model husband, a model father and a model church member than I would for all the men on a burst you could git up—or women either."

An' then we went upstairs into a room full of embroideries an' lace. The embroideries was consid'able faded. Cousin Sarah showed me a single piece of yellow old lace, worth, she said, several thousand dollars. It wasn't no great shakes as I could see, either; although if it had been washed clean, and starched and ironed, it would have looked well enough for every day, though it aint my taste.

Then the pottery! I don't mean pots and kettles, as one not 'versed in art' might naturally suppose, but dishes, and jars, and vases and—well, the land knows what.

Then we found ourselves in the picture-room, and I was indeed glad I come. Such lovely pictures! Cool, green rivers with trees overhangin', natural as life; cattle browsin' on the hill; cows knee-deep in water; bits of the sea in a storm; rocky coasts with the sunset gildin' of 'em; country lanes shaded by green willows; bits of autumn color when the maples git all aflame; a man milkin' after sundown, (John says the artist put the milker on the off side, and any mortal cow would a-kicked him over; but I wouldn't let that trifle disturb my enjoyment of what—at last—I felt was true art!)

The best of all to me was the picture of a young girl standin' under green trees listenin' to the spirit voices. I didn't need that Sarah should tell me it was Joan of Arc. I knew it, an' lookin' at her there, I seemed to understand why she left home, an' led by them same voices, with that same eager, glietenin' look in her eyes, go up and take command of a great army, inspirin' them all with patriotism, even if she come to a scaffold at the end. She had to.

It was some time before I could get away from Joan. And her eyes followed me as we passed on to the next room full of portraits of

George Washington an' lots of other patriots. But it was George that fascinated me.

"To think," I said, to the partner of my joys—an' when he can't dodge 'em, of my troubles—"to think that we are gazin' on the Father of his Country!"

"Oh, pahaw!" says he, "come along. If you didn't know that was George Washington, you'd think it was as humbly an old duffer as there is here."

"Johnson Winterbottom," says I, real severe, "I should think that was a noble face an' full of character, wherever I saw it, whether in the chair of State or on a farm in Pottsville. An' more'n that, I should know him for a gentleman."

Then there was a room full of pictures made with charcoal. John said they looked dauby an' smutty, an' he could make better ones himself; but after lookin' at 'em a little I seemed to see lots in 'em.

There was the moon in one, jest comin' up beyond a clump of hemlocks. I've seen it just so in our back pasture lots of times; an' I listened for the whippoorwill's voice as it sounds sometimes when I'm out after the coveys, John bein' belated with his hayin'.

But instead of the whippoorwill I heard the impatient voice of my John.

"Come on," says he; "what in time do you see in them daubs to look at so long? Come, we shall be late to dinner."

I joined Cousin Sarah, and we started for the door; but we hadn't got half-way down the stairs when I see the worst statue I'd seen yet. It didn't have a rag on.

"For Heaven's sake," I whispered to Cousin Sarah, "look at that."

"Yes," she said, lookin' at it quite bold, "that's the Venus De Medichy; the Venus De Meelo is in the next room. Do you care to see it?"

"See it!" says I. "No; not if she looks like this one. They can't be decent women, whoever they be, or they'd wear something, if it wasn't more than a six-cent calico."

And this was what I meant when I said some of it was wuss than the "works of art" we have in Pottsville 4 Corners. Them wear clothes; I dunno but they have to, to cover up their deformities.—Portland Transcript.

A Match Debate.

A chew of gum came rolling up to a quid of tobacco with a look of disdain wrinkling its pretty little face. The gum was petite, and pink and rosy like the dainty mouth that had been chewing it with all the demure satisfaction that an Alderney or Jersey finds in a similar process. The tobacco was dark, uneven, indifferent and bilious looking, unlike the man who had thrown it away. And the gum said: "You are a low-down, heathenish-looking object; how I do pity you! Your mission is one of destruction. You ruin the breath; you discolor the teeth; you bespatter the whiskers; you contaminate the system with nicotine poison." And it was so deeply impressed with the list of evils that it became for the moment speechless.

"But you need not be making so much ado about it," the tobacco here found a chance to reply, "for reform begins at home. You are one of the social evils. I stay out on the street; but you invade the parlor and drawing-room; you weaken the saliva glands as much as I do. You cause dyspepsia; you overtax the muscles of the jaw, already overworked with talking; you cause strange, weird contortions of the mouth that make frightened husbands think their wives are trying to talk but are speechless; you bring unmeasured trouble to the school-teachers; you—you—"

But the gum obtained the floor again and continued: "You cannot charge any destruction to me, but you commit actual damage. Just think of the stains in the mistress's carpets and the great blotches on the walls and the puddles on the car floors! And when that man spat some juice from you into that boy's eye, how the little fellow squirmed with pain! You are always causing destruction and I am not."

But, a little later, when the chew of gum had somehow got upon a chair and a man sat upon it and then went to get up and the chair followed him, and, no matter how much the man turned around, the chair persistently kept behind him, when the man, thinking some one had tin-canned him, grew desperate, hopped about the floor and upon the counter, broke the show-case in six places, upset the hat-rack on the stove, scattered three boxes of apples over the floor, and jumped through the glass door to the great consternation of a team of horses, the chew of tobacco laughed itself black in the face and expressed willingness to compare items of damages.—C. T. G. in Monterey Democrat.

DOES THE MOON INFLUENCE EARTHQUAKES? Observations on the part of a large number of scientists prove that earthquakes are more frequent at the time of full moon and change of the moon than at other times, and also more frequent when the moon is nearest the earth or when she is on the meridian. The cause to which this fact has been assigned is the action of those forces which produce the tides of the ocean; their similar influence upon the solid land strata leads to their disturbance in the shape of earthquakes.

YOUNG FOLKS' COLUMN.

Trading Babies.

[Written for the RURAL PRESS by C. P. NETTLETON.]

"Harry, Harry, where are you? I want you to take little sister out for an airing this afternoon, and be sure and take good care of her."

"O ma! have I got to? Flossie cries too much and the other boys don't have to."

"Please don't trouble me now, Harry, but run right along like a little man. The 'other boys' may have even worse things to do than roll a baby carriage along."

Harry watched baby while she was being wrapped up, and she looked so sweet he felt it was not so awful, after all, to have to take her out on the street, but he would not for the world have admitted now that he was more willing.

After one or two parting words from his mother he started off, but had been out only a short time when Flossie, who, strangely enough, did not like to be outdoors, changed her mind and did not look as pleasant as when they started. She commenced to get uneasy and pounded the bottom of her carriage with her feet—a sure sign she wanted to go back. They had not been out long, and Harry knew very well it was no use going back home yet, so he tried to amuse her. She was only about a year old and was not readily amused.

Harry could hear some of his companions playing ball a block off and wisely kept out of their way, as he remembered a certain day not so very long before when he had left Flossie on the sidewalk and played ball for awhile, and been punished for it on reaching home.

So he went on with his pretty little charge, when all at once Sammy Banner, a boy Harry liked but did not know very well, came round a corner, and he too was wheeling a baby carriage, with a sweet little baby in it just about the size of Flossie. When the two boys had said "Hello," and stared a little, Sammy said: "Say, let's go along together." And as misery likes company, Harry was of course willing.

"Don't you think babies are mean little things?" said Harry. "I aint going to have any when I grow up, and I'm going to kill 'em all off, like Herod, so we boys won't have to haul 'em round."

"Who was Herod?" replied Sammy. "I never heard of him. Did he kill all the babies he could get?"

"Why, don't you know?" said Harry, in wonder that everybody did not know all he knew. "Herod was a norful wicked old fellow who lived in the Bible, and once when he wanted to kill Jesus he had policemen go round and rake up all the babies, and then he chucked 'em all in the water—or—well, he killed 'em anyway. Just you wait till I'm big, and see what a time there'll be."

Sammy seemed shocked, and said in an awestruck tone:

"You wouldn't want your own sister killed, would you? and there'll be somebody's sister when you grow up."

"Well," said Harry, evidently struck by the argument, but not wanting to let it be seen, "if they don't cry perhaps I won't, but they'd better look out. Does your sister ever cry?"

"No," said Sammy, evidently wishing to make matters sure; "not unless she's got something the matter with her, mamma says. Does yours?"

For little Flossie had been so interested in the other baby and boy that she had stopped fretting and was now looking very pretty.

"Yes," said Harry; "most all the time, and ma makes me take her out every day."

"So does my ma," replied Sammy eagerly; and from that moment the two boys were close friends.

They had walked on some way when Harry, struck by a sudden thought, said:

"Say, I tell you what let's do—trade babies! I'll give you my splendid, beautiful big jack-knife my uncle gave me, 'cause your girl don't cry, and Flossie does a little, and we'll call it square."

"Let's see your knife," replied Sammy, cautiously; and as Harry slowly opened blade after blade, till six blades and a corkscrew stuck out half-way round it, Sammy was plainly dazzled. Still he did not say anything till Harry said:

"Pooh, what you waiting for? Mamma says Flossie weighs 31 pounds, and I know she's a great deal nicer than your baby."

Then Sammy said: "Look here, do you know who you are talking to? I licked Dick Alling the other day, and you'd better look out or you'll get hit."

Harry saw he had made a mistake, and said soothingly:

"Well, Flossie does weigh 31 pounds, but she cries some and yours don't; that's a great deal better. Say, I'll give you this, too, if you'll swap." And he held up a three-cornered piece of glass about three inches long.

Sammy looked at it with a sniff. "Huh! what's that good for?" he said.

"Just you look through it and see," replied Harry, at the same time showing him how to hold it, so that when one tried to look through it objects were out up in odd shapes; It was a piece of an old chandelier, and Harry prized it highly, but he was bound to have that baby that did not cry.

Sammy looked at the knife and glass and

from them to the babies, both of which seemed to be listening with a good deal of interest to the animated discussion, as if they too thought a change would not be a bad idea. Sammy was going to take his time, however, and suddenly said, in a low tone: "Do you think our mammas will know?"

Harry had not thought of that possibility at all and said, in a half contemptuous manner: "No, they won't know; won't care if they do. Say, what's her name?" pointing to the other baby.

"Nina," replied Sammy; and then with the comforting remark that he did not have to take the baby out but once a day and didn't care if Flossie did cry a little, he made a dash at Nina's carriage and lifted her out.

Harry did not wait, but recklessly hauled Flossie out of her seat, and each boy put his baby into the other's carriage.

Having stowed away the helpless little animals, the two boys faced each other to bind the bargain in schoolboy manner.

"What goes up the chimney?" said Harry.

"Smoke," replied Sammy.

"The bargain's done never to be broke," said Harry.

It was now Sammy's turn.

"What are shoes made of?" he said.

"Leather," said Harry.

"The bargain's done forever," replied Sammy, and each boy had no idea that it was not.

After that the boys hardly knew what to do; they had done something unusual, they knew, and all they could think of now seemed too small and worthless.

Finally they separated and went home, but had no idea what a tempest had been started by their innocent "swapping of babies."

It so happened that Mrs. Childs, Harry's mother, had a headache before he came home, and had given orders to the servant-girl that she was not to be disturbed, but to take care of the baby herself. Now, the servant-girl had been in the house but two days, and, not being fond of children, had paid as little attention as possible to Flossie, so, as Flossie and Nina were about the same size, and all babies look pretty nearly alike except to their mothers, she must be excused if she did not notice the change.

But in the other house it was different. On Sammy's arrival Mrs. Banner came out to take her baby out of the carriage. Now Mrs. Banner was a nervous, excitable little woman, so when she bent down to take out her cherished infant and found a strange face staring at her, it is no wonder that she almost fainted. She recovered herself in time, however, and seized Sammy by both shoulders and shook him hard while she said, "What have you done, what have you done? Where is Nina?"

Sammy managed to blurt out, while his mother's shakes cut up the sentence into almost atoms:

"I met—Harry—Childs—and he had—a nice—little baby—and—he want—wanted—to swap ba—babies—and—we did."

Mrs. Banner stopped shaking Harry, and instead of going into hysterics as had seemed likely, she sat down on the step and buried her face in her hands and commenced to shake. Sammy thought she was crying and tried to console her by saying: "But see, mamma; Harry gave me this knife and a piece of glass, and that's real beautiful. Things look real funny through it, and—and you can have it if you really want it."

Then his mother explained to Sammy that she could not possibly consent to the trade, and that he must go with her at once to where the Childs lived and get Nina back. Sammy could hardly believe it, and very excitedly told his mamma that they could not possibly trade back because they had "bound the bargain" in the regular way. She became very stern and went into the house for her bonnet and shawl. But now a serious difficulty arose. Sammy said he did not know where Harry lived! There was but one thing to do, and Mrs. Banner did it at once. She got a directory and looked for the name "Childs." Alas! there were 12 catalogued there.

Sammy now began to take an interest in the matter, and volunteered the information that Harry could not live anywhere except in that part of the city where they lived, because he went to the same school Sammy did. Fortunately there were but two families by the name of Childs living in just that part of the city, and it did not take long to find the first house, which was the right one.

Great was Mrs. Childs' surprise on learning the errand of the strange lady who had insisted on being admitted. She explained why she had not found out the change in babies, and agreed with Mrs. Banner that the boys ought to be taught wisdom in such a manner that they would not forget it.

What the babies thought I cannot say, but the boys, when next they met, decided that it was not such a pleasant thing, after all, to trade babies.

AN EASY PLACE.—A lad once stepped into our office in search of a situation. He was asked: "Are you not now employed?" "Yes, sir." Then why do you wish to change?" "Oh, I want an easier place." We had not a place for him. No one wants a boy or man who is seeking an easy place; yet just here is the difficulty with thousands. They want easy work, and are afraid of earning more than their wages. They have strength enough to be out late at night, to indulge in vices and habits which debilitate them. They all have strength enough to waste on wine or beer, or tobacco, all

of which leave them weaker than before; they have strength enough to run, and leap, and wrestle, but they think they have not the strength to do hard work. Will the boys let me advise them? Go in the hard places; bend your back to the task of showing how much you can do. Make yourself serviceable to your employer, at whatever cost to your personal ease; and if you do this, he will find that he cannot spare you. And when you have learned how to do work, you may be sent to teach others; and so, when the easy places are to be had, they will be yours. Life is toilsome at best to most of us; but the easy places are at the end, not at the beginning of life's course. They are to be won, not accepted; and a man who is bound to have an easy place now may as well understand that the grave is about the only easy place within the reach of lazy people.—*Exchange.*

GOOD HEALTH.

Cancer on the Tongue.

Dr. W. E. Taylor of this city, in his reported remarks at the late Medical Association meeting, said that "the immediate mortality by removal of the tongue for cancer is comparatively small." We presume what was really said was, "removal of the cancer from the tongue." The mortality of such cases is undoubtedly "small," but the favorable results or permanent extirpation of the cancer is much smaller.

In regard to such removals we have before us a very interesting letter from Mr. Phil. R. Smith, of Victoria, British Columbia, addressed to Mrs. Dr. Cook of this city, who writes under date of April 1, 1888, as follows:

"The tongue has not troubled my wife now for the past two weeks; but previous to that time I was somewhat afraid, from occasional pains, of the cancer returning. I am now satisfied with the result and the patient way in which you worked with it. You have done more than I dared to hope for." The letter concludes with many thanks for the successful treatment of this case of cancer on the tongue.

The above case was one which was pronounced unmistakable cancer by several physicians of Victoria. Before submitting herself to the treatment of Mrs. Cook the cancer had been twice removed by the knife, and once burnt out with caustic, but it making its appearance for the fourth time induced her to try some other treatment, as above noted. We once more repeat our honest belief that the use of the knife for the extirpation of cancer is barbarous and ought to be made a subject of legislation. We have given in these columns abundant reason for our belief that cancer can be cured by constitutional treatment without either knife or caustic, and again challenge any rebuttal of the evidence which has been published in these columns. If the Medical Association, which met in this city last week, had appointed a committee to investigate this matter, we believe it would have resulted in more good for the profession and for humanity than all which that body, as such, has done for years. But we suppose that suffering humanity and medical progress will have to stand aside to do reverence to an antiquated and barbarous code of medical ethics which has come down from the dark ages, and which is a bar to any investigation of any medical discovery outside of the profession until public opinion actually forces such discoveries upon their attention and practice, as it has done in numerous instances and eventually will do in this.

Health of the State.

The report of the State Board of Health for March shows a very satisfactory condition of immunity from disease and death. The fatalities from 87 cities and towns with an estimated population of 734,000 were but 1066, or 1.4, per thousand.

Smallpox is rapidly dying out. Fifteen deaths from that disease are reported for the entire State, only four of which occurred in San Francisco.

Reports of sickness from 99 localities indicate a very favorable diminution of diseases throughout the State for the past month. This is especially noticeable in acute diseases of the lungs and inflammatory affections of the bowels.

Diphtheria during the month is reported as having exceeded its former boundaries, and invaded localities where it has not heretofore been prevalent. The general conclusion in regard to this disease, according to the report before us, is, "that it is a specific poison, not depending on defective sewerage or sewer gas, as we find it in localities without sewers, as well as in those well sewered; among the rich as well as among the poor; in cities, and in remotely isolated dwellings. The disease is communicable, and can be carried long distances by infected persons, clothing, and railway cars. It can only be arrested, or at least restricted, by the thorough disinfection of the persons and premises of those in contact with the dread disease. It should, therefore, be legally incumbent on every person to give notice of the disease whenever present on their premises, or in their families. We hope such a law will be enacted in our next Legislature.

The dreaded disease of cancer claimed 17 victims in this city alone during the month.

DOMESTIC ECONOMY.

PLUM PUDDING.—Pick and stone one pound of the best Malaga raisins, which put in a basin with one pound of currants (well washed, dried and picked), a pound and a half of good beef suet (chopped very fine), three-quarters of a pound of white or brown sugar, two ounces of lemon or orange peel, two ounces of citron, six ounces of flour, and a quarter of a pound of breadcrumbs, with a little grated nutmeg. Mix the whole well together, with eight whole eggs and a little milk; have ready a plain or ornamental pudding mold, well butter the interior, pour the above mixture into it, cover a sheet of paper over it, tie a cloth over the mold, put the pudding into a large stewpan containing boiling water, and let boil quite fast for four hours and a half. When done, take out your mold, turn upon a dish, serve with the following sauce: Put the yolks of three eggs in a stewpan with a spoonful of powdered sugar and a gill of milk; mix well together, add a little lemon peel and stir over the fire until it becomes thick (do not allow it to boil), add two glasses of brandy and serve separate, or it may be poured over the pudding and both served together.

CROQUETTES OF RICE.—Wash well half a pound of best Carolina rice, which put into a stewpan with 1½ pints of milk and a quarter of a pound of butter; place it upon the fire, stir until boiling, then place it on a slow fire; cover the stewpan, and let simmer very slowly until quite tender; rub the rind of a lemon upon a lump of sugar weighing a quarter of a pound, then pound the sugar in a mortar very fine; add it to the rice, with the yolks of five eggs (mix well), stir a few minutes longer over the fire until the eggs thicken, but do not let it boil; lay out upon a dish, when cold, form it into a number of small balls or pears, or into long shapes, according to fancy; have three or four eggs in a basin well whisked, dip each piece in singly, and then into a dish of breadcrumbs, smooth them gently with a knife, dip again into the eggs and breadcrumbs, put into a wire basket, which put in a stewpan of very hot lard; fry a nice light-yellow color, drain on a cloth, dress them pyramidically upon a napkin, and serve with powdered sugar sifted over them.

APPLE DUMPLINGS.—Peel and cut out the core with a cutter, cover the apple with paste, tie it in a cloth, and boil according to size. These are all the better for being boiled and kept in the cloth hung up for four or six weeks and rewarmed. They may, likewise, be baked. Boiled puddings containing a large quantity of paste should be made with flour, in which is mixed one teaspoonful of culinary alkali powder to four pounds of flour, which will cause them to be much lighter.

COOKIES.—One cup butter, two cups sugar, four eggs, four cups flour, three tablespoonfuls milk, three teaspoonfuls baking-powder. Rub the flour and butter thoroughly together, cream the butter and sugar, beat the eggs separately, add to the whole nutmeg, cinnamon or any flavoring preferred. Sift in the flour and baking-powder, and make it stiff enough to roll out and cut in any shape desired.

CHICKEN PIE CRUST.—One egg, six tablespoonfuls of melted butter, one cup of sweet milk, two cups of flour, three teaspoonfuls of baking-powder. Cook a chicken and put it, with gravy thickened a little, into a baking-dish. Stir together the above ingredients and spread over the chicken.

RICE PUDDING.—One-half cup of rice, uncooked, two quarts of sweet milk, one-half cup of sugar, a little nutmeg and cinnamon; put in the oven and bake for two hours or more. Do not stir to break the top crust; if you stir at all, lift the crust gently to one side. It is good warm or cold.

EGGS A LA CREME.—Six eggs boiled hard and chopped fine, and stale bread. Put in a dish alternate layers of chopped eggs and grated bread. When the dish is full, pour on one pint of boiling milk seasoned with salt, pepper and one tablespoonful butter. Bake a light brown.

DEMI-PLUM PUDDING.—Prepare the mold, then add a layer of plum pudding, broken in pieces, that has been left from the previous day, alternately, till full; fill up with custard, and steam or bake for three minutes. The remains of any kind of pudding may be used thus.

ICE CREAM CANDY.—Two cups of sugar, half a cup of water. When boiling, add a teaspoon of cream of tartar dissolved in a little water. Boil ten minutes without stirring, then add a small piece of butter and boil till it will harden in water, then flavor and pull.

PORK CAKE.—One pound of fat salt pork chopped fine, 1½ cups of boiling water poured over the pork, two pounds of raisins, currants and citron, two cups of sugar, eight cups of flour, one tablespoonful soda, and cloves and cinnamon to taste.

BUTTERMILK CAKE.—One cup of buttermilk, one large cup of sugar, two-thirds cup of shortening, two eggs and one teaspoonful of soda. Flavor to taste. By putting in mixed spices it makes a good spice cake.

STEWED VEAL.—Lay a knuckle of veal in a saucepan with two blades of mace, an onion, a small whole pepper and some salt, with two quarts of water; cover close and let it simmer for two hours.



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[NEW THIS ISSUE.]

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Windmills—Pacific Manufacturing Co.
New Music—Oliver Ditson & Co., Boston.
Agricultural Implements—Truman, Hooker & Co.
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Combined Harvesters—Daniel Best, San Leandro.
Agricultural Implements—Wm. Deering & Co.
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Cattle—Dunlap & Latimer, Sacramento.
Seeds—G. W. Park, Fannettsburg, Pa.
Nurseryman Wanted—Trumbull & Beebe.
Seeds—Wescott Brothers.
Cattle—Dr. G. M. Dixon, Sacramento.

See Advertising Columns.

The Week.

The drouth gives rise to considerable apprehension concerning the outcome of the season in grain crops. There have been, during the present week, quite considerable showers which have refreshed limited areas both north and south, but the showers were unfortunately only local, and the great valley expanses are not encouraging to look upon just now. It is true that the winds have been active and appearances have portended rain, but there were not clouds enough to go round. The orchardist and vineyardist can do much to conserve the somewhat short supply of water by constant and thorough cultivation, but the grain and grass-growers have only hope left as the guaranty of satisfactory results from their fields. It is to be hoped that we are about through the cycle of moderate winters, and that a good, old-fashioned wet year is not far distant. Haying is now in progress in some parts of the State, and a fair weight is being secured. In others it will take more rain to make a growth worth starting the machines into. The hay-cutting

generally brings rain. It cannot come too soon, from the present appearance of things.

The usually well-moistened North also wants water. A dispatch from Portland says the country is now suffering for rain, and unless it comes speedily crops will be short in some localities, especially in Eastern Oregon and Washington Territory, where considerable wheat was winter-killed and has been resown.

The Government and the Railways.

The telegraph brings notice that the first formal step on the part of the Government against the assisted overland railways has been taken. Following the report of the Pacific Railway Commission and the message of President Cleveland in transmitting it to Congress, the movement is to be now toward recovery of money shown to be due to the Government, providing Congress will agree to an Act authorizing the legal steps on the part of the Government. The first arraignment is to be of the Union Pacific and the Kansas Pacific companies, and the proposed Act directs the Attorney-General to forthwith institute proceedings in the courts of the United States, either in law or equity, to enforce forfeiture, provided for in the law of 1878 and other Acts, and collect the amounts due the United States from the company, its stockholders and officers. He is also directed to bring suit against the Union Pacific and Kansas Pacific, to recover the proceeds of the wrongful issue of stocks and bonds, amounting to \$7,500,000. Included in the action are John B. Alley, Elisha Atkins, Ezra H. Baller and Sidney Dillon, and join as parties defendant Jay Gould, Fred L. Ames, Russell Sage and others. The sum of \$36,000,000, more or less, the proceeds of the sale of bonds, all claims growing out of transactions which may be the subject-matter of a suit, are to be exempted from the statute of limitations.

Such are the parties to the proposed initial action, and such the colossal sums of money to be recovered. Congressman Anderson of Iowa introduces the measure in the House. The introductory clauses of the bill seem to be a condensation of the facts brought to light by the investigations of the Commission, and they are stated as follows:

It appears from the report of the Pacific Railroad Commissioners that the Union Pacific has for years persistently refused to comply with the conditions of the various Acts of Congress relating to it; that the officers and managers have squandered large sums out of the gross revenues in exorbitant and unprofitable enterprises, and have divided immense sums of money among themselves; that the company has, since the passage of the Act of 1873, issued new incumbrances without the consent of Congress, thereby impairing its credit and destroying the value of the United States lien; that it has levied excessive charges upon people tributary to it; that the company has, by its unlawful acts, forfeited its rights, privileges and grants, including its privilege to further time in which to pay its indebtedness to the United States.

Another measure now before Congress, according to the telegraph, seems to be a proposed method of forfeiting delinquent railways to the Government, which is credited to another representative named Anderson of Kansas. The bill is drawn for the purpose of providing a feasible method for operating a Pacific road—after its acquisition by the foreclosure of the Government's mortgage—a method which shall at once yield the United States an assured income on its investment, and also secure the people against the abuses of discrimination, pools, and monopolies. For this purpose it would enact that the Government shall purchase the first mortgage bonds with the surplus in the treasury in protection of its own second mortgage, and after foreclosing the latter operate the road as a public highway, to be kept open to any carrier of freight upon payment of uniform and regulated tolls for the use of its track.

These measures will reopen the whole subject of Pacific railway mismanagement and will give fresh material for political platforms and discussions during the coming campaign.

A FRAUD KILLED.—There is reason for rejoicing in that Commissioner Stockslager has given the Reavis-Peralta land claim its quietus. A more impudent and bare-faced blackmailing job has hardly ever been attempted, and it appears that both the Surveyor-General of Arizona and the General Land-Office at Washington have understood and dealt with it aright.

The Labor Supply.

The Santa Clara Viticultural Society last week discussed the question which is now uppermost in the minds of all fruit-growers, what will be the labor supply available this summer. Concerning encouraged immigration of negroes from the Southern States, there was much difference of opinion. This is natural enough, but it is too soon to say what negro labor will be worth in California. It is possible that they will be found valuable. We shall have to wait for the result of the season at Fresno and other points where considerable numbers will be tried this year.

Some members had found the native Indians of California more valuable than negroes, but even if this should be the general experience, it would avail little, for the supply of Indians is too small to reach far, and only orchards within reasonable distance of the ranoherias can thus be aided. No doubt Indians will be used in fruit harvest this year as far as the supply goes.

All seemed to agree that the number of Chinamen in sight was rapidly decreasing. It was said that they had almost wholly disappeared from the Willows district. We shall soon know how many the labor contractors will be able to gather together.

Concerning the employment of school children in the San Jose district, Mr. Babb said that school authorities are going to dismiss children, in accordance with the desires of a majority of their parents, a few weeks earlier. Last season mothers and children were found picking fruit and enjoying themselves, too. Last year he had two Spanish families having some boys and girls on his farm, and put the children at work and paid two of them just what he paid one man, so that it was a good investment on both sides.

The use of San Francisco children was also considered, and the wise conclusion was reached that this would not be satisfactory unless the parents accompanied the children, and the whole family went to work. This, of course, necessitates arrangements for housing the families, and it is more than likely that the cottage system will ultimately be accepted as the true way for the fruit-grower to equip himself for the summer's work.

Concerning bringing in European or Eastern white laborers, the question turns upon how many can be profitably employed on the fruit farm, or in the neighborhood, during the whole year. At the San Jose meeting, it is reported that Capt. Merithew suggested that a comfortable cottage could be erected for \$250, in which they could remain all winter with their families, and work in summer. It is possible that some families could earn enough from May to November to support themselves the whole year, but very few would be found frugal enough to store up their earnings to sustain themselves during the winter. It seems most likely that with cottages on the large orchards men with families could be installed, the men working the year around, and all the family, including sisters, cousins, and aunts, turn in during the summer months for the picking, packing and drying.

The requirements for labor are increasing. In the San Jose district, Mr. Daggett said he was of opinion that at least one-fourth more would be needed on account of the increased production, partly owing to new acreage which will come into bearing, and it was his opinion, therefore, that workmen would be scarce.

Concerning the importation of negroes, the Chronicle states that a regular organized agency has been established in the South for the purpose of placing colored help in Central and Southern California, and already hundreds of negroes of both sexes have been placed with farmers, business men and private families by this contract system.

F. M. Ownbey of the Missouri Pacific railroad and R. A. Williams of the Memphis & Little Rock road, two of the principals in the scheme, are now in this city perfecting arrangements for establishing headquarters on this coast. Mr. Ownbey gave the following particulars about the scheme:

The fact which led to the colored labor agency whose interest we represent was the reports in the South of the agitation in California against Chinese labor. As the South has tens of thousands of negroes who can barely make a living, we conceived the idea of contracting for

negro help here and shipping them out to take the place of the Chinese. So far the scheme has been successful and satisfactory, as the increasing business of our agency indicates. In securing the negro laborers for this State our agent here enters into an agreement with the person wanting the help to furnish him with able-bodied laborers, male or female, as the case may require, for the period of one year from the date of the arrival of the laborers at the place specified, at the following wages: Male laborers, \$15 a month; female laborers, \$10 a month; boys, \$7.50, and girls \$5 a month. The employers supply the help with suitable food and lodging. The person employing the help deposits in his local bank a sum sufficient to pay the transportation charges of the negroes, and this money is paid to the contracting agency when the help is delivered and found to be as represented. Then between the agency and the colored help an agreement is entered into, by which the former furnishes the employment stated and transportation free on the condition that the latter remain with his employer for the term of one year and reimburse him for the amount expended in his transportation in installments of two-thirds of his monthly wages until the debt is paid. A specification of the contracts is that the treatment of the colored help and the daily hours of labor shall be the same as with the white laborers.

As we have said, there is much of an experimental nature in this undertaking, but it is worth attention, because most certainly we need a good supply of reasonably priced labor in this State to make our great fruit industry profitable.

The Experiment Stations.

Last week Prof. Hilgard visited San Luis Obispo county and selected the land upon which the University Culture Station for that district will be established. The site selected is near to Paso Robles upon land owned by J. V. Webster, who donates the land in trust to the University for experimental purposes. The selection by Prof. Hilgard has been approved by the Board of Regents, and the work of improvement will proceed at once. The necessary cost of buildings, amounting to \$2000, has been donated by enterprising people of the region, and the buildings are to be ready for occupancy by September 1st.

On Monday and Tuesday of this week, Prof. Hilgard was in Tulare examining land offered for the station which is to represent the upper San Joaquin valley. The Tulare people have raised \$3000 for buildings, and like the Amador people, desire rather better buildings than those absolutely required. It was Prof. Hilgard's intention, after making the location at Tulare, to proceed southward and examine the several tenders of land made in Los Angeles, San Bernardino, and San Diego counties.

It is desired to have these locations decided upon by the Board of Regents, and everything put in readiness for planting this fall.

NATIONAL CITY WATER-WORKS.—Last Thursday week—April 19th—was a proud and festive day for National City, which then celebrated the completion of the water-works of the San Diego Land & Town Co. This great system, embracing a reservoir whose area is nearly 700 acres, and more than 60 miles of mains, has been built at a cost of about \$1,000,000. Thousands of invitations had been sent out to prominent persons in all parts of the State, and the public of the whole bay region was bidden to attend, with free transportation; so the city was crowded with visitors. Places of business were decorated in honor of the occasion. There were music, speeches, fruit and flower exhibits, and a grand ball in Horticultural hall closed the proceedings.

A FLORAL FAIR, in furtherance of the beneficent aims of the Woman's Exchange, is to be held in this city two or three weeks hence. The successes of the flower festival which they gave a year ago, and of their chrysanthemum show last November, encourage the lady managers in the hope and confident expectation of making a display that shall at once delight all who look upon it and add to their means of doing good.

FROM CASA DEL MAR, where Professor and Mrs. Lemmon have been busy studying, photographing and painting Torrey's pine—described by him on page 377 of this paper—she writes a pleasant personal letter, delighted with the salubrity of the place and the richness of its flora.

COSTLY CARELESSNESS.—A pair of valuable horses were poisoned in Nevada, by drinking out of a tub into which strychnine had been put to cure hives.

Torrey's Pine.

[Written for the RURAL PRESS by PROF. J. G. LEMMON.]

Scientists the world over and lovers of nature generally will be interested in an investigation now going forward concerning the life-history and habits of the rare and curious Torrey pine—*Pinus Torreyana*—on the coast of Southern California.

A mournful interest attaches to this pine from the fact that there are but few trees of it left, and these in a certain locality limited to a few miles of the sea-coast hills at and on both sides of the beautiful and newly established watering-place of Del Mar, San Diego county, through which town passes the A. & T. R. R. from San Bernardino to San Diego.

The bluff or mesa at Del Mar is high and unbroken for two miles, but about a mile distant, on each side, occur canyons and breaks in the mesa, and on the sides of these cling the few Torrey pines, for the most part gnarled and beaten prostrate by the buffeting winds from the Pacific.

On the sheltered inner side of the hills, and on the spurs of the canyons, however, the trees remain erect, and here are found the largest specimens, a few trees measuring nearly 2 feet in diameter, and elevating their flattened crowns to a height of 30 to 35 feet.

The trees are prolific bearers, the cones of three different years' origin being found abundantly on most of the trees; these, when mature, the second year, are above the medium size, four to five inches long, ovate, with few large, thick scales terminated by short, strong, but not formidable prickles.

The nuts are very large, nearly an inch long, but slightly flattened, brown, with a narrow, thickened, black wing. The shells are thick and hard, requiring a smart blow with a hammer to fracture them. The seeds are very oily and delicious to the taste.

The pollen-bearing or male flowers are terete very large, 2 to 2½ inches long and three-eighths of an inch in diameter.

The leaves are in fascicles of fives: very large and strong—the strongest pine leaves known—and are 6 to 12 inches long.

In many respects this species of pine stands alone among California conifers. No other species is found within 50 miles of it; none other survives such buffetings by the sea winds, and no other bears such large flowers, hard nuts and such strong leaves.

The trees are comparatively rapid growers, individuals two feet in diameter being often not more than 40 or 50 years old.

In a few localities young trees of all ages are found, but always less in number than the older trees, from which it is inferred that the species is slowly succumbing to its environment, and must, if not protected, soon become extinct.



SCENE IN AN OLD ORCHARD IN BUTTE COUNTY.

As the visitor for the first time views this curious pine, he is struck by the persistence of its character, and the suggestion at once occurs that this is the species of pine from which most might be expected by planting it along the now deforested coast hills of California.

Seeds will be sent for propagation to the Forestry Experimental Station at Santa Monica, and no doubt in a few years trees from there may be had for trial on proper application.

Orchard Thirty Years Old.

The fruit industry is comparatively such a young one in California that special interest attaches to the orchards planted by the pioneers. The engraving that we give is of an orchard 30 years old, which stands in the Rio Bonito colony, which has been recently established in Butte county. We are indebted to Preble & Young for the views. The tract is a part of the famous Fernandez Grant, and comprises the Henshaw ranch and the Biggs ranch, containing 2600 acres in all. It lies about 20 feet above the water level of the Feather river through the dry season. On the

west is the low Coast Range, covered with trees, shrubbery and grasses to the summit. On the East are seen the Sierras, with crowns of perpetual snow.

SHORTHORNS FOR JAPAN.—Mr. Robt. Ashburner of Baden Farm shipped ten head of choice young graded Shorthorn dairy cows to Yokohama on the steamer Gaelic last Monday. They are for a dairyman established in Yokohama, who has had all his cows for the last six years sent to him by Mr. A., so that we may reasonably presume that the several shipments made during that time have been satisfactory to both buyer and seller.

A TIMELY HINT.—The San Andreas *Citizen* remarks that it now behooves the fruit-raisers to be watchful of late frosts. Every one should have material at hand to raise a smoke in the orchard if there is any indication of frost. A little time and a few cents of cost may be the saving of hundreds of dollars worth of fruit.

A SWEDISH COLONY has been established at the old Mallagh place, about four miles from Creston and seven miles from Paso Robles. The San Luis Obispo *Republic* says that a town-

site of 60 acres has been laid out and 20-acre farms in long strips after the manner of the small farms in Europe, with the farmers all dwelling in the village. The proceeds of the sales are remitted to Fatherland to aid others in coming to live on the pleasant Huer-Huero.

Scene in Wood Lawn, Shasta County.

The illustration of a scene in Wood Lawn is taken from a spot that is to be donated as a public park in this beautiful section. Wood Lawn is located a mile and a half from the center of Redding, and is in the famous Piedmont region in Shasta county, of which it has been said:

"Many of the landscapes are little short of enchantment. Eroded by a thousand streams and tumbled into every conceivable shape, there is among these billowy hills nothing wanting that the exacting lover of nature could desire. There are here stretches of stately forests, and clumps of trees and scattered groves with delicate shrubbery and clouds of wild vines along the water-courses. There are walks and alamedas with generous sweep, but not too prim or over-symmetrical. There are sunny lawns and irregular glades opening far into the woodlands, all of which man may well enjoy though he cannot imitate."

The engraving is made direct from a photograph, and accurately represents some features of our California woodland scenery.

THE WILLAMETTE VALLEY HORSE-BREEDERS' ASSOCIATION was organized at Salem, Oregon, April 14th. Its object is to encourage the better breeding of horses in Oregon. The charter members are G. G. Glenn, W. L. Townsend, David Grierson, Smith Lucas, A. L. Hodson, J. A. Tanner, G. A. Higgins, J. Francis, E. J. Frazier, Henry Fletcher, D. L. Hall, J. T. Beckwith, W. W. Baker, R. A. Wright and A. W. Carey. E. J. Frazier, Salem, Ogn., is secretary.

A ROSERY PLANNED.—We learn from the *Sun* that Brooks & Fiesch have secured from the San Diego Land & Town Co. a tract of 10½ acres, lying on the line of the motor road about two miles from National City, which land they intend to use as a general nursery, with the cultivation of roses as the dominant specialty.

POMONA'S FLOWERS.—The annual flower fair at Pomona, for the benefit of the Public Library will begin May 1.



SCENE IN WOOD LAWN, SHASTA COUNTY.

AGRICULTURAL SCIENCE

Agricultural Work by the Geological Survey.

As there is now pending before Congress a proposition to enable the U. S. Geological Survey to carry on the agricultural work provided for by law, and as Congressman Morrow of California is giving especial attention to the measure, it seems pertinent to allude to the matter at some length.

The movement was brought formally forward by the adoption of the following resolutions by the California State Grange, at the meeting of October, 1887:

WHEREAS, Agriculture lies at the very foundation of our national prosperity, and is justly entitled to an ample share of the fostering care of the General Government; and

Whereas, In the opinion of this body it is of the highest importance that accurate and reliable information concerning the agricultural features and peculiarities of the country, and particularly of the newer States and Territories yet to be settled, should be within the reach of the intending settler and immigrant; and

Whereas, The law creating the Geological Survey of the public domain of the United States provides for "the classification of the public lands and examination of the geological structure, mineral resources and mineral products of the National domain," but in the actual execution of the work the first provision has thus far remained a dead letter, so far as any of the information needed by agriculturists is concerned, while the most elaborate and minute investigation of even the most remote matters relating to the geological structure and mineral resources have received abundant attention; therefore be it

Resolved, That the State Grange earnestly prays the Honorable the Senate and House of Representatives, that steps be taken and provision made to the end that the Geological Survey shall discharge the first duty intrusted to it by law, to wit: "The classification of the public lands;" together with such other service to the agricultural development of the country as properly belongs to that effort.

Resolved, That copies hereof be transmitted to the Honorable Representatives of California in Congress, and that their approval and support of such measures as are needed to attain the result be most earnestly solicited.

In order that the matter may be fully understood, we publish below an essay on this subject by Prof. E. W. Hilgard, Director of the University Agricultural Experiment Stations, which was read at a convention of representatives of agricultural colleges and experiment stations which was held in Washington, D. C., October 18 to 20, 1887. We publish the essay because the official report of the convention has not yet appeared, and because in order to secure action at the present session of Congress, it is necessary that the subject should be brought forward prominently at once.

It is important to state that Prof. Powell, Director of the Geological Survey, heartily approves the measure to extend the work of the survey in the manner proposed:

Essay by Prof. Hilgard.

As, owing to the pressure of official duties at this season, I am unable to attend the meeting of agricultural chemists connected with experiment stations, I beg leave to submit in writing, for its consideration, a brief discussion of some points which, to the majority of those likely to be present, may not suggest themselves as forcibly as in the case of those who, like myself, have labored, and are now laboring, chiefly in regions in which, from whatever causes, agriculture is still passing through its first period of development. When it is considered that such regions comprise nearly all the United States lying west of the Mississippi river, the only material exceptions being the older settled portions of Missouri and Iowa, and parts of adjacent States, it is not easy to overestimate the importance, not only to that immense territory, but to the United States at large, of avoiding the mistakes made by the settlers in the older States; of placing within the reach of the actual or intending settler or immigrant, a knowledge of the facts and conditions with which he has to deal in his practice, and of the best means to be employed in overcoming the numerous difficulties with which he has to contend in a *terra incognita*.

It has been broadly claimed, and even somewhat dogmatically contended in the course of some of the discussions on the subject of the proper functions of the experiment stations, that their main duty and object should be to enlarge the knowledge of agricultural science, and that to act as bureaus of reference and information for the farming population is a departure from their true spirit and intent. I think we cannot be too emphatic in the repudiation of any such point of view, and it must be patent to all who have followed the discussions relating to the bills for the establishment of experiment stations, whether by the States or the National Government, that a totally different view of their functions was taken by their advocates, and that on any other basis than that of effectually aiding in the solution of practical questions as they arise, no such measures would have had the least chance of acceptance by the several legislative bodies. It is not, however, merely as a matter of good faith with legislatures and taxpayers that such a course is advisable and necessary. I contend, and am most thoroughly satisfied from a somewhat protracted experience in such work, that in no other way can we obtain such fruitful subjects of investigation in the domain of agricultural science, or be assured that what we hold to be true does not need a host of corroborations and provisions in order to render it applicable to all cases. It is the endless multiplicity and variety of the problems pre-

sented for solution by the practical farmer that serves as the touchstone of our theories, and by continual attrition, now at this point, now at another, modifies our conceptions into a shape in which we may feel sure of their correctness. In the presence of the multitude of suggestions and "live" problems thus continually presented to us in the newly-settled regions, the laborious search for proper subjects for investigation, that sometimes troubles our colleagues in the Old World, becomes an unknown quantity, the only danger being that the pressure of details may be so great as to drown, to a certain extent, the proper pursuit of a subject until it shall have been evolved into a definite form or proposition. The occurrence of such aggravations lies, doubtless, within the experience of many here present. It can, of course, be remedied only by a more adequate supply of means, such as is, or will be, afforded by the "Hatch Bill" when fully carried into effect.

It should then in my view be distinctly understood that the experiment stations so endowed must perform the double function of a bureau of reference and information, and of a laboratory (in the widest sense of the term) where those points in agricultural science most directly interesting to the region for which it is established, are investigated to their uttermost ramifications, theoretical and practical.

But in order that these functions may be fulfilled to the best advantage, the institution should not be obliged to await the tardy and irregular action of applicants for information. It should have the means for getting possession of the actual facts of the case in advance of the settler, or at least of the time when the farmer, by irrational practice, shall have gotten himself into difficulties which the station will be called upon to solve for him. The attainment of such knowledge involves, of course, the operations and results of an agricultural survey; and where such work has been done by the State (as is the case in the majority of those lying East of the Mississippi river), the work of the experiment stations will be greatly facilitated, although it is unfortunately true that in but too many cases the "Geological and Agricultural" Surveys, provided for by law, have rested content with the fulfillment of the first-mentioned attribute, and have left agriculture to shift for itself as best it could. Even where an attempt has been made to describe and investigate the agricultural features, it has too often been done in such a manner as to indicate, on the part of the director or writer, either a very slim acquaintance with the matter, or an unwillingness to give to so distasteful a subject more thought and attention than was absolutely required by the letter of the law.

But for the newer States and Territories, where it is now most urgently needed, no such work has been done, and none is at present in prospect. It is true that the law creating the United States Geological Survey provides for "the classification of the public lands, and examination of the geological structure, mineral resources and products of the national domain;" and the first report of the director of that work (1880) states that in his opinion "the intention of Congress was to begin a rigid scientific classification of the lands of the national domain . . . for the general information of the people of the country, and to produce a series of land maps which should show all those features upon which intelligent agriculturists, miners, engineers and timbermen might hereafter base their operations. . . . And to this end a careful beginning has been made." It is curious to note that both in the wording of the law and in the remarks of the director (Mr. Clarence King), the agricultural side of the work is mentioned first, and to compare therewith the actual performance of the survey during the last six years. It has done excellent work in the way of the much-needed topographical maps; it has laid down on these the geological and mineral features of the regions explored with a degree of accuracy and minuteness which has commanded the admiration of the civilized world and has aided powerfully in the development of the mining industries of the United States. But when we inquire what has been done to benefit the agricultural industry, to give to the farmer or immigrant the needed information so copiously afforded the miner, we quickly come to the conclusion that the agricultural side of the work has been left exactly in the state of "careful beginning" referred to by Director King in 1880.

It is no part of my object to discuss in detail the causes of this pointed omission. It may be said in general that in doing as it did, the United States Survey followed the lead of the majority of State surveys; that its work was done in the direction in which there was the greatest active demand, so that while farmers got nothing it is also true that they asked for nothing.

The Land Office has, through its surveyors, actually collected more or less of the information wanted concerning the agricultural adaptations of the lands traversed by them. But this information is of so very general a character, and collected by men so little versed in the subject, that even if it were published in an available form it would be of little avail toward replacing agricultural surveys. The maps and pigeon-holes of the Land Office are not what is wanted either by the farmer or the experiment stations.

It has been suggested that this work be undertaken by the Department of Agriculture. But this would be a revival of the undesirable multiplicity and duplication of public surveys that was done away with by the special Act of

Congress consolidating all under one head. The topographical and geological work now so well carried out by the geological survey is absolutely essential to an intelligent discussion and description of the agricultural features. All the machinery is there, and it only needs an additional endowment and the employment of competent agricultural experts to do all that is necessary in the premises. Were the agricultural work undertaken *de novo*, endless and unnecessary expense would be incurred in the duplication both of work and of appliances. The functions of the Department of Agriculture and those of such a survey are so clearly distinct that it is difficult to see how any conflicts could arise, as has been feared.

But whatever may be the machinery to be provided, or the department of Government under which this work shall be carried on, it is essential that it should be inaugurated and carried forward as quickly as possible. It is needed by the resident farmer, in order to guide him in his methods of cultivation. It is needed by the immigrant, in order to give him reliable information as to where he may find a home adapted to his wants, outside of the recommendations of interested parties. It is needed by the experiment stations, in order that they may have a basis of well-ascertained facts upon which to conduct their experiments and investigations so as to result in the greatest good to the greatest number, and so as to avoid the most serious mistakes resulting from imperfect reports from persons unused to accurate observation. Last, but not least, such work forms a most needful basis for truly practical instruction in our agricultural colleges: instruction which shall tell the student not only what he shall do in certain supposititious cases, but also what, in fact and in practice, are the conditions each will have to deal with in his own State.

Without such a basis of accurately observed facts, the experiment stations will never be able to do their best work, from unavoidable ignorance of the conditions under which agriculture exists in their respective fields of action. It is impossible for them to obtain this basis through their own exertions, within any reasonable limits of time. It should be done for them, and for the agricultural population at large, as a Government work.

ENTOMOLOGICAL.

The Vine-Hopper Trap Again.

EDITORS PRESS:—To my treatise on "How to Destroy the California Grapevine Hopper," which was published in your issue of April 21st, I am making a few additions—the results of later work—which may be of interest and benefit to your readers. Since writing on the subject much work has been done, out of which has grown a few improvements.

1. The trap as detailed before should have a heavy cloth stretched over and fastened to the lower portion of the gauze which may be sewed to the lower rim of the hemisphere in such a manner as to turn upward toward the center when closed. This being well saturated with kerosene will catch many hoppers which would otherwise fall from the gauze and roll out when the two parts come together.

2. The best solution to apply to the gauze is a mixture of kerosene with a small portion of crude petroleum.

3. When the trap is closed over the vine it should be held there a moment after the vine is disturbed, as it is found that if operating long without rubbing on fresh kerosene the insects may sometimes take a second jump, which would liberate them if the trap was opened at once.

Another and Better Form of Trap.

The following described appliance is the best found yet and is most commonly used at the time of this writing, though somewhat more expensive than the one previously described:

Frame two semi cylinders, using for this purpose band-iron one-eighth inch thick and one-half inch wide, which should be joined with rivets at the corners.

These parts should be hinged together with small butts which may be riveted to the frame, such, that when covered with green gauze it may be opened and closed over the vine.

This trap needs no top, but should be provided with a bottom of either heavy cloth, or what is better still, two semi-circular tin pans about 1½ inches deep, and so formed that in coming together to form the circle, a space is left for the stump of the vine and stake, say eight inches long and three inches wide.

A cloth or sponge should project from the edges of the hole to close completely about the vine when in use.

For vineyards under 10 years old, and some even older, 18 inches is a sufficient diameter for the cylinder, which should be about 2½ feet high so as to accommodate long-pruned varieties.

The last dimensions may, however, be modified to accommodate the shape of particular vines.

A portion of the upper part of the frame left free will serve as handles; or these may be added, if desired, in which case they should be attached near the upper center of each semi-cylinder.

In my desire to render this remedy available,

for the present season, I have given to the public the results of the first efforts, without delaying to perfect apparatus as we are able to do by longer experience.

The additions suggested here make the appliances more complete, and more may yet be added later on, though I apprehend that little improvement can be made to the trap last described, which is at present in general use.

J. H. WHEELER,

Chief Executive Vit. Officer.

San Francisco, April 25th.

Cases for Entomological Specimens.

Mr. Chas. F. McGlashan of Truckee possesses probably the best entomological collection on the Pacific Coast, and certainly the best arranged one. The collection is especially rich in butterflies, as he has spent many years in gathering the different genera and species. Aside from his own collection, Mr. McGlashan supplies those found on this coast to Eastern and European collectors. His system of preserving and exhibiting specimens is novel and very effective. The specimens are so arranged that the lower as well as upper side may be observed and studied, and the method of mounting is such as to prevent the attack of any parasitic insects.

Mr. McGlashan has recently patented, through the MINING AND SCIENTIFIC PRESS Patent Agency, his peculiar system of preserving and exhibiting entomological specimens. The case is made wholly of glass, preferably in the form of a six-sided box. It is made in sections, each side being a separate piece—that is to say, the top is one piece of glass, its bottom another piece of glass, and each of its sides one piece of glass. The meeting edges of each piece are beveled or chamfered to an angle to suit the particular case, and these joints are thoroughly cemented together, so that the sections of the case become practically a single piece, forming a hollow shell or casing which is permanently and hermetically sealed.

Before finally sealing the sections of the case the specimen is placed in position in the following manner: To the inner surface of the bottom section is firmly cemented a small piece or standard of soft wood or cork, and on top of this a small sheet of absorbent material, such as unsized or blotting paper. The impaling pin is then passed through the body of the specimen and through the blotting paper, its point being inserted into the cork, so that the specimen is thus supported in approximately the horizontal central plane of the case and may be observed from all sides.

The piece of cork or soft wood which serves as a standard differs from ordinary things of the kind, in that, before being placed in position, it is treated with a suitable insecticide—such as creosote, carbolic acid, cyanide of potassium, chloroform, etc.; and the piece of absorbent paper is treated in the same way. The piece of paper, in addition to its object of giving forth a vapor destructive to parasites upon the specimen, serves also to steady the impaling pin in the cork standard, and further, the medicated cork and piece of paper will prevent the injurious attacks of those parasites that may drop from the specimen upon the bottom of the case.

The main feature of the invention is the mode of preserving the specimens, which consists in mounting them within an all-glass case permanently and hermetically sealed. Each specimen is excluded from the air for good. No harm can come to them, as would be the case if doors were provided to afford access as in an ordinary show-case or where the joints are made simply with paper pasted over them, for in both instances the air, dust and dampness find access to the interior and soon spoil the specimen.

The specimen may be inspected from all sides and above and below. The construction of the case is of the simplest character, requiring no ledges, dovetails, grooves or clamps to hold the sections together, but simply requiring the edges to be mitered or beveled to other suitable angles and all held together as one piece by means of a proper cement. Hermetically sealing the case prevents destroying insects from getting in. The label or description of the specimen, its history, and any matter of interest connected therewith, may be firmly cemented to the inner surface of the glass.

Australian Parasites of the *Ioerya*.

EDITORS PRESS:—It may interest you and your readers to learn that I have recently received from Australia about a dozen specimens of a species of *Calostoma*, a scale insect closely related to our *Ioerya*, and that several of them were parasitized by small, two-winged flies. About 50 of these flies had issued in transit, and all but one of them were dead when received; already ten others have issued from the parasitized *Calostomas* since their arrival here, and are now confined with several *Ioerya* on a branch of an orange tree. It is to be hoped that this venture will prove successful, and that these parasites will multiply to such a degree that the dreaded *Ioerya* will become a thing of the past in California. The sender, Mr. Crawford, writes me that the *Ioerya* are very scarce in his locality, and that several colonies of them which he had started upon some orange trees in his garden had been completely exterminated by these parasitic flies.

Los Angeles.

D. W. COQUILLETT.

PALM VALLEY! THE LOUISIANA TRACT!

TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land? DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10 acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

BRIGGS, FERGUSON & CO., General Agents,

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Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

California Bone Meal and Fertilizer Co.,

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FOR SALE OR EXCHANGE.

Ranch of 200 acres on Coquille River, Coos County, Oregon; 40 acres bench land 160 acres bottom, 80 acres under cultivation; 1 1/2 miles from Coquille City, one-half mile from steamer landing. An abundance of fine spring water on place. Price, \$1500 cash, or will exchange for California property in vicinity of San Francisco Bay. For further particulars apply to
H. GOETZ,
659 Clay St., San Francisco, Cal.

LAND & WATER FREE!
800 Acres Rich, Level Land.

To some one who will summer fallow and cultivate well, will be furnished free water and use of 160 acres of good land (S. E. Sec. 13, T. 21, R. 23) within 9 miles of Tulare, S. W. Forty acres formerly plowed. Land on all sides cultivated and pastured. Water for irrigation (if needed) free. Also (without water) 640 acres (Section 13, T. 23, R. 24), four miles westerly of Tipton and S. P. R. R., all in Tulare County and the Artesian belt. For particulars call on E. M. DEWEY, 7 miles S. W. of Tulare, or A. T. DEWEY, 220 Market St., San Francisco.

GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

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GREAT ARTESIAN BELT,
KERN COUNTY.

This tract comprises 2640 acres, all level land and ready for the plow.
In this colony is the

Greatest Artesian Well in the World,

And a perpetual water-right goes with the land bought. Tracts of 20 acres will be sold for \$500—only one-third cash; balance, one-third in two years, and one-third in three years, with ordinary interest.

Apply at once for best selection to

C. H. STREET & CO.,

Successors to Immigration Association of California,

415 Montgomery St., San Francisco.

City of Sacramento,

With a Population of 30,000, and

1/4 MILE from Terminus of an ELECTRIC RAILWAY, now in course of construction.

SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. 5 ACRES IN FRUIT, well attended to, will make a handsome income. One Acre in Strawberries will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$80, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

—APPLY TO—

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SACRAMENTO, CAL.

Catalogue of Lands issued monthly. Send for one.

SANTA YNEZ,

Santa Barbara County, California.

THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil.

TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for lonely or quickly paying investments, cannot do better than purchase here. For further information refer to

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CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

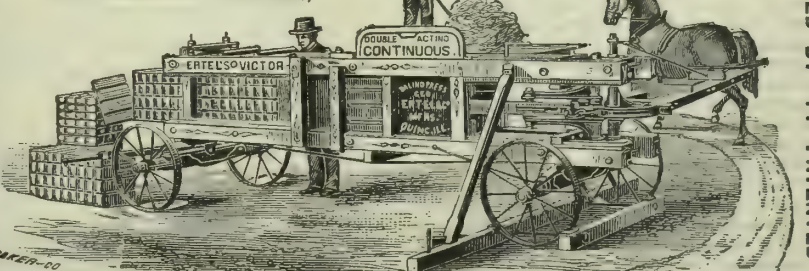
ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

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AUTOMATIC FOLDER,



Double-Acting Perpetual Hay and Straw Press.

A Machine imitated but not equalled. Baling Hay or Straw faster, more compact, easier, more economically (to load 10 to 15 tons to the Car) than is done with any other so warranted or no sale. Circulars mailed free address, Geo. Ertel & Co., Quincy, Ill.

N. B.—The above Victor Baling Machine, making 16x22 size of variable length bales, is warranted to bale from 12 to 20 tons of Hay per day; loading from 10 to 15 tons to the railroad box car. Price low and satisfaction guaranteed. Represented and sold this season by Messrs. THAYER & PETERS, San Bernardino; N. MATHEWS, Los Angeles; BAKER & HAMILTON, San Francisco; and by GEO. ERTEL, the manufacturer, at Livermore, Cal.

Self-Playing Organ.

An Automatic Organ Combined with an Ordinary Five Octave Organ.

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Strictly First Class!

Board by the day, week or month. Rooms may be engaged by telegraph or letter.

R. DIEFENDORF, Proprietor.

Agricultural Notes.

(Continued from page 373.)

Napa.

A MOUNTAIN RANCH.—St. Helena Star: C. J. Beerstecher's place is situated about three miles south of Rutherford. He has two large cellars, containing some 18,000 gallons of the choicest wines. He informs us that he has a direct market in San Francisco, and gets as high as 65 cents for some of it. His residence commands a beautiful view of the valley below. After partaking of an excellent dinner, we were escorted over the different parts of the large ranch. Mr. B. has some 500 acres in all, 100 acres being set to the choicest varieties of vines. He has also some thousand choice fruit, olive and nut trees, most of which are now in bearing, and quite a number of bushes and vines in a thrifty condition. We were finally taken to a point on the hill, thickly wooded with oaks, whence we could obtain a most excellent view of the valley from Yountville to Mr. Krug's. The grandeur of the view really baffles description. He has all his land divided off and fenced in, and quite a band of stock roaming over his pastures. Mr. Beerstecher's place is at an altitude of some 1200 feet, and he informs us that he is never troubled by frost. During his seven years' residence he has greatly improved his ranch and is now very proud—as well he should be—of his beautiful domain.

JAPANESE BUYING LIVE STOCK.—Napa Register, April 20: B. Hirose, S. Koike and Juro Kobayashi, representatives of a stock-farm in Japan, were in this valley last week. The first named is a graduate of the Veterinary Department of the University of Japan. He speaks English and German fluently. All three are young men, well dressed and polished in manners. They are visiting this country with a view of buying horses, cattle and other livestock, for the purpose of improving the Japanese breeds. At F. W. Loeber's stock farm, near St. Helena, they found some horses they may buy and take back with them. First, however, they will visit Kentucky and several of the Eastern States. Sunday they took in the stock-farms near Napa, and looked over the asylum. They have letters of introduction from the U. S. Consul to Sen. Stanford.

Placer.

ORANGE TREES ALL RIGHT.—Auburn Herald, April 21: A large proportion of the orange trees that were apparently killed by the severe cold weather last winter are putting forth their buds and leaves, and in a few months only a critical observer would suspect that they had ever been touched by frost. The fruitmen were scared, and believed that the days of orange-growing were over, that the climate was too severe, and were ready to set out hardier trees. They were scared by the frost of last year, but never in the history of Placer was more and better fruit, of all kinds, than in the year 1887. There is no question that large portions of the county are not adapted to the orange, but we believe that there are other portions that are specially fitted to produce this glorious fruit. The apple trees suffer from cold in New England occasionally, but that fact doesn't condemn that section as an apple country or deter the farmers from enlarging their orchards.

Sacramento.

ANOTHER CANNERY PROJECTED.—Record Union, April 21: One of the chief objects in forming the Sacramento Improvement Association was the encouragement of new business enterprises, and to that end a committee was appointed on manufactures. This committee has decided to organize a company, to be known as the Sacramento Fruit Packing, Canning and Drying Co. To that end they have secured a refusal for 30 days of the St. Louis Brewery property, corner of Sixth and G streets, for \$8000. It is admirably located, as fruit can be unloaded from cars at the front doors of the warehouse. The lot is 150x160. A two-story brick building, with cemented cellars beneath, extends from G to the alley, 160 feet, is 30 feet in width, in excellent repair, and will need but little changing to adapt it to the business. The buildings on this property cost originally over \$20,000. It contains an engine with capacity sufficient for all power purposes. The property can be purchased by a payment of \$3000 cash, leaving a mortgage of \$5000 thereon for a term of years at a low rate of interest. It is estimated that about \$10,000—exclusive of cost of building—will be required to put up a pack of 10,000 cases, the number proposed for the first year. This will include the cost of machinery. A gentleman experienced in the canning business visited the premises yesterday, and said they were equal to a plant costing \$20,000. The matter will be pushed, so as to be able to commence handling the early fruit.

San Bernardino.

A CITRUS NURSERY IN THE HIGHTS.—Valley Echo: J. W. Keeney's house in Box Spring mountains is about 1000 feet above the East Riverside plain, or fully 2000 feet above the level of the sea. A highly romantic road of his own construction winds up from the base to the summit of the ridge. Once at the summit, you are on the edge of a broad valley, hemmed in by still higher rocky walls rising above you at least 800 feet more. We were amazed to find up here fields and orchards aggregating scarcely less than 80 acres, nearly all under cultivation. The water for house and nursery is piped from a perennial spring 1600 feet away, and

some distance farther off are four more springs of larger capacity—all on Mr. K.'s land. Up here—out of the world, as it were—is a well-cared-for and thrifty nursery of seedling orange trees, numbering about 100,000 plants. The little trees have grown two or three inches since the last warm spell. It must have taken great care and patience to raise this valuable crop of future orchard trees in that secluded spot.

GOOD RETURNS.—Index, April 14: W. R. Ingham, owner of the famous Ingham ranch at Highlands, yesterday heard from his cargo of oranges, recently shipped to Chicago. When they arrived there, they were in the very best preservation and found a ready sale. The seedlings brought \$3.75 and the Navels \$6. Mr. Ingham is delighted with the result of his venture, as the letter acknowledging the receipt of the oranges says they were the best received there this season.

San Diego.

EDITORS PRESS.—The 11th, 12th and 13th were warm days, the thermometer on the 12th registering 102° at 5 A. M., on the 13th 82°, with the tail end of a desert storm just stirring the leaves upon our tallest trees; at 12, noon, the wind changed and blew up cool from the coast. Thus passed off one of those dread storms that are so fatal to the best hopes of the farmer and fruit-raiser. There was not a leaf nor blade of grass injured in Sweetwater. Barley is maturing nicely and will be fit for hay by the 25th. —A. W. O., Sweetwater, April 18th.

HORTICULTURAL SOCIETY.—FAIR MATTERS.—San Diego Union: The annual meeting of the County Horticultural Society was passed, owing to the failure of a quorum to put in an appearance. The next meeting of the society will not be held until July, and the old officers will hold over. They are: Pres., J. M. Asher; V. P., F. H. Heald of Elsinore, W. E. High of San Diego and Chester Gunn of Julian; Sec., Geo. Bower; Entomologist, Frank Blaisdell. The few members that materialized put in the time discussing arrangements for holding an agricultural fair in this city next fall. Mr. Asher stated that committees have canvassed the matter, and there is every prospect that a successful fair will be held. The fair grounds will probably be located in the City Park, near the head of Sixth street. There is a desire, however, to have the fair held this year at a point more conveniently located, and negotiations are in progress to obtain the use of the block near the water front owned by the Government. The fair will probably be given under the auspices of a county agricultural society, soon to be organized, which will include the old Horticultural Association and be quite general in its scope.

THE AGNES LEMON.—San Diego Union, April 19: Several years ago, Frank A. Kimball was given some lemon seed by Sen. John S. Harris of New Orleans, which he planted at National City. The product was a new variety of lemon. They are uniform in size, have a symmetrical tree, fine foliage, and perfectly sweet rind, their spines are few and very small, thereby rendering the fruit less liable to damage by piercing. The texture of the pulp is finer than any other on the coast. Mr. Kimball presented this new lemon at the recent Fruit-Growers' Convention, and asked to have it named. The committee on nomenclature, to which the matter was referred, christened the fruit the "Agnes lemon," the name of Sen. Harris' wife.

San Luis Obispo.

AGRICULTURAL ASSOCIATION No. 16.—S. L. O. Tribune, April 20: A meeting of the Association was held April 7th, E. W. Steele, presiding. Present—Steele, Warden, Hollister, Van Gorden and Orcutt; absent—Murphy, Webster and Leedham. The statement of accounts for the fair showed a balance of \$593.54. Ordered that \$60 be paid the secretary for services, and the balance of money on hand be paid to the S. L. O. Co. Park Association for use of their grounds. Election of officers for the ensuing year was held with the following result: Pres., E. W. Steele; V. P., L. M. Warden; Sec., J. H. Barrett; Treas., R. E. Jack. Membership fee for present year fixed at \$5, covering admission to fair, grounds and pavilion. Ordered that fair be held Sept. 25th to 29th inclusive.

Santa Barbara.

TREES AND VINES PLANTED.—Santa Maria Times, April 18: Over 100,000 trees have been sold to the farmers of this valley this season. A Times reporter called on Jones, Mauley & Co. to ascertain the amount of these sales for the present season, which are about as follows: [Fourteen firms and individuals are named, whose combined purchases amount to 66,915.—Eds. Press.] Miscellaneous small orders about 15,000. The above sales simply represent the work of one agency of the Garey nursery in Los Angeles county. Some miscellaneous orders, sold to parties direct from other nurseries, are: Jos. Kaiser, 6300; A. Weiheimer, 3300; Capt. Williams, 3000; Mr. Teitson, 1500. Orders ranging from 50 to 500 trees through other agencies will swell the list of sales made in this valley during this past winter to at least 115,000. Besides the heavy sales of fruit trees there have been at least 50,000 vines planted out. This has been a most prosperous year for tree-planting in Santa Maria valley, and the acreage would have been much larger had the nurseries been able to supply the demand.

FAIR MEETING.—At a meeting of the Santa Maria Agricultural Society, Saturday, there was a good attendance and the usual business

was gone through with. It was the sense of the meeting that our next annual fair should be some time between the first and middle of October. Adjourned to meet on the 5th day of May at McMillan's hall, at 2 o'clock.

Santa Cruz.

FARMERS' UNION.—Santa Cruz Sentinel, April 14: At a meeting of the directors of the Farmers' Union of this city on Monday last, 595 more shares of its capital stock were sold, making a total of 1029 shares of paid-up stock, representing a capital of \$51,450 which has thus far been disposed of. The stock is held by about 25 different persons.

BEST SEEDING.—Pajaronian, April 19: Farmers are making splendid progress in putting in their beet-seed, and considerably more than half of the acreage contracted has been seeded. It is expected that seeding will be finished early in the coming month. The work was greatly aided by many farmers using their grain drills, thus preventing delay in waiting for the factory drills.

Solano.

EDITORS PRESS.—The chief question here now is: Have you sold your apricots? Several buyers have been up here the week past, and succeeded in buying a few at two cents per pound. I hear of one offer of three cents that was refused. One lot of peaches was sold at 1½ cents per pound, peaches to measure 2½ inches. Cherries are coming in, but the crop will be very light, especially Black Tartarians, of which there are scarcely any. ... A large crowd was in attendance last Saturday at the land sale of the Butcher farm, belonging to Mrs. Buckingham, and sold by Easton & Eldridge, auctioneers. The tract comprises 900 acres, and was bought about one year ago for \$90,000. About two-thirds of the land was sold, and is said to have paid for the whole tract. Prices ranged from \$240 to \$550 per acre, according to the improvements on it. ... Several who have driers here will not run them this season. They say they can get just as much for sun-dried fruit, and can dry it much cheaper in the sun, and just as well, unless it is late peaches or prunes. There will be but little, if any, fruit peeled with lye here this season. ... The days are very warm, but the nights cool, with heavy dew. The dew will help out the hay crop, which will be short until some more rain comes soon. —G., Vacaville, April 22d.

FRUIT GROWERS ORGANIZE.—Suisun Republican, April 20: The fruit-growers of the valley met Wednesday and discussed questions of interest. They meet again Saturday week, the 28th. The agreement below was signed by all present; more signers are wanted. "We, the undersigned, fruit-growers of Suisun valley and vicinity, hereby organize ourselves into a Bureau of Information for the purpose of procuring information relative to the fruit industry of this section and to extend to the members such information." C. B. Elliot, G. P. Plaisted, J. W. Rams, J. M. Baldwin, L. B. Abernathie, W. H. Morrison, Dave Hale, G. H. Pangburn, C. E. Barnes, F. C. Chadbourn, Wm. Stewart, John Malchi, J. Danielson, J. W. Bauman, W. C. Davison.

Sutter.

SUTTER COUNTY HORTICULTURAL SOCIETY.—Farmer, April 20: There was a good attendance at the meeting of the society, held in the Supervisors' room last Wednesday. C. C. Newkom asked for information in regard to rust on blackberry vines. P. L. Bance stated that he thought it was caused by heat. Had noticed the same thing on alfalfa. Mr. Newkom stated that it was to be found only on the under side of the leaves. If later in the season, Mr. Kells thought it might be caused by red spider, and advised the use of sulphur. He did not think that it was absolutely necessary to put the sulphur on the leaves, as the sun would cause the fumes of the sulphur to rise and affect the leaves in the desired manner. C. E. Grovenor of Woodstock, New Brunswick, Canada, was introduced. J. C. Gray, Henry Everett, J. W. Mills, W. H. Campbell, G. W. Carpenter and Joseph Phillips were added to the membership. The subject of cultivation of orchards and vineyards came up for consideration. It seemed to be the general impression that land should be plowed early—about Feb. 1st. Land should not be plowed too deep—from three to five inches being enough, next to the trees. Be careful not to plow when the land is too wet. Ground should be cultivated as long as there is any prospect of rain or any weeds may grow. Our limited space prevents our giving a full account of this discussion, which was very valuable.

A TURKEY ROUTS A BULL.—Marysville Appeal: A very novel combat was witnessed on the Marcuses' ranch in Sutter county last Sunday. A young bull discovered a turkey on her nest in a straw-stack, and took apparent delight in causing her discomfort by shaking the straw under her until she and the nest fell to the ground. This made Mrs. Gobbler mad, and she went for the bull in a rage. She jumped on his head, pecked at his eyes, and scratched, until the bull, who showed fight at first, ran away. The turkey followed, pecking his sides in the flight, and, returning, rearranged her nest, satisfied that she would not be troubled again.

Tulare.

DOSING GOPHERS.—Vernalia Times: I. H. Thomas uses the raisin grape and strychnine to poison the gophers that infest his nursery, and with great success. He punctures the raisin and then fills the cavity with powdered strychnine.

nine, afterward placing it in the runway of the gopher. Lately he has secured a new plan, which he intends testing to-morrow. Following is the receipt: Take any old can that will hold 2½ gallons of water, and place in it a stick of phosphorus and a little cold water. Then pour in hot water, which has not reached the boiling point, and stir with a stick until the can is full, being careful to see that the water is hot enough to melt the phosphorus gradually. When melted, add two pounds of sugar, meanwhile stirring the liquid, and after the sugar is melted, thicken to a stiff batter with cornmeal and flour, half and half. Now add wheat, and stir until stiff. While adding the wheat, add also 15 to 20 drops of the oil of rhodium. Set away in a cool place and the mass will become quite hard, when small pieces can be chipped off and placed in the runways of the animals with no uncertain result.

Yolo.

SUMMER IRRIGATION.—Woodland Democrat, April 19: Passing R. B. Blowers' place the other day with a party of friends, we were attracted by the silvery flow of limpid water over the brim of the large stone receiver, and stopped to see the working of the great pump. Mr. Blowers informed us that this was the beginning of summer irrigation. His pump throws a stream of 25,000 gallons a minute, and the supply in his well seems inexhaustible.

Yuba.

EDITORS PRESS.—It is very warm and dry. I notice some of the farmers are turning their stock on their grain as though they gave it up. Rain must get along soon to save the grain-growers. Apples, with the aphid at the roots, borers in the trunk, and codlin moth in the fruit, are an uncertain crop this year. Should orchardists continue to grub up their trees as in the past two years, the apple will be the greatest delicacy in the fruit line. Peaches will be a big crop, and require thinning on the young trees. Cherries and pears about average; ditto, plums and prunes. Apricots are good on young trees; old trees almost bare—some dropping. Will be very fine—the few on the trees—and large, but a short crop. —E. H. S., Marysville, April 19, 1888.

ARIZONA.

BARLEY HAY.—Phoenix Herald, April 19: Mr. E. W. Wiley began cutting barley hay on the second day of April from his new land under the Arizona canal, and realized two tons to the acre of the finest kind of hay. He is now irrigating the land and will have a second crop, without sowing; in fact, the new crop is already up six inches on portions of land first mown.

NEVADA.

WILD HORSES IN NEVADA.—Walker Lake Bulletin: As long as can be remembered by the oldest settler, bands of unclaimed horses have been on the ranges in different sections of this State. They are the cause of considerable annoyance to those who have horses pasturing in the hills, as they will not feed with the tame ones, but run them off the ranges, sometimes to so great a distance that the owners are unable ever to find them. They will also "steal" tame horses from different bands and keep them away for a long time, or until the domesticated animal has a fascination for a wild life and joins the band of "thieves," as they are commonly called.

OREGON.

SOUTHERN OREGON FRUIT OUTLOOK.—Oregonian, April 20: Mr. H. E. Battin of the commission firm of H. E. Battin & Co. has returned from a flying trip as far south as Medford. He reports the outlook for a large crop of fruit throughout the entire State very flattering. He finds that this county, in this respect, is both as early and promising as any of the more southern counties. The acreage of apple orchards in Jackson county has been greatly increased during the past winter, and the people in Douglas are turning their main attention to the cultivation of prunes, in the growth of which that section excels.

WASHINGTON TERRITORY.

GRAIN PROSPECTS.—Oregonian, April 13: Hon. Philip Ritz of Walla Walla was questioned Tuesday about the outlook for grain in the Columbia river basin. Mr. Ritz said the grain prospects of the Inland Empire are good. A very large area of the ground sowed last fall froze out during the winter on account of the severe cold weather, when there was no snow on the ground. Most of this has been replowed and sowed again during the spring months, but some of the farmers could not quite get around to all of it, so some was not resown and some of it was sown rather late and does not look very favorable. The cold, dry, backward spring is still holding the crop back, but there is plenty of time for rain yet; and the longer the rain holds off the more we will get when it comes, and the more good it will do later in the spring when the weather is warmer. On the whole, there is no occasion for alarm. In the great Palouse country nine tenths of the grain is put in in the spring, so there will be very little loss from freezing out, and in the Palouse country there will be the greatest increase of acreage. Taking it all in all, it now seems as if there might be 10 per cent less grain for shipping this year than there was last; and yet a month later these figures may want to be changed from 5 to 10 per cent either way.

TULARE, CAL., April 8, 1888.



PACIFIC MANUFACTURING CO., San Francisco, Cal.

Gentlemen: In November, 1886, I bought a Cyclone of your agent. It has been running now eighteen months, and I was so well pleased with it that I bought, of your agent at Visalia, another, and in its place have abandoned a windmill and a horse power that cost me \$150, and it does its work well. Now when I go away from home I do not have to leave a man to pump water for my stock, for with the Cyclone Mill I have plenty of water. In the eighteen months I have had the other, I have never expended one farthing for repairs.

A neighbor of mine has been getting a Cyclone; has had it about a month. I was going by and he hailed me and said "Ingham, I have got to take down my Cyclone." I said: "Newell, why?" He said it had pumped too much water around his place; that he had the malaria. I think that is a good one.

(Copy.)

Yours truly,

S. S. INGHAM.

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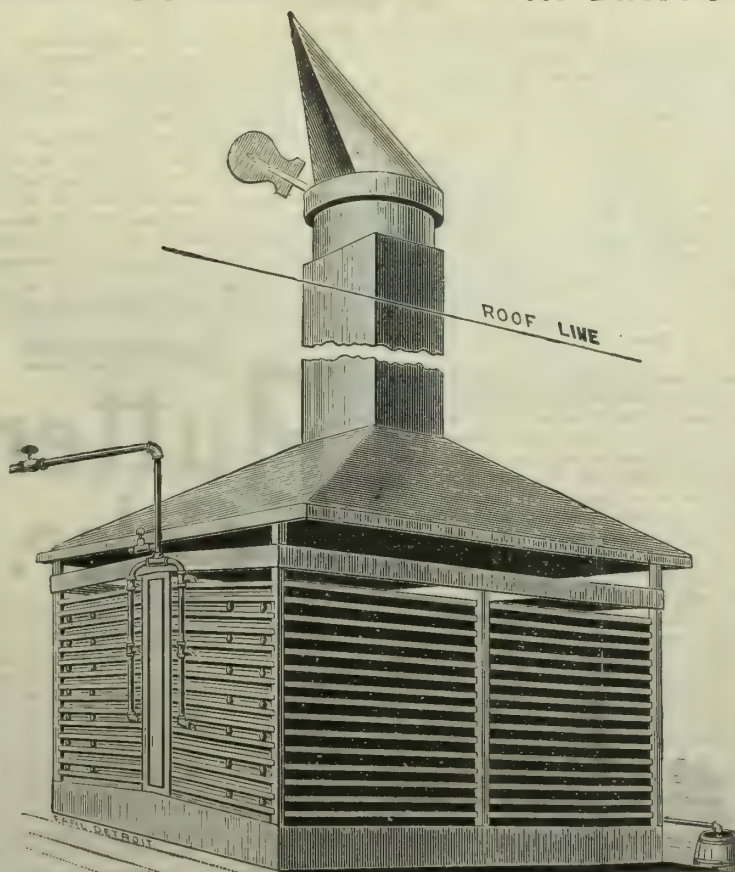
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Anti-Poverty Plans.

EDITORS PRESS:—Our Government is rightly spoken of as paternal. A father is quite apt to favor his brightest sons of whom he is proud, while the mother often lavishes the wealth of her affection upon the most unlovely and wayward of her flock. Then, too, she sees the first beginnings of evil with anxiety. That Harry is out late at night, and Joe grows impertinent. But the father scoffs at her fears, says "boys will be boys—let them sow their wild oats," etc. When, however, he finds they are ruining his credit and defying his authority, he sternly lays on the rod.

We need more of the mother spirit in our Government. Having allowed giant wrongs to go so long unchecked, it is now time for Uncle Sam to call his boys to account and lay down the law to them in no uncertain words. Make them understand that individual liberty does not mean the right to rob and trample on the weak.

If among the causes of want and crime we find the consumption of intoxicating liquors to be one of the largest factors—and this is so well proven all must admit it—let us first consider this evil.

We make laws that say, "Thou shalt not kill." "Thou shalt not steal." Every one sees the justice and necessity for this; but, strange to say, many good people do not fear the alcohol fiend, who transfers more property without giving equivalent than all the thieves working in chain-gang or prison. Who takes more lives than have all those who swing from gallows, should not be prohibited, only restricted. The popular plan for this, high license, is about as wise and efficient as would be a plan gravely proposed to me by a tramp philosopher:

"Whisky should sell at 50 cents a glass, then the workman could not buy enough to hurt himself."

In view of the constant interference of Government with private rights for public good, the personal liberty plea is lame indeed. And now since prohibition has been decided constitutional by the Supreme Court, I see nothing left except self-interest, from the farmer seeking a market for his grapes and barley to the rum-seller and his chief partner, our paternal Government.

All other means to check intemperance have been tried with little or no effect; the sovereign remedy can only be found in the prohibition of the manufacture and sale of the poison.

Once this upas tree cut down, many other evils that have thriven under its shade will wither and die. Many virtues almost choked out revive and grow. Fancy loves to paint the pleasing change.

From how many homes the specter of want and fear will be at once banished?

Children dance with joy, as wholesome food in plenty, good clothes and nice furniture are carried into homes long the abode of want and wretchedness.

Aged parents are coming home from almshouses with tears of joy, to be cared for by their now reformed and dutiful sons. Tramps are buying land and building homes. Police force is reduced, jails and prisons are thinning out, while under a new demand for all the comforts of life, every business is booming. There is work for all, bread for all.

But you say, "There will still be vice, ignorance, laziness, and want." True, probably there always will be, and the dire effects of the liquor traffic will still be felt for one generation, at least; but the vastly lessened amount we can now meet with courage. Never in the history of the world were there so many well-organized, well-supported charitable institutions for the relief and uplifting of every class of unfortunate fellow-beings. So many loving hearts, who, like the little girl, do "want a heathen so bad," I almost fear the heathen won't go around.

As prevention is cheaper as well as infinitely better than cure, we should consider the children more. The money formerly spent in the punishment and repression of crime, and the charity bestowed upon adult, needy objects, would go far toward the better education of all our future citizens, red, white and black.

Our need is not more colleges of higher learning—not more tall church spires—but more first principles of work and right thinking; more industrial schools, where the young can acquire the skill necessary for self-support; more plain churches where the simple gospel of the Golden Rule is preached to the poor.

Bring out from the evil influences of the city its street arabs and homeless waifs to cheap or Government lands. We have plenty suitable in California with an unapproachable climate thrown in. Place them in commodious cottage homes, some 20 to 40, under the fostering care of some wise and loving soul. Here let them cut down and grub up the brush, dig, and plant, and reap. Have tools and shops for learning the simple beginnings of trades, any who showed especial skill to be advanced to higher industrial training schools, while those bright in lessons should have better opportunities in that direction. The seemingly incorrigible should be placed in separate homes under wise disciplinarians. Plain food, plenty of work, learning to love nature and honest toil, these are as nearly as possible the conditions for rearing useful, happy citizens, and such, I have no doubt, the greater part would prove to be.

Mrs. J. M. K.

Hand in Hand, Etc.

EDITORS PRESS:—In a report of the proceedings of the recent Viticultural Convention I find the following as a quotation from a paper read by one of the members: "The experience of the world demonstrates that where pure, light fermented beverages, such as wine and beer, are produced plentifully, and distributed at prices within the reach of the poorest classes of the people, there, even without any legislative control or restriction, except such as is imposed by a high taxation upon distilled spirits, the least intemperance is observed. It is to be understood, however, that we mean wine used rationally as a part of regular meals, and not wine used as a tippie, or as an accompaniment of other tipples. Wine and beer, hand in hand, may preach a temperance reform, provided that their friends do not shrink from their responsibilities as citizens in applying all legitimate remedies for popular habits of intemperance caused by other agencies and irrational customs." In reading such a report of "the world's experience," some would like to know when and where such "experience" occurred.

The remark that "Wine and beer, hand in hand, may preach a temperance reform," under certain conditions, reminds me that they are preaching reform very effectually without those conditions. In 1830 beer preached a powerful sermon, resulting in a great revival in England. A removal of restrictions from the stronger drinks had brought an increase of drunkenness, and as a reformatory measure it was proposed to so remove the restriction from beer as to bring it within easy reach of all. Beer was a



GEO. ERTEL.

favorite English drink, and the measure was favored by laborers and lords, the press and the clergy, and the bill passed by acclamation. The Duke of Wellington, on its passage, proclaimed it a greater achievement than any of his military victories. Lord Brougham said that under the circumstances it was giving the people what "might be called a moral species of beverage." Two weeks after its passage, Rev. Sydney Smith wrote: "The new Beer bill has begun its operations. Everybody is drunk. Those who are not singing are sprawling. The sovereign people are in a beastly state." One editor spoke of its effects as "exceeding the evils of any single act of internal administration passed within the memory of man."

In France, wine has been exercising its reformatory influence till the governing power has become alarmed at the increase of drunkenness and ordered an investigating commission. But these unfortunate results may have come from not using wine "rationally as a part of regular meals and not as a tippie." It may be pertinent here to inquire wherein other drinks would do more harm than wine, if used "rationally," as aforesaid, and under the application "of all legitimate remedies for popular habits of intemperance," as required for wine.

Does not wine, like other intoxicants, uniformly incline men to "shrink from their responsibilities as citizens in applying all legitimate remedies for popular habits of intemperance"? If wine requires such restrictive accompaniments, the favorable results come of the restriction and not of the wine. Does not wine under such restrictions "preach" stronger for restriction than for wine, and teach that it would be better to drop wine out of the formula and take restriction "straight"?
Pascetta, March 24, 1888. M. WILCOX.

IRRIGATING ENTERPRISE IN COLORADO—The Montezuma irrigating tunnel, just finished in Colorado, is upward of a mile in length, running under a mountain, and with 50 miles of canal, will convey water from the Dolores river over 200,000 acres of the richest agricultural valley in the State.

George Ertel.

The lives of men who have won success by honorable means are full of interest; and we may get valuable lessons from the careers of those who have started at the bottom and reached the top by virtue of intelligence, honest industry and strength of character. Among such is Geo. Ertel of Quincy, Ill., whose likeness we present upon this page. Mr. Ertel is not only one of the foremost business men and respected citizens of the place where he resides, but is widely known as the senior member of the firm of George Ertel & Co., the fame of whose baling presses has gone into foreign countries.

He was born April 10, 1830, at Neuburg-on-the-Rhine, Germany. Like so many of our successful men, he spent his boyhood on a farm. At the age of 13 he was apprenticed to a cabinet-maker, and this occupation he followed in the land of his birth until 1854, when he immigrated to this country. Having worked two years in New York and Pennsylvania, he followed the course of empire and for a time resided in Quincy, and later in Liberty, a town near by. In 1868 he returned to Quincy, where he has resided ever since and been persistently engaged in the improvement of his presses, the manufacture of which has steadily increased. In 1879 came the Ertel Economy Press, in 1882 the Farmers' Friend, in 1884 the Clipper Perpetual Baling Press, and in 1886 the Ertel Victor, in which, seemingly, no place for improvement can be found. The Economy and Victor only are now manufactured, and the demand for them tries to the utmost the capacity of the large works, although they are furnished

List of U. S. Patents for Pacific Coast Inventors.

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FOR WEEK ENDING APRIL 17, 1888.

- 381,321.—APPARATUS FOR REDUCING BITUMINOUS ROCK—G. E. Belmor, S. F.
- 381,323.—GASLIGHT SHIELD—Annie L. Boone, S. F.
- 381,117.—PRINTERS' GALLEY—O. A. Dearing, S. F.
- 381,362.—WASHING MACHINE—O. J. Graham, Spokane Falls, W. T.
- 381,364.—DENTAL PLUGGER—B. W. Haines, S. F.
- 381,365.—WIRE-ROPE MACHINE—A. S. Hallidie, S. F.
- 381,470.—OVEN ATTACHMENT—C. H. Harmon, Lebanon, Ogn.
- 381,369.—FILTER PRESS—A. Heberer, Alameda, Cal.
- 381,225.—WHIFFLETREE—D. R. Lakin, Eugene City, Ogn.
- 381,257.—DREDGER DIPPER—M. C. Lawton, Staten Island, Cal.
- 381,258.—DREDGER DIPPER—M. C. Lawton, Staten Island, Cal.
- 381,399.—HAME—A. C. Matlack, Independence, Cal.
- 381,135.—PAPER AND TWINE HOLDER—J. G. McBride, S. F.
- 381,267.—THILL COUPLING—A. F. Moltzen, Oakland, Cal.
- 381,268.—SASH HOLDER—F. B. Moors, S. F.
- 381,414.—CLOTHES STAND—S. A. Parker, San Jose, Cal.
- 381,286.—PADDLE BELT FOR PROPELLERS—W. H. Silsby, Martin's Ferry, Cal.
- 381,456.—APRON FOR CONCENTRATORS—G. E. Woodbury, S. F.

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BERKELEY, April 7, 1888.)

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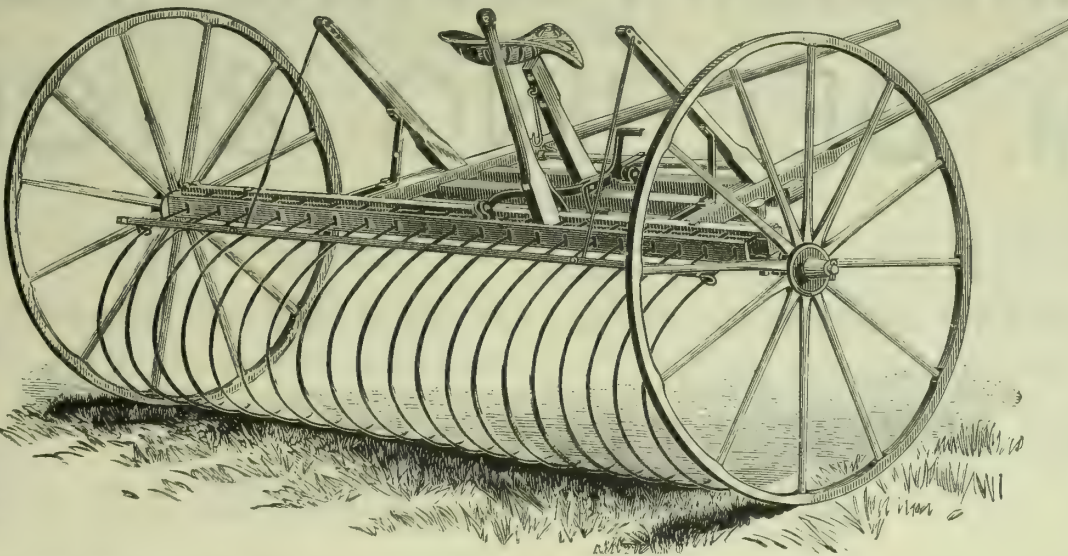
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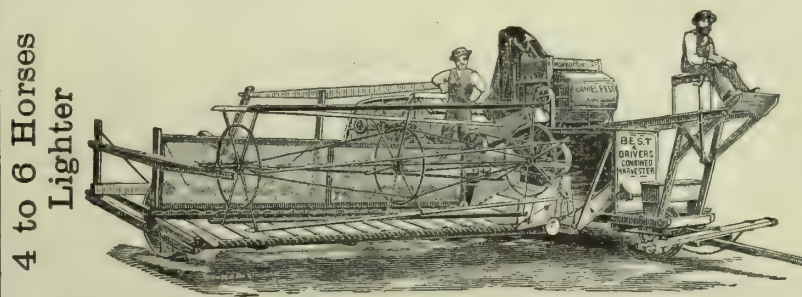
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FLORICULTURE.

The Los Angeles Flower Festival.

[Written for the RURAL PRESS by CLARA S. BROWN.]

Again the season has arrived for the crowning social event of the year in this "Queen City of the Angels," and again has an unequalled success been scored, and a scene of marvelous loveliness been presented to an admiring public by the efforts of a band of energetic, philanthropic women.

The opening of the Fourth Annual Flower Festival took place Tuesday evening, in Hazard's pavilion, a structure of most generous proportions on the corner of Fifth and Olive streets. There has been almost a surfeit of entertainments in the city this spring, an unusual number of celebrities having visited Los Angeles, in addition to a succession of "lesser lights" in opera, drama, concerts and lectures. Yet as the writer wended her way last evening from a street car to the brilliantly lighted pavilion, preceded and followed by a throng of men, women and children, some one was heard to remark: "That building won't hold all the people to-night!"

The floor of the main room, 120x166 feet in dimensions, was crowded in all the spaces available between the booths, and the two wide galleries were equally filled with the fortunate ones who had obtained seats from which to gaze comfortably down at the jostling mass of humanity and the bewildering profusion of floral designs which made it easy to believe that a scene of the fairy kingdom had been magically transported to this work-a-day world.

It is impossible to adequately describe a flower fete of such noble proportions. Language seems poverty-stricken in the presence of this grand demonstration of nature's wealth, and only the eye-witness can realize how much it is possible to do with the blossoms that thrive so wonderfully on our genial coast, and shed their fragrance on rich and poor, in summer and winter, in a manner that would seem heaven-sent, indeed, were it vouchsafed to the dwellers of all classes in the more inclement Eastern States.

The extraordinarily cold weather of December and January, while it retarded the growth and blooming of calla lilies and other tender plants, did no serious damage and has not apparently lessened the supply from which is to be drawn the immense number of flowers that will be used during this week and next at the pavilion. The quantity on exhibition at the opening was almost incalculable, yet every day all the drooping ones will be replaced by fresh specimens. The labor involved in successfully managing an affair of this nature in all its details is very great and almost wholly performed by the ladies of the Flower Festival Society.

The large stage was converted into a woodland scene and occupied by distinguished residents and visitors, among whom were General John C. Fremont, General Nelson A. Miles and staff, Brigadier-General John R. Mathews and staff, the president of the Board of Trade, Mayor Workman and ex-Mayor Spence, members of the Board of Education, and of the legal and medical professions in the city, Thomas Nast, the world-famous caricaturist, etc.

After the opening address of the Mayor, short speeches were made by Generals Fremont and Miles, but, owing to the throng of moving people, none of the remarks could be heard a few feet away from the stage. Los Angeles people were, however, well pleased to look at these eminent soldiers and observe their approval of the brilliant scene before them. The effect was considerably augmented by the rich and showy uniforms of the military, whose headquarters were last year removed from Arizona to this city.

The rose exhibit occupies the center of the hall. Two years ago it was an immense bank of blossoms; last year it was a circular bed inclosing a fountain and pool; this time it is in the form of a Moorish pavilion, octagonal, and 15 feet in diameter. At the entrance is placed a gilt turnstile. A pole in the center rises 24 feet above the roof, wound with evergreens, and from the top are stretched garlands of roses to the points of the roof, each garland tied with ribbons corresponding in color with the roses used. Gazing up to the arched ceiling, 57 feet in height, one sees between each arch a great red clover leaf, rimmed with green, and on the sides of the building three silver crescents are grouped around each clover leaf. Ropes of evergreen are netted backward and forward like a spider web of gigantic threads. Returning to the rose booth, silver cords, at the first glance unnoticed, are seen tied irregularly to the garlands above the roof, further simulating the spider web. The walls and pillars of the booth are studded and twined with choice specimens of the "Queen of Flowers," while within are massed thousands more. In the hurry of the opening they were not classified last evening, but to-day they will all be labeled. The occupants of this booth wore their hair à la Pompadour and powdered. (*En passant*, the costumes of the attendants at all the booths harmonized perfectly with the lovely scene, being very rich and delicate, in some cases a "symphony" of color, made especially for the occasion.)

Turning from the central figure, what is this towering object at the left, a wondrous creation of calla lilies and marguerites, rising from the roof of some fairy grotto? It is the exhibit of

the town of Long Beach—a lighthouse 25 feet high, with windows of scarlet geranium, and a balcony made of dark-red flowers. At the top is an incandescent electric light surrounded by a revolving glass of different colors. The pedestal is made of gray moss, lichens, seaweed, etc., and amid shells and flowers stand a bevy of Long Beach ladies, smiling upon the crowd about them.

It would seem that this little hamlet by the sea has a fair prospect of winning one of the prizes offered to outside towns; \$200 will be awarded for the best-kept booth, and \$175 for the second best; \$100 for the most original design; and \$75 for the next in favor.

Equally conspicuous is the exhibit of Alhambra—a rapidly growing settlement in the San Gabriel valley. It represents the ruins of the Alhambra palace in Spain, as described by Washington Irving. There is the ruined front of the palace, the tower, the arches, the Spanish garden, with its tropical foliage, all surrounded by a low fence covered with English ivy. In the construction of this artistic design, great numbers of roses, daisies, geraniums, verbenas, marigolds, orange and lemon blossoms, wild flowers, ivies, etc., have been used.

San Fernando, an old but small town in the midst of a famous wheat country, is not to be outdone, and furnishes a Moorish temple, the chief feature of which is a correct representation of the mammoth submerged dam of Paicoima, recently completed, which provides the water-supply of the San Fernando valley. Most of the decorations of this booth are in wild flowers.

A very showy booth is inscribed "California, the Golden State," and is presided over by native-born ladies. Only yellow flowers are used here, and the costumes are all yellow; even yellow wigs are worn. The effect is striking. In front of the booth hangs the American eagle, with wings outstretched, made of marigolds, marguerites, and sea-moss. The California bear is present, of course, made of marigolds. The pillars are twined with branches of acacia in bloom.

In contrast to this gorgeous coloring, is the "Spring" booth, draped in illusion, and with English ivy clinging everywhere upon its snowy background. Delicate spring flowers and fruit-blossoms are daintily arranged here, and the young girls in attendance are clad in white. In front is a rising sun, a large butterfly of pale-yellow flowers, and a scroll of gauze upheld by snowy doves bearing the word "Spring."

A booth is devoted to old-fashioned flowers, and finds no lack of admirers, even where there is so much that is novel and rare. Snowballs, lilacs, single pinks, bachelor's buttons, sweet peas, nasturtiums, petunias, mignonette, mourning bride, poppies, etc., bring to mind the associations of long ago. Above the entrance is a banner made of gunny-sacking, on which is queried: "Should Auld Acquaintance be Forgotten?"

Another booth is decorated entirely with purple and white flowers, the draperies are lilac and white; a lilac-covered sofa within invites the weary to rest, and the ladies in charge are attired in brocades of the two colors.

The lemonade booth has a canopy of yellow tulle, and is supported by six pillars covered with lemon and orange blossoms with their foliage and clusters of the fruit interspersed here and there.

The candy booth is striped with wide bands of red and white geraniums, the pillars covered with the graceful leaves and ruddy berries of the pepper tree.

The soda-water booth is in horseshoe shape, and profusely adorned with calla lilies. At the right of the hall a fountain sends its cooling spray upon a lofty pyramid of calla lilies. Around the pool are placed ferns, more lilies, bunches of azaleas, umbrella grass, etc.

The Inglewood booth is a center of attraction, its presiding genius being Mrs. Jessie Benton Fremont. For a town that has only become a town since it was known that this talented lady and her husband would reside there, and that a large college of applied sciences would soon be erected and handsomely endowed in the immediate vicinity, Inglewood has made a most creditable showing. The arrangement of flowers is very beautiful. Hanging-baskets and colored-glass lanterns depend from the green canopied top, which is surmounted by an immense jar of Banksia roses. Within stands the most generous-sized "loving-cup" ever seen, made of La France roses; and there is a large bell of yellow Banksias, with a tongue of century-plant blossoms.

One of the most beautiful single pieces in the hall is a large ship of roses with rigging of smilax.

As at previous festivals, unique designs will be added from day to day to those present on the opening night, when the utmost care cannot prevent a degree of incompleteness.

There is a boutonniere booth, containing only tropical flowers and foliage; also a bulbous booth, where many rare potted plants are exhibited; a pop-corn booth, embowered in ferns and bridal-wreath; a wedding canopy of ferns and roses, with a large marriage bell of roses, entered for competition by a florist of this city; a newspaper booth, watched over by a very solemn owl; a registry booth, where under a horseshoe of roses, with roses massed all about you as you stand within the circle, you may write your name for five cents, or have the honor of opening a new page for twenty-five cents.

This, with the booth near the main entrance, where the business of the society is transacted, completes the exhibit on the first floor.

The galleries contain several very handsome booths. The ice-cream "parlor" is in the first gallery, and in this case is a Chinese tea-garden. A pink and pansy booth is in the form of a six-pointed diamond. Many varieties of wild flowers are shown in another booth, and in still another "milk-shakes" are compounded among snowballs and marguerites. A geranium booth has a pyramid in the center of red geraniums, eight feet high.

Anaheim and Santa Monica have in this gallery very handsome exhibits, the former containing a ship, a miniature rockery and lake, over one hundred varieties of choice roses, and many other flowers; and the latter representing a rustic summer-house, the pillars wound with barley and oats, the roof thatched with grasses. This booth has a beautiful ship and a wharf of exquisite roses, with the waves of the bay represented by purple and white blossoms.

The Seventh Regiment band of 25 pieces will furnish music each evening, and novel entertainments have been arranged. Over 100 children have been trained for the cantata "Rebellion of the Daisies," and twenty-five little girls will drill with muskets each evening.

The receipts at the opening were \$1850. It is hoped to net \$10,000 during the two weeks of the festival, \$7500 having been cleared last year. The primal object of the society was to establish a boarding-home for young working women in this city. That praiseworthy undertaking has been accomplished, and as the Home is now on a paying basis, a portion of the proceeds of this year's festival will be donated to the Orphan Asylum, which greatly needs more commodious quarters.

Los Angeles, April 23, 1888.

Shorthorns from Illinois.

The announcements of sales of fine cattle continue. The latest news we have to give is the coming of a choice herd of fashionably-bred Shorthorns, 40 females and 10 young bulls, from the breeding farms of R. M. Dunlap, Galesburg, and J. S. Latimer & Sons, Abingdon, Illinois. The animals belong to the Rose of Sharon, Young Mary, Bloom, Miss Wiley, Acorn, Pearllet and other useful and fashionable families. The cattle will arrive in Sacramento and be on exhibition at the grounds of the State Agricultural Society after May 5th, and the sale will take place May 17th, at 1 P. M. Catalogues can be had by addressing Dunlap & Latimer, Sacramento. Our readers will remember that a previous importation of cattle to California by Mr. Dunlap sold well, and it will be important for those desiring stock to see what is now to be offered.

FRUIT AND VEGETABLE SHIPPERS' MANUAL.—We have received a copy of a pamphlet of 100 pages entitled: "Southern Fruit and Vegetable Shippers' Guide and Manual—What to Grow for Northern Markets, How to Pack, Ship, etc." It is published by P. M. Kiely, a commission merchant at 914 North Third street, St. Louis, and is sent on receipt of three cents to pay postage. Though intended, as stated, chiefly for growers in the Southern States, it will be read with much interest by California producers.

It is said J. B. Haggin is preparing to retire from the turf, and will sell his yearling stock in New York in June. This resident of San Francisco is now the owner of the largest racing establishment in the world.

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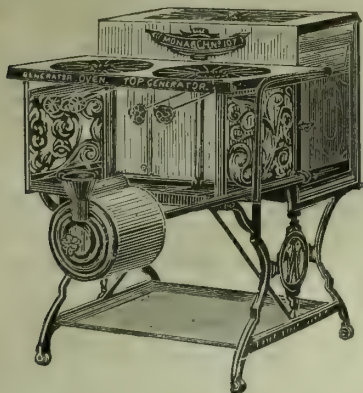
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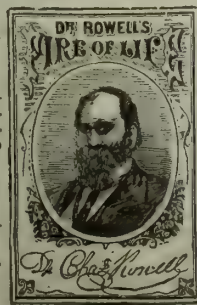
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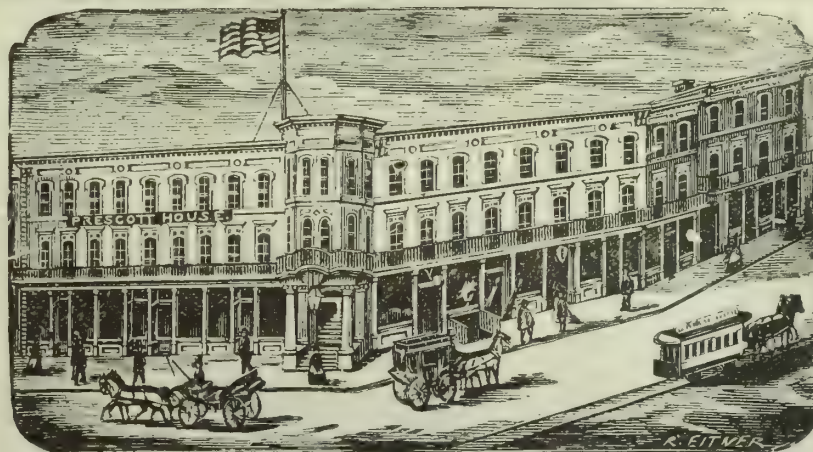
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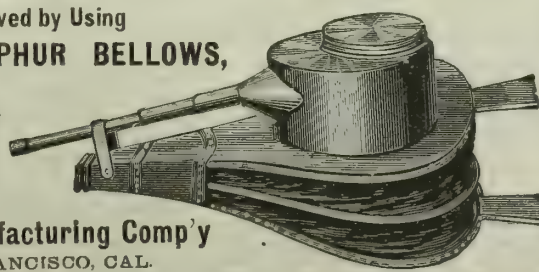
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 25, 1888.

The past week has been characterized by freer trading in farm products, both spot and futures (particulars of which are given below) than at any time this year. Continued dry weather causes much uneasiness, but as usual, while well grounded they are unduly exaggerated, and consequently extreme reports should not be accepted as correct. Fruits and vegetables are making a better showing, while for them the crop prospects are all that can be desired. The European and Eastern wheat markets have ruled strong and fairly active throughout the week. The following is to-day's cable:

LIVERPOOL, April 25.—Wheat—Rather easier. California spot lots, 68¢ to 69¢; off coast, 33¢ 6d; just shipped, 33¢ 6d; nearly due, 33¢ 6d; cargoes off coast and on passage, turn dearer; French country markets, generally dearer; wheat and flour in Paris, quiet; wheat on passage to Continent, 370,000 qrs.; wheat and flour on passage to U. K., 2,148,000 qrs.

Foreign Review.

LONDON, April 23.—The *Mark Lane Express*, in its weekly review of the grain trade, says: "The supply of the native grain has materially slackened. The country markets during the week were firm, and sometimes there was an advance of from 6d to 1s."

Foreign wheat was quiet and steady. The Russian ports are mostly open, with free sellers. The markets, however, are sensitive. The receipts were small and stocks were very moderate.

The off the coast market was liberally supplied; 25 cargoes arrived, 7 were sold, 5 withdrawn, 5 remain for orders and 11 are on sale, including 5 California cargoes.

The oat trade was quiet. Stocks are low, but there are large quantities in the Baltic ports awaiting shipment.

To-day wheat was firmer. English and some foreign sorts were 6d higher. Flour was 3d higher. Malt barley was steady; common kinds were easier. Common oats were from 3¢ to 6d lower.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Date.	Cash.	April.	May.	June.	July.
19.....	94	91	94	94	93
20.....	96	93	93	92	92
21.....	96	94	94	93	93
22.....	96	94	94	93	93
23.....	96	94	93	93	93

The closing prices for wheat have been as follows, at Chicago.

Date.	Cash.	April.	May.	June.	July.
19.....	79	81	81	82	84
20.....	79	80	81	82	84
21.....	80	81	81	82	84
22.....	81	81	81	82	84
23.....	81	81	81	82	84

CHICAGO, April 25.—Wheat—Firm; cash, 81¢; May, 81½¢; June, 82¢; corn, firm; cash, 54¢; May, 54½¢; June, 54½¢. Oats, firm; May, 32½¢.

NEW YORK, April 25.—Wheat—95½¢ for cash, 94½¢ for April, 93½¢ to 93¢ for May, 92½¢ to 92¢ for June, 92½¢ to 92¢ for July and 91¢ for August.

California Products in Chicago.

CHICAGO, April 21.—On account of the increased receipts of oranges from California, the market has declined. The demand is fair for choice fruit. Following are the quotations: California Riverside oranges, 128 and 226, \$3.25 to \$3.50; do other sizes, \$2.75 to \$3; do other oranges, seedlings, \$2.75 to \$3; Riverside Navel, \$5 to \$6; do others, \$3.50 to \$4.25. California lemons, slow, \$1 to \$2 box.

California dried fruits are quiet. A good many plums and prunes remain, and they are rather dull. Apricots, peaches and raisins rule steady. Of the first named description the supply has become light. We quote: Apricots, sun-dried, ½ lb, 10½ to 11½¢; bleached, prime do, 13¢; do, choice, 14½ to 15¢; do, fancy, 15 to 16¢; evaporated, choice to fair, 14½ to 16¢; peaches, sun-dried, ½ lb, 11 to 12¢; do evaporated, unpeeled, 13 to 15¢; do, peeled, 20 to 22¢; plums, unpitted, ½ lb, 6 to 9¢; do pitted, 10½ to 12¢; prunes, small, ½ lb, 6 to 8¢; fancy, large, 10 to 12¢. Raisins, loose Muscatels, 2-crown, ½ box, \$1.35 to \$1.45; do 3-crown, ½ box, \$1.50 to \$1.65; do London layers, ½ box, \$2.25 to \$2.40.

A few choice hops are selling, at the same time the demand is limited and the market rules dull, with common qualities almost entirely neglected. Pacific Coast, choice, 12 to 13¢ ½ lb; common to prime, 9 to 11¢.

Beans are rather dull at present, and sales drag slowly; there are not many domestic beans offered, but of foreign stock the supply is quite liberal.

Quotations for new California cabbage, \$3 to \$3.50 ½ crate, but some in poor order is offered at 3 to 3½¢ ½ lb.

Weather and Crops.

WASHINGTON, April 22.—The weekly weather crop report says among other things: Reports from Northern States indicate that the week has been unusually cold, and farm-work has been greatly retarded. Reports from Southern States show that the weather during the week affected all crops favorably. Cotton planting is progressing rapidly, and generally throughout the cotton States the week is reported as the most favorable of the season. Slight frosts occurred in North Carolina on the 20th, which may prove injurious to fruit and crops on low ground. In the States south of the Missouri river, including Kansas, Nebraska and Southern Missouri, the weather has been generally favorable and crops are well advanced.

Eastern Wool Markets.

NEW YORK, April 23.—Inactivity and decided weakness appear in all the wool markets. With the new clip just at hand, and the current tariff agitation, manufacturers and dealers are over-confident. The former are buying to satisfy immediate requirements, but no further, while the latter are in a rather

uncertain state of mind as relates to the purchase of supplies in the country. The recent decline in two or three lines has stimulated inquiry, but the general state of things is dull and in buyer's favor. There is a large attendance at the London wool sales, and bidding has increased in animation from the first. Liberal purchases are going forward both for domestic and Continental consumption. Prices are firm throughout the list. At Philadelphia, wool is dull and the market is weaker under increased pressure to sell. The situation is very unsatisfactory to all classes of operators, owing to nearness of new clip and the uncertainty as to future conditions caused by the tariff agitation. The sales foot up 398,000 lbs, as against 332,000 lbs last week and 387,000 lbs for the corresponding week of last year.

Local Markets.

BAGS—The market is somewhat demoralized, owing to bad crop weather and freer outside selling. The pool has been and is still selling in a quiet way through others at less than the quoted rates. Calcuttas for June and July delivery are quoted at 7½ to 7¾¢, and even 8¢.

BARLEY—The spot market holds to strong prices. The demand is free for consumption. On Call, futures are dealt in more freely, with slight but attractive fluctuations. As usual, the large proportion of the sales are reported to be cross-orders. The following are to-day's sales:

Morning Session: Spot—100 tons, 84¢. Buyer season—100 tons, 84½¢; 100, 84½¢; 200, 85¢; 500, 85½¢; 200, 85½¢. Buyer 1888—100 tons, 95½¢; 100, 95½¢; 400, 95½¢; 100, 95½¢; 300, 95½¢; 400, 95½¢; 1000, 96¢; 100, 96¢ ½ c. Afternoon Session: Buyer season—700 tons, 85½¢; 800, 85½¢; 400, 86¢; 200, 85½¢. Buyer 1888—100 tons, 96½¢; 100, 96½¢; 2700, 96½¢; 100, 97¢; 100, 96½¢; 300, 96½¢; 200, 96½¢ ½ c.

BUTTER—The market shows more strength under free buying. Montana, Idaho, Nevada and Puget Sound are large takers. The home demand is free. Considerable is being packed. The quantity packed is about 800 bbls short of last season to date.

CHEESE—The market continues to shade off under liberal receipts and only a fair demand. The closing is weak.

EGGS—The market is weak and demoralized, owing to two firms importing Eastern fighting each other. They are selling all of 3¢ per dozen less than it costs to lay them down.

WHEAT—The market has ruled strong but inactive during the week. On Call, more has been done. Prices have fluctuated some, but not to any great extent. Sales at to-day's Call were as follows:

Morning Session: Buyer 1888—100 tons, \$1.46½; 100, \$1.46½; 400, \$1.47; 400, \$1.47½. Afternoon Session: Spot, season's storage paid—100 tons, \$1.34. Buyer season—100 tons, \$1.34; 100, \$1.35½; 100, \$1.35½. Buyer 1888—100 tons, \$1.47; 100, \$1.47½; 100, \$1.47½; 300, \$1.47½ ½ c.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to April 23 '87.	July 1 '87 to April 21 '88.
Flour, qr. sks.....	3,739,114	3,098,477
Wheat, cts.....	11,412,541	7,704,779
Barley, cts.....	2,017,639	1,991,905
Oats, cts.....	118,600	146,891
Potatoes, sks.....	726,383	974,642
Corn, sks.....	84,259	201,333
Rye, sks.....	21,697	16,053
Buckwheat, sks.....	5,865	3,054
Beans, sks.....	412,092	379,696
Bran, sks.....	388,999	426,092
Hay, tons.....	87,155	100,474
Salt, tons.....	19,763	13,670
Wool, bales.....	50,434	51,967
Hides, No.....	92,022	89,320
Raisins, 20-lb boxes.....	137,252	110,965
Quicksilver, flasks.....	15,389	25,311
Hops, bales.....	12,995	15,378

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to April 23 '87.	July 1 '87 to April 21 '88.
Flour, sks.....	158,767	292,052
Wheat, cts.....	738,282	1,019,843
Barley, cts.....	5,473	75
Oats, cts.....	310,076	241,505
Corn, cts.....	115,279	12,590
Wool, bales.....	9,165	7,372
Bran, sks.....	27,918	53,763
Hops, bales.....	754	508
Hides, No.....	28,795	24,237
Rye, cts.....	5,154	5,154
Potatoes, sks.....	128,479	77,834

Cereals.

J. E. Beerbohm's London *Evening Corn Trade List*, of March 29th, in its weekly review says: Some fresh reports have this week been received concerning the Indian wheat crop in the Punjab and the Bombay Presidency, which are rather more favorable than those in December last, especially concerning the Punjab, where the acreage is now returned as 5,910,300 acres, against 5,588,500 acres according to the last report, and 5,943,400 acres last year. The prospect, moreover, is now considered very favorable, late rains having fallen. In the Bombay Presidency the area sown this year is said to be 2,950,000 acres, against 2,860,454 acres last year; the yield in the most important wheat-growing districts has, however, been greatly reduced by rust, so that in many places it only amounts to half or two-thirds of a crop. In the Berar district the acreage this year is 931,601 acres, against 933,938 acres last year; the outlook is considered to be quite above an average. In the Northwest Provinces and Oudh the outlook was favorable, according to latest advices, as well as in the Central Provinces.

The April report of the Department of Agriculture places the average condition of winter wheat at 82 for the entire country, as compared with 88 on April 1st last year: The following table compiled by the New York *Produce Exchange Reporter* from Department of Agriculture reports, shows the average condition by States for the years mentioned:

	Apr. 1, '83.	Apr. 1, '87.
New York.....	94	97
Pennsylvania.....	90	70
Ohio.....	68	79
Michigan.....	76	92
Indiana.....	75	90
Illinois.....	74	72
Missouri.....	82	95
Kansas.....	97	83
Texas.....	88	79
Kentucky.....	76	92
Tennessee.....	97	94
Maryland.....	92	82
Virginia.....	91	79
California.....	99	92
Oregon.....	78	98

The following compilation shows the general average condition of winter wheat on April 1st, for the years indicated:

	Condition.	Condition.
1888.....	82 to 88½	94 to 100
1887.....	88 to 188½	80 to 100
1886.....	92 to 188½	104 to 100
1885.....	76 to 188½	85 to 100

The New York *Produce Reporter* just to hand says: Our letters to-day from the West complain of the slow progress winter wheat is making, this due to a want of moisture and the low temperature. The frequent rains in February, March and the early part of April did not do much good, as the ground was frozen, hence to insure a fair crop even, we must have copious rains this and next month. Farmers in Indiana and Illinois have already plowed up many large fields and have put in oats in most instances. In Ohio, Indiana and Illinois the crop is very irregular, very patchy, and hence it will be difficult to estimate the yield properly, and this can only be done safely and correctly after thrashing is completed. The damage done to the crop is serious in Illinois and Indiana, and they carried over very little old wheat into the new year, so that the wheat situation with them is now of more than usual interest. We notice a continued good demand for wheat for Spain and we find the quantity taken for that country since the 1st of September is considerably in excess of our estimate in our annual statement.

The *Daily Market Record* of Minneapolis, Minn., says: Wheat is now coming out of Dakota elevators as rapidly as facilities for moving it are offered by the railroads. One reason of hastening it forward from Dakota, rather than Minnesota, is that the tax assessor of Dakota assesses all that is found in Dakota elevators May 1st. There would be nothing so bad in that as to lead to active exodus, were it not that past experience shows that the average Dakota assessor knows no scruple when it comes to gathering taxes from the elevator men.

Oregon advices report a general rainstorm in the Willamette valley, which, it is claimed, will do much good to the growing crops. But even this will not make the wheat crop in Western and Eastern Oregon, and in Eastern Washington, more than a fair average—last year was largely above an average. In this State there is a more general feeling that even good, soaking rains in this month will not make more than last year's outturn, while with only light showers it will be less. In many sections the plant is hopelessly killed by the dry weather. As yet, the condition of the plant is exaggerated, but still, without rains soon, the worst is apt to be realized. In the coast counties, cool, moist and foggy weather has done a great deal of good, and the outlook is of the best, but then the grain will be fog-colored. The above will cover the outlook for oats and barley as well as for wheat.

In the local market, the past week witnessed a strong market for wheat, with few sellers. The unpromising prospects for the crop on this coast is causing stronger holding, with the more desirable straight parcels withdrawn. This action is due to the impression that a higher range of values will obtain not only on this coast but also abroad. This belief is emphasized still more by the strength of the English market, which shows, in the face of heavy arrivals of wheat off coast, an increase on passage, and the Russian ports open with an unusual number of vessels awaiting cargoes. The bears in this city claim the supply available up to July 1 to be about 275,000 tons. The writer's advices from the various warehouses and farming centers do not warrant placing it at over 200,000 tons, which by July will be reduced to less than 100,000 tons for the entire State. Some sales of choice milling wheat have been made at full prices; it is now held higher, but millers at the advance are slow buyers. Oregon continues to send us liberal supplies of both wheat and flour. The latter is sold at cut rates, which works against California millers.

Barley has held strong throughout the week, under freer buying and a lessened selling pressure. Receipts have been larger, which operated to keep the market from showing a still higher range of values. Stocks in the State, under a large consumption, are being depleted quite rapidly, particularly for the better grades. Choice to extra choice brewing are wanted by brewers in this State, Nevada, Oregon and Washington. The stock carried by them is quite light considering the low prices.

Corn has been weak under free receipts. The buying interest held off for lower prices, and consequently only take to cover immediate wants.

Oats have held to steadier prices, owing to lessened receipts. The demand has been fair, particularly for good to choice grades.

Rye, under light stocks and light receipts, shows more strength at an advance.

Buckwheat is steady.

Feedstuff.

Bran, middlings and ground barley are strong and higher. The consumption is increasing quite steadily, owing to the dry weather.

Hay has commenced in some sections, but notwithstanding which the market holds strong, owing to poor feed and a growing demand for cured feed. The crop this year, it is claimed, will hardly equal that of 1887, while the carryover with the new season will be quite light.

Fruits.

Fine maturing weather has increased the receipts of strawberries, cherries and gooseberries. The freer receipts caused values to shade off, with some daily fluctuations in prices. From the North there has been a good demand for berries.

Oranges came in the past week quite freely, caus-

ing weak prices for poor to good, but choice held strong. The North continues to draw freely.

More contracts were made the past week for future delivery of apricots. The sales reported show a gradual advance; the last being 2½¢ for Vacaville grown. In the Santa Clara valley orchardists ask from 2½¢ to 3¢. A sale of 75 tons of peaches, plums and apricots was made at Vacaville to J. Lusk & Co., at 1½¢ all around. The bulk sold were plums.

In dried fruits, the market is slow, with some shading reported to close out consignments. Montana, Idaho and Nevada are steady buyers.

In raisins, there is nothing new to report. The stock here is very light, which causes holders to maintain strong prices.

Live-Stock.

Choice, well-conditioned bullocks are scarce and fetch more money, particularly the medium-sized that cut up without wastage. Mutton sheep are weak; many flocks will soon begin to move to the mountain valley ranges. Hogs are higher and strong at the advance. Block hogs are wanted, and for which as high as 6½¢ on foot was paid the past week, although that price cannot be quoted. In milch cows, there is nothing doing. The scarcity of feed is against them. Last week's report covers this week's advices about horses.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed and one-half from the price of grass-fed, that is, animals running at large).

HOGS—On foot, grain-fed, 6½ to 6¾¢ per lb.; dressed 9½ to 10¢ per lb.; soft, 6 to 6½¢ per lb.; dressed, 8½ to 9½¢ per lb. Stock hogs, 3½ to 5¢ per lb.

BEF—Stall-fed, 8 to 8½¢ per lb.; grass-fed, extra, 7½ to 8¢ per lb.; first quality, 7 to 7½¢ per lb.; second quality, 6½ to 7¢ per lb.; third quality, 5 to 6¢ per lb.

VEAL—Choice, 9 to 11¢ per lb.; fair to good, 7 to 8¢ per lb.

MUTTON—Wethers, 6½ to 7¢ per lb.; ewes, 6 to 6½¢ per lb.; lamb-spring, 9 to 10¢ per lb.

Vegetables.

New potatoes of good size and fairly matured are wanted for shipping to the East, and also to fill more distant orders in this State. Choice find a ready sale, but small, unripe, are hard to sell, as are the carryovers. Old potatoes are slow, and sell in buyers' favor. This year's crop of potatoes will be quite large.

Onions hold strong, under light supplies and a good demand.

The supply of old cabbages is about exhausted, under the large shipping demand.

In garden truck, the market is liberally supplied with peas, rhubarb and asparagus. String beans are in better supply, as are cucumbers. Prices are setting.

Canners will commence packing peas the last of this week.

Miscellaneous.

Continued receipts of live fowls from the Missouri river keep this market easy. Choice, well-conditioned hens and roosters are wanted.

Beans are slow, owing to the supply here being generally poor.

Choice hops are wanted for both home and shipping.

In wools there is nothing new to report. Receipts show an increase, but buyers hesitate, owing to the unsatisfactory market at the East and also from the poor results of last year's business. The home woolen-mills are not disposed to bid up, unless for a choice, well-conditioned, desirable clip.

An evidence of the sluggishness of grain is the continued abundance of freight-room. Wheat would be taken as ballast if obtainable, while a number of vessels have turned their bows to the sugar districts for cargoes home. It is reported that 110 steamer loads of Russian wheat are ready, destined for England.

The interruption of the brewers' business, caused by the lockout, has noticeably cut off local attention to hops, and English advices do not encourage exporters. All high-class lots, however, are firm, and former rates are named generally. Little credit is given to the reports of a contemplated decrease of the cultivation in this State.

Hides continue without important business. For special wants, for selections of Rio Plata grades 16½ has been paid. Sellers do not revise the last list.

Raisins are firm, and are likely to go to a complete clear-out.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way.....	400,238	224,792
In port, disengaged.....	64,894	122,835
In port, engaged.....	12,271	3,862

Totals..... 477,403 351,489

To obtain the carrying capacity, add 60 per cent to the tonnage.

Tonnage on the way to Oregon, 22,835; tonnage at Portland, Oregon, loading and to load, 19,572. Total tonnage, 42,407.

How It Strikes Some Readers.

"I have been a constant reader of your paper for over two years and have received much valuable information from it."—J. P. R., Gilroy.

"Your paper is a valuable one, and it affords me much pleasure."—J. D., Denver, Col.

The PACIFIC RURAL PRESS must change its contents, or we must remain a lifetime subscriber."—G. W. W., Downey.

POLLED ANGUS CATTLE.—Readers who may be interested in the growing popularity of the black hornless cattle will not overlook the announcement in this issue of a large band of Polled Angus bulls and heifers (thoroughbred and grades) which are offered in Sacramento by Dr. G. M. Dixon. The cattle are from his Loupvalle stock ranch, Nebraska. Some of the cattle will show the results of the Angus cross, which is an interesting point. An advertisement of the stock may be found on another page.

On the old Bliss place, just northwest of Marysville, is a black walnut tree that measures two feet two inches in diameter.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, April 25, 1888.

BEANS AND PEAS.			POTATOES.		
Bayo, 00.....	2 00 @	2 25	Paper shell.....	15 @	—
Butter.....	— @	—	Brass.....	11 @	12
Red.....	3 40 @	3 65	Pecans.....	10 @	16
Pink.....	2 20 @	2 50	Peanuts.....	4 @	6
Large White.....	3 40 @	3 60	Hickory.....	10 @	12
Small White.....	3 40 @	3 70	Hickory.....	5 @	6
Lima.....	3 25 @	3 65	New.....	50 @	1 00
Old Peas, blk eye	2 00 @	2 10	Burbank.....	75 @	90
do green.....	2 00 @	—	Early Rose.....	30 @	40
do Miles.....	2 00 @	—	Cuffey Cove.....	— @	—
	2 10 @	—	Petaluma.....	40 @	55
BROOM CORN.			Tomales.....	45 @	55
South'n porton.....	60 00 @	80 00	River reds.....	25 @	40
North'n porton.....	60 00 @	80 00	Jersey Blues.....	— @	—
CHICKEN.			Humboldt.....	— @	—
California.....	6 @	7	do Kidney.....	— @	—
German.....	7 @	8	Peachblows.....	60 @	70
DAIRY PRODUCE, ETC.			Chile.....	— @	—
			do Oregon.....	— @	—
Cal. fresh roll, lb.	30 @	25	Fats.....	60 @	70
do Fancy brands	28 @	—	Salt Lake.....	— @	—
Pickle roll.....	— @	—	Sweet.....	— @	—
Firkin, new.....	— @	—	POULTRY AND GAME.		
Eastern.....	18 @	20	Hens, doz.....	6 50 @	8 00
EGGS.			Roosters.....	7 00 @	13 00
Cheese, Cal., D. B.	9 @	12	Broilers.....	4 50 @	8 50
Eastern style.....	10 @	13	Ducks, tame.....	9 00 @	13 00
			do Mallard.....	— @	—
Cal., ranch, doz.	20 @	—	do Sprig.....	— @	—
do store.....	19 @	—	Geese, pair.....	1 50 @	2 00
Ducks.....	— @	—	do Goslings.....	2 50 @	3 00
Oregon.....	— @	—	Wild, doz.....	— @	—
Eastern.....	14 @	—	Turkeys, D.....	18 @	22
FEED.			do Dressed.....	— @	—
Ryan, ton.....	15 50 @	17 50	Turkey Feathers.....	— @	—
Feed meal.....	30 00 @	31 00	Red tail.....	— @	—
Gr'd Barley ton.....	19 00 @	21 00	Snipe, Eng. doz.	— @	—
Hay.....	10 00 @	18 00	do Common.....	— @	—
Middlings.....	17 50 @	20 00	Doves.....	— @	—
Oil Cake Meal.....	32 50 @	—	Quail.....	— @	—
do new process.....	25 @	—	Rabbits.....	1 00 @	1 25
Straw, bale.....	45 @	65	Hare.....	1 00 @	1 50
			Venison.....	— @	—
FLOUR.			PROVISIONS.		
Extra, City Mills.....	4 00 @	4 35	Cal. Bacon.....	11 @	12 1/2
do Co'ntry Mills.....	3 75 @	4 00	Heavy, lb.....	12 @	—
Superfine.....	3 25 @	3 50	Medium.....	12 @	—
GRAIN, ETC.			Light.....	12 1/2 @	—
Barley, feed, 00.....	72 @	87 1/2	Extra Light.....	13 @	—
do Brewing.....	95 @	1 15	Lard.....	9 @	11
Chowder.....	1 25 @	1 50	Cal. Smoked Beef.....	11 @	12 1/2
do Coast.....	95 @	1 15	Hams, Cal.....	12 @	14
Buckwheat.....	1 75 @	2 25	do Eastern.....	14 @	15
Corn, White.....	1 32 1/2 @	1 37 1/2	SEEDS.		
Yellow.....	1 25 @	1 30	Alfalfa.....	8 1/2 @	9
Small Round.....	1 27 1/2 @	—	Canary.....	3 @	4
Nebraska.....	1 50 @	1 65	Olive red.....	11 @	12
Oats, milling.....	1 25 @	1 40	White.....	20 @	22
do good.....	1 32 1/2 @	—	Oatton.....	20 @	—
do fair.....	1 30 @	—	Flaxseed.....	2 @	3
do black.....	1 30 @	1 40	Hemp.....	4 @	4 1/2
do Oregon.....	— @	—	Italian Ryegrass.....	10 @	11
Rye.....	1 75 @	2 10	Perennial.....	7 @	9
Wheat milling.....	4 04 @	—	Millet, German.....	5 @	6
do choice.....	1 38 1/2 @	—	Red Top.....	5 @	6
do fair to good.....	1 36 1/2 @	—	Mustard.....	2 @	2 1/2
Shipping choice.....	1 35 @	1 36 1/2	Brown.....	3 @	3 1/2
do good.....	1 32 1/2 @	1 33 1/2	Rape.....	1 1/2 @	2
do fair.....	1 30 @	1 31 1/2	Ky. Blue Grass.....	15 @	17
HIDES.			2d quality.....	13 @	15
Dry.....	11 1/2 @	12	Sweet V. Grass.....	7 @	8
Wet salted.....	5 1/2 @	6 1/2	Orchard.....	17 @	18
HONEY, ETC.			Red Top.....	9 @	10
Beeswax, lb.....	21 @	25	Hungarian.....	30 @	40
Honey in comb.....	11 @	15	Mesquit.....	8 @	9
Honey in comb.....	16 @	17 1/2	Timothy.....	7 @	—
Extracted, light.....	6 1/2 @	7 1/2	TALLOW.		
do dark.....	5 1/2 @	6 1/2	Crude, lb.....	2 @	4 1/2
			Refined.....	6 @	—
HOFS.			WOLLS, ETC.		
Oregon.....	6 @	15	Humboldt and.....	18 @	20
California.....	6 @	15	Medocino.....	18 @	20
ONIONS.			Sect's valley.....	15 @	18
Pickling.....	— @	—	Free Mountain.....	18 @	21
Red.....	— @	—	N'hern defective.....	— @	—
Silverskins.....	3 00 @	4 25	S Joaquin valley.....	10 @	15
Cut.....	2 @	2 35	do mountain.....	12 @	15
NUTS—JOBBING.			Cava's & F'n'll.....	15 @	18
Walnuts, Cal. lb.....	8 @	10	Oregon Eastern.....	15 @	20
do Chile.....	8 @	—	do valley.....	18 @	22
Almonds, hdshl.....	5 @	7	Southern Coast.....	— @	—
Soft shell.....	12 @	13			

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, April 25, 1888.

Apples, bx com.....		do evaporated.....	
do choice.....	— @ —	Peaches.....	9 @ 10 1/2
Apricots, lb.....	— @ —	do pared.....	— @ —
Bananas, bunch.....	2 50 @ 4 00	do evaporated.....	20 @ 25
Blackberries, ch.....	— @ —	Pears, sliced.....	4 @ 7 1/2
Cantaloupes, cr.....	— @ —	do qtd.....	4 @ 7
Cherries white bx.....	1 25 @ 1 75	do evaporated.....	11 @ 12
do black bx.....	2 00 @ 3 00	Plums, evapo'd.....	11 @ 12 1/2
do Royal Ann.....	— @ —	do unpitted.....	4 @ 7
Cherry plums.....	— @ —	Prunes.....	7 @ 10
Crabapples.....	— @ —	do French.....	8 @ 11
Cranberries.....	10 00 @ 12 00	Zante Currants.....	8 @ —
Currants ch.....	— @ —	RAISINS.	
Gooseberries lb.....	8 @ 12 1/2	Dehesa Olus, fcy.....	3 25 @ 3 50
Figs, black bx.....	— @ —	Imperial Cabin.....	— @ —
do white bx.....	— @ —	et. fancy.....	2 00 @ 2 25
Grapes, white.....	— @ —	Crown London.....	— @ —
do black.....	— @ —	Layers, fcy.....	2 00 @ 2 25
do Rose Peru.....	— @ —	do Loose Muscatels, fancy.....	1 90 @ 2 10
do Muscat.....	— @ —	do Loose Muscatels.....	1 60 @ 1 90
do Tokays.....	— @ —	Cal. Valencian.....	1 60 @ 1 80
Isabel.....	— @ —	do Layers.....	1 50 @ 1 61
Wine, Zinfandel.....	— @ —	do Sultanias.....	1 60 @ 1 75
do Mission.....	— @ —	Dried, sacks, lb.....	5 @ 6
Limes, Mex.....	7 00 @ 9 00	Outside brands of raisins	sell at from 25 cts to 50 cts less than above quotations.
do Cal. box.....	— @ —	Fractions come 25, 50 and 75 cents higher for halves, quarters and eighths.	
Lemons, Cal, bx.....	1 00 @ 2 50	VEGETABLES.	
do Sicily, box.....	4 00 @ 5 00	Artichokes, doz.....	— @ —
Nectarines box.....	— @ —	Asparagus bx.....	50 @ 1 00
Oranges, Com bx.....	1 50 @ 2 00	do extra choice.....	1 25 @ 2 50
do Choice.....	2 25 @ 4 00	Okra, dry, lb.....	15 @ 20
do Navel.....	— @ —	do green bx.....	2 50 @ 3 25
choice.....	3 50 @ 5 00	Peanuts, oil.....	8 @ 10
do do Com.....	2 00 @ 3 00	Peppers, dry lb.....	10 @ 15
do Panama.....	— @ —	do green, lb.....	10 @ 15
Peaches, bx.....	— @ —	Pumpkins prto.....	— @ —
Crawfords, bx.....	— @ —	Squash, Marrow.....	— @ —
do choice.....	— @ —	fat, too.....	— @ —
Pears bx.....	— @ —	do Summer bx.....	20 @ 25
do choice.....	— @ —	String beans lb.....	— @ —
do Bartlett, bx.....	— @ —	Tomatoes box.....	3 00 @ 4 00
Persimons.....	— @ —	do choice.....	— @ —
Jap, bx.....	— @ —	Turnips oil.....	1 00 @ 1 25
Pineapples, doz.....	2 50 @ 4 50	Beets, sk.....	1 25 @ 1 40
Plums lb.....	— @ —	Cabbage, 100 lb.....	1 25 @ 1 40
Pomegranates lb.....	— @ —	Jarrots, sk.....	30 @ 50
Prunes lb.....	— @ —	Eggplant, 1/2 bx.....	— @ —
Quinces bx.....	— @ —	Green Corn, cr.....	— @ —
Raspberries ch.....	— @ —	do sweet cr.....	— @ —
Strawberries ch.....	4 00 @ 8 50	do large box.....	— @ —
Watermelns, 100.....	— @ —	Green Peas, sk.....	50 @ 75
DRIED FRUIT.		Sweet Peas sk.....	75 @ 1 50
Apples, sliced, lb.....	6 @ 11	Lima Beans lb.....	— @ —
do evaporated.....	10 @ 13	Mushrooms, lb.....	5 @ 25
do quartered.....	11 1/2 @ 13	Rhubarb bx.....	75 @ 1 25
Apricots.....	8 1/2 @ 10 1/2	Cucumbers, doz.....	50 @ 1 00
do evaporated.....	15 @ 17		
Blackberries.....	12 1/2 @ 15		
Onions.....	18 @ 25		
Dates.....	5 @ 10		
Figs, pressed.....	5 @ 6		
Figs, loose.....	3 @ 4		
Nectarines.....	8 @ 11		

FROM one to four carloads per day of canned salmon and large quantities of fresh fish packed in ice go East daily from Portland, Oregon.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S.Francisco.				Fresno.				S. L. Obispo.				Los Angeles				San Diego.							
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.								
April 19-25.																																								
Thursday.....	.00	74	S	Cl	.00	52	N	Cy.	.00	78	S	Cl.	.00	72	S	W	Cl.	.00	57	W	Cy	.00	82	S	Cl	.00	64	N	W	Cl.	.T	72	W	Cl	.00	66	N	W	Cl	
Friday.....	.03	68	N	Fr.	.00	58	N	Fr.	.00	80	S	Cl.	.00	76	S	S	Cl	.00	63	W	Cl.	.00	84	E	Fr.	.00	63	S	S	Fr	.00	66	S	Cy.	.00	66	S	W	Cy.	
Saturday.....	.01	70	N	Cy.	.00	54	N	Cy.	.00	86	N	Cl	.00	78	N	W	Cl.	.03	63	S	W	Cl	.00	86	S	E	Cl.	.00	68	S	W	Fy.	.00	66	S	Cy	.00	64	W	Cy.
Sunday.....	.00	66	S	E	Cy.	.01	54	N	E	Fr.	.00	76	S	S	Cl	.00	66	S	W	Cl	.00	82	N	Cl.	.00	63	W	W	Cl.	.00	64	W	Cy.	.00	66	N	W	Cy.		
Monday.....	.00	62	S	Cy.	.00	56	W	Cy.	.00	72	S	Cl	.00	74	S	S	Fr.	.03	61	W	Fr	.00	72	W	Cy.	.00	63	W	W	Fr.	.08	66	W	Cy.	.01	64	W	Cy.		
Tuesday.....	.18	54	S	Cy.	.00	54	N	W	Cl.	.00	66	W	Fr.	.00	64	N	W	Fr	.00	58	W	Cl	.02	64	W	Fr.	.00	55	W	Fr	.01	62	W	Cy.	.00	68	S	W	Cy.	
Wednesday.....	.30	54	S	Cy.	.26	52	N	W	Fr.	.T	62	N	Cl.	.01	56	W	Cl	.00	58	W	Cl	.00	60	N	Fr.	.00	55	W	Fr	.01	64	W	Cl	.T	60	W	Fr.			
Total.....	.49				.27				T				.01				.00				.02				.00				.10				.01							

EXPLANATION.—1. for clear; Cy, cloudy; Fr, fair; Fy, foggy; — indicates too small to measure. Temperature, wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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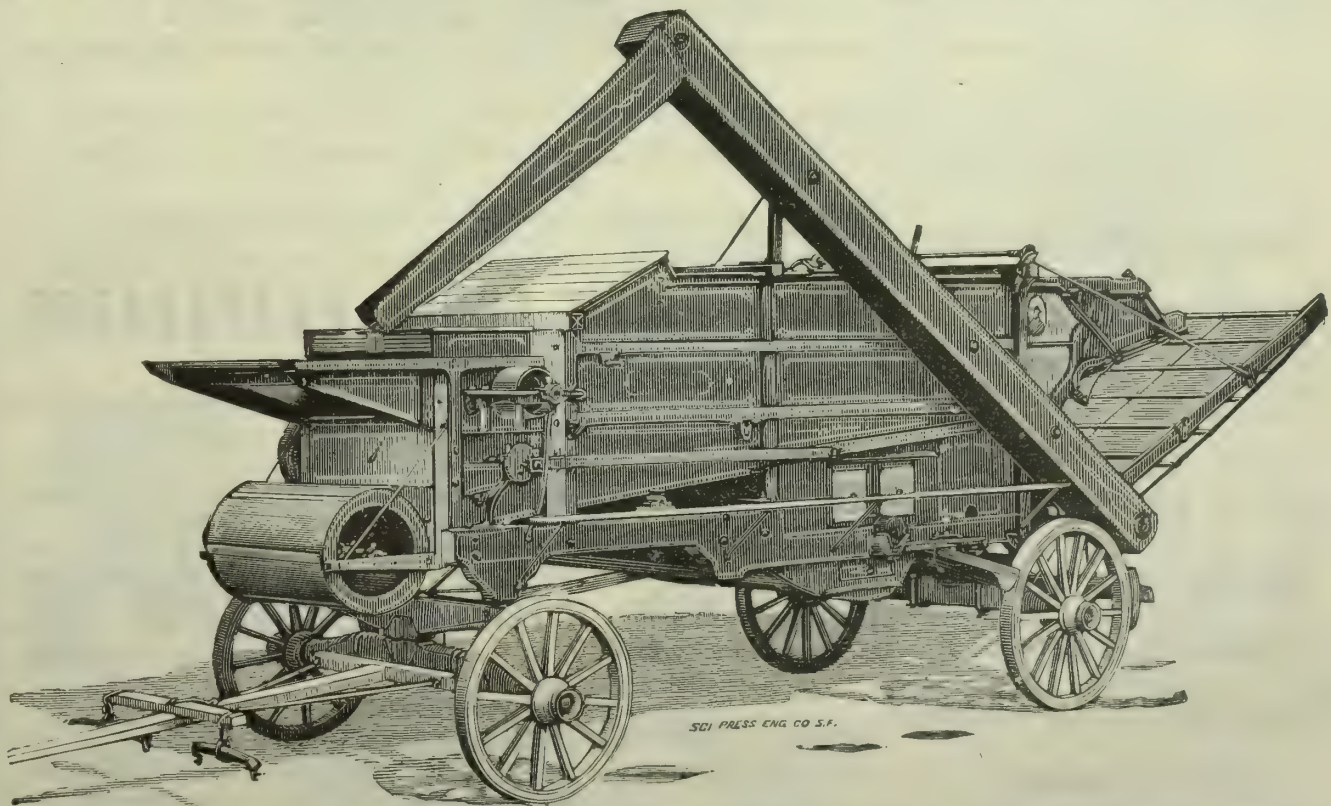
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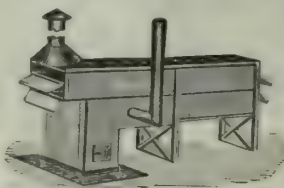
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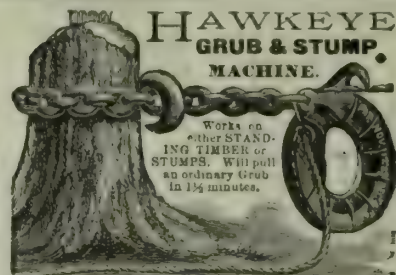
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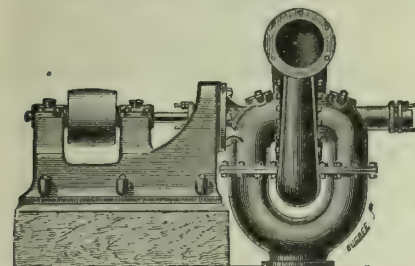
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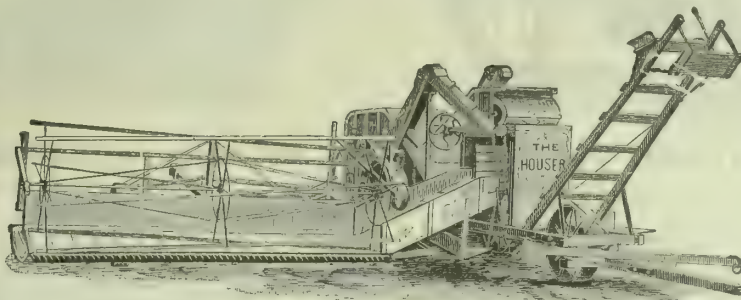
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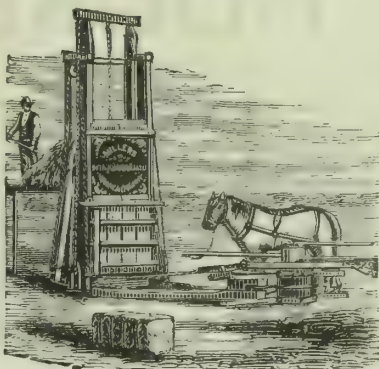
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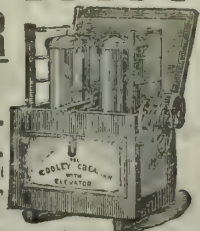
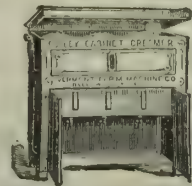
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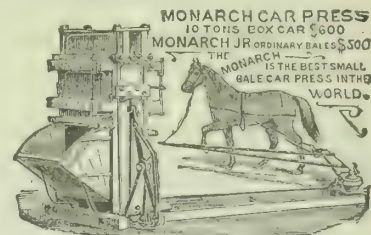
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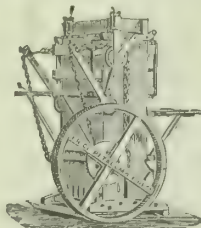
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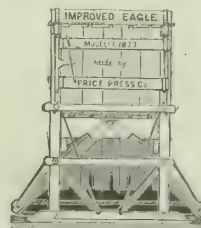
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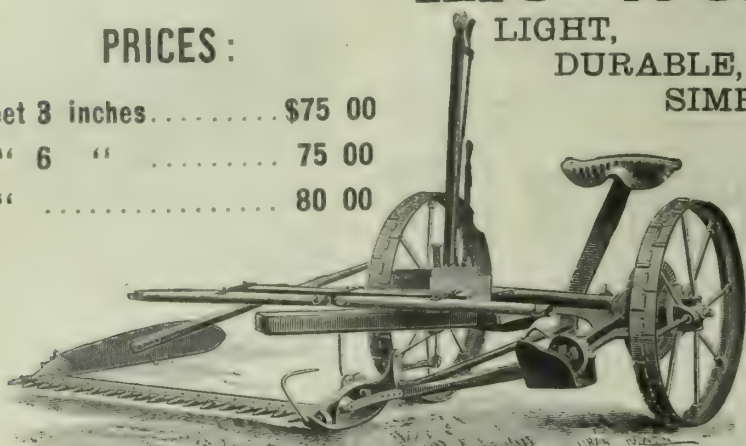


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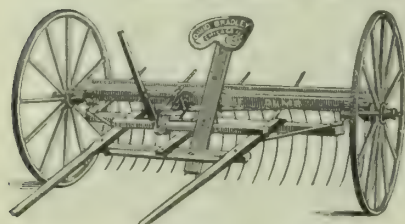
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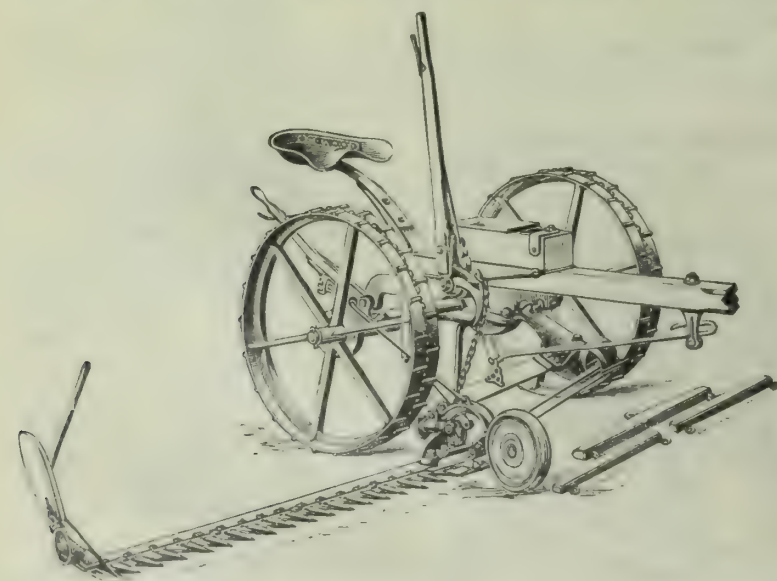
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Vol. XXXV.—No. 18.

SAN FRANCISCO, SATURDAY, MAY 5, 1888.

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Sequoia Gigantea.

As the season for the annual outing approaches, thought naturally turns to the old and yet ever new features of scenery which

head of Deer creek on the south, a distance of about 200 miles. Rarely does one of these great cedars fall; they seem almost as imperishable as the granite on which they grow. "The great sequoian ditches, dug at a blow by their

redwoods, for gigantic size. A tree from 300 to 400 feet high and 30 feet thick in the trunk is a great curiosity, and yet we have a number of such curiosities.

In the Calaveras Big Tree Grove there are

press any one with a realizing sense of the vastness of the trees, without some realistic comparison. A daily stage-coach has been driven through one, 120 children and a piano crowded into another, theatrical and cotillion perform-



GRIZZLY GIANT, MARIPOSA BIG TREE GROVE.

give California a place of her own among the political divisions of the earth's surface. Though the air is full of notes of progress, though new lines of travel are making accessible many new and interesting regions, the grand objects of interest which have given us world-wide fame lose none of their charm.

The sequoias are prominent features in the scenery of California. They are the mammoths among trees, the Methuselahs of the forest. The sequoia timber-belt along the Sierras extends from Calaveras on the north to near the

fall, and the tree tumuli, always turned up beside the deep root-bowls, remain, but not a vestige of one outside the present forest has yet presented itself; hence the area has not been diminished during the last 8000 or 10,000 years, and probably not at all in post-glacial times." The common notion, therefore, that this species tends toward extinction more than others seems absurd, for so far as mundane appearances are concerned their vital vigor is assured for ages to come. No known trees of the world compare with them and their kin, the

150 trees more than 15 feet in diameter, and ten that are about 30 feet. One of these fallen monarchs must have been 450 feet high and 40 feet in diameter. The "horseback ride," as it is called, one of the wonders of the grove, is a hollow trunk through which a man can ride upright on horseback 75 feet, and theatrical performances have been given in it. The State grove, in Mariposa county, is 15 miles south of Yosemite, and has 427 trees, including 134 over 15 feet in diameter, 18 over 25 feet and three over 33 feet. Language is inadequate to im-

ances given on the smooth stump of another. A single tree would furnish two-rail fencing 20 to 30 miles. The cut on this page may give one some idea of one of these Mariposa giants.

It is a direct reproduction from a photograph by Taber, being a photograph made by the Dewey Engraving Co., thus accurately and expressly made for our columns. It brings out the immensity of the tree better than any other engraving we have seen. It portrays the vast bulk of the base from which one can better understand the natural elevation.

HORTICULTURE.

Propagation of Orange Trees.

[An essay read at the Santa Barbara Convention by M. BALPINE, of Covina, Los Angeles county.]

Some time ago your secretary informed me that I had been selected to prepare for this occasion an essay "How to Propagate Orange Trees," and in order to achieve brevity in doing so, I shall present such facts only as have come to my knowledge. Do not expect me to cover the ground as fully as might be desired. I have been in the business only five or six years, and have only learned just enough to enable me to realize how little I know about it. Besides, it could not be done in such a paper as could be read before this meeting. I shall not consume your time with theories or references to text-books or consular reports. You can get what there is in them at home and at your leisure. Neither shall I attempt a formula and insist that it apply to all places and conditions alike. I propose to treat the subject in a very plain, practical way, and if I repeat much of what I have said at various times before our County Society, it will be because my results have been so satisfactory that I would not change my methods.

The propagation of orange trees necessarily involves the conditions requisite to make a success. As this is the foundation upon which we propose to build, great care should be taken to make no mistake here. It takes too long to correct it. It is a well-known fact that certain vintages will give a flavor and bouquet much superior to other localities that money will hardly buy them. Certain localities only will give the most delicate aroma in tobacco, tea and coffee. Many of you are no doubt aware that the nurseries near Geneva in Central New York sell trees to all parts of the East. There is a reason for it. The conditions there furnish the material to make a better tree than those grown in most other localities.

Now, when you begin to make your program for propagating orange trees, the first thing to be considered is the selection of such a place for your seed-bed as will combine all the elements necessary to give a strong and healthy plant. Time and money would be well expended in visiting many places and noting where the best trees are grown and the conditions obtaining there. In this way you get a practical working test which is better than an analysis of soils. I would select a rich chocolate marl and fine sand, with just a little reddish clay in it; not so much that it would get stiff with irrigation. This will give you an abundance of fine, fibrous roots. If you plant in heavier land you will get a heavier tap-root, with so few fibers that the tree will suffer severely in transplanting. Plow deep and pulverize well. A light dressing of ashes well mixed will discourage the worms, which are sometimes troublesome. Lay off the grounds and make beds say 14x42, with narrow walks all around them. Use the spirit-level so that water will stand the same depth on every part. Put up earth from four to five inches high on the borders.

We are now ready for the seed. In man we recognize such a thing as inherent constitutional vitality, or "life principle." In animals we propagate with reference to it. The same thing obtains in the tree family. So far as my own experience and observation go, I am satisfied that stock grown from Tahiti seed will inherit this life principle in larger measure than that produced from any other source. A very large proportion of the trees in market are raised from "California windfalls," because they cost nothing. They are raised to sell, and only an expert can tell the difference. As to the "sour stock" which propagates itself in Florida and is being used here to some extent, some years will be required to determine definitely its value. All that has been planted in this locality has a rather pale, yellowish color which I do not like. I very much prefer the deep, dark green as indicative of a stronger life. All other "sour stock" has been fully tested and rejected. Lemon and lime promised well for a time, as the continual flow of sap would push a bud faster than the orange, but latterly the verdict against them has been unanimous. While I would not discourage experiment in any direction, I would rely upon stock grown from Tahiti seed until better results have been fully established for something else.

To Obtain the Seed.

Go to any importing fruit-house and ascertain when they will have a cargo of oranges from Tahiti. Many of them will be decayed. Have a man there to select the largest, pack them in barrels and ship them in pulp. When they come to hand, wash out and plant. Do not permit them to dry. Cover nicely, say $\frac{1}{2}$ to $\frac{3}{4}$ of an inch. Now cover the whole bed with clean sand one inch, as you cannot cultivate and must irrigate while in seed-bed. This will keep the weeds from starting and the ground from baking. A barrel should give 1500 to 2000 plants. Now put up posts and stretch bales to represent ridge-pole and plates. Cover with very thin cotton cloth. This will protect the young plants from the sun and permit free circulation of air underneath. Irrigate always before the plants begin to show that they need it.

The month of May is a good time to plant.

At about the same time next year transplant the nursery.

Have the ground thoroughly irrigated and well prepared. Plant far enough apart for convenience in cultivating, and a foot apart in the row. Bear in mind that you must have sand and marl with but little clay to furnish the mass of fibers you will need when transplanting to orchard. When growth conditions are well defined, put up a tent to protect fibers from sun and wind while handling. Make a box with one open side, face that side north, take up about a hundred and carry to the tent and assort into 1st, 2d and 3d, and grow and heel in until the planters come for them. Let them take in a similar box about the same number. Plant with dibble, taking care to close solid around plant at bottom. Handled in this way, all should live. They should not even lose their foliage, and the growth which has just started should come on pretty much the same as if they had remained in seed-bed. Now irrigate just enough to furnish requisite moisture, and cultivate so thoroughly that weeds will have no chance to start. Do no pruning except to keep the way open for horse and cultivator for 18 months.

Budding.

If trees have made a strong, thrifty growth, I would set buds in the fall. In my locality I can generally get buds and trees in condition in October. Buds should be cut from vigorous, healthy, bearing trees only. Sometimes several buds should be rejected from the heavy end of a stick, because imperfectly developed, and on tip end they will be too sharp and thin. I prefer to set buds in the fall, as they are then well developed and ready for the February growth.

The most important feature in the budding is the tying. I would just touch with wax after slipping in the bud, before putting on the string. Then be sure the top is well secured. I have often seen buds loose at the bottom, living, while all I ever saw loose at top were dead. I prefer to let the strings crease the bark pretty well before taking them off. As growth conditions come on I cut off the tree about four or five inches above the bud, and cover with wax to keep the wood alive until it is all healed in. When the bud is large enough to carry all the sap, select a period of non-growth and stamp off to a shoulder with the bud and again cover with wax. This cut I would make with a saw, and as nearly level as may be.

Ground should be kept loose in the tree-row, otherwise klinker or scoria will form on the bark and originate "gum disease." If this should occur you may save the tree by scraping thoroughly to sound wood.

The method here outlined has given me Washington Navel buds, ten feet high at one year, and with good body and well branched, with a tree taper like a carriage whip, carrying white wood, and rounding cane well to top. Such a bud, with very large leaves and dark-green, wax-like surface, furnishes the most conclusive evidence that conditions were good and methods correct.

I use no fertilizer in seed-bed or nursery. The nurseryman or orchardist can well afford some time and money in quest of such trees, or the locality which will in its normal condition produce them. The next business in order is

Transplanting to Orchard.

Here, again, conditions must govern. I prefer to do this at one year also because there is much less top to cut away than at two years old. The second year's growth on such a bottom is enormous, is inclined to mature wood and put on fruit, and has to be cut away if left in nursery, when, if removed to orchard, such growth as is wanted can be forming the permanent top, and the rest can be thumb-pruned away without shock or check to the plant. As trees are to be taken from nursery in spring, I strip the cane pretty close in early winter, then tip with wax every raw place. It is then healed over, the tree re-covered, and there is not much to do when planting-time comes, but to cut off so much of the top as would come above your six-foot stake. My trees carry this height nicely from nursery to orchard with stake for support. The first business the cane does will be to clothe itself from the bottom up, and you have a tree at once. I like this method for another reason. The first growth is strongly inclined to be lateral, with a downward tendency. If that is taken off the next growth will be nearly at an angle of 45 degrees, and the tree can be readily shaped to carry a heavy load of fruit. This method I consider a very important feature in the foundation of a tree, and never having seen it adopted or suggested in any of the books, I claim it as an original discovery and solicit investigation. Five thousand such trees planted in my own orchard two years ago will verify what I claim for it.

As to the proper time to transplant, again consult conditions and be governed by them. Seasons vary very much, and it is not safe to name the day, week or month. When the buds are swollen to bursting, and new growth just starting, that is the time to take the tree from nursery to orchard. If there would be danger of subsequent frost, wait until such conditions are again on, when this growth has hardened. In my locality I very much prefer planting in February. Trees are then well established before the hot weather comes on. I finished transplanting the 25th of February, and the young growth just starting came on about the same as if trees had remained in nursery. When you find the tree in proper condition, cut it

back and cut the tap-root to hold it there. See that ground is well prepared. Lay it off and secure your force. I would plant budded trees 24 feet apart each way; seedlings, 30. Have everything in readiness before you touch a tree. If a norther should come on just as you are ready, stop and wait until it is over. When weather is favorable, put some of your men to raising trees, some to digging holes and some to hauling. Cover with wet blankets as soon as out of the ground. If sun is shining hot, or you have far to haul them, I would grout them, but there is so much danger that the grout may be permitted to dry or harden on the fibrous roots, that I would almost be willing to say dispense with it entirely. I have never yet sacked a single tree, and latterly I have not grouted. I have made a success in packing to haul 40 miles without it. Sacking necessitates more root-pruning than I am willing to do. If land is deep marl and sand, as it should be, cut tap-roots 24 inches, dig holes 30 inches and set crown-roots six inches below dry earth. I insist upon more tamping than most men are willing to do, but my trees live and do well. I ride no hobbies. I will adopt another man's methods when I see that he gets better results than I do. If a little space is left open anywhere on the tap-root, or the ground is left so loose that the first irrigation will open one, the bark will rot there and all below it is lost. I have two tampers and one shoveler to each setting-board, and dirt is filled in no faster than it can be made solid. I never plant orange trees to get done, never leave a tree until the work is well done. One tamp stick should be quite small to work among the roots. Tamp the bottom solid up to the crown-roots, then cover them and let one man tamp with his feet. A tank-wagon should follow the setters and give each tree a bucket of water. As soon as the water has disappeared, cover up with loose earth. Now the tree has what is indispensable—something to preserve the old life until the new life begins. One bucket of water at this time is worth more than a flood a few days after. Your citrus tree cannot wait until you have finished the plot.

Now stake the tree and tie it, otherwise the wind will move it back and forth, packing the earth on either side, until a little space is opened around the cane where the air can penetrate to the crown-roots and evaporate the moisture. Put a little straw, half composted, on top before the hole has been quite filled; put a little earth on it to keep the wind from blowing it away. Now paper the trunk; it keeps the jack-rabbits from eating it, prevents young growth from starting where it is not wanted, and protects the bark from the reflection from the sand, otherwise the south side will be hide-bound. Try it with your knife; it will not slip, and you will find free circulation of sap on the north side only. You must protect the trunk from the ground up until the foliage will do it. Now the work is done. Ninety-five per cent of the trees will live and make a growth at first growth period after they are established in their new home. Handled in this way without sacks or grout, I planted two years ago about 6000 and did not lose a dozen trees. Now station a man there with a shotgun with instructions to use it for business on the first man who comes along with a load of white stakes marked "Lot 1 in Block A," and keep him there until your orchard comes to bearing, and it will then be difficult for him to persuade you that the stakes will yield a better crop than the trees.

Citrus trees should never be distributed ahead of the planters, or allowed to suffer a moment in any way at any stage of the business, or a check will result. If severe, a stunt will follow, from which it will be difficult to get a good recovery. There is but one course to pursue with a stunted tree—put up the best sucker coming from near the bottom and train that to a stake for the future tree. When it has made a strong growth, cut off the old stem to shoulder with it as with a bud in first instance.

Care of Orchard.

Irrigate just enough to furnish requisite moisture, and no more. Cultivate and mulch thoroughly after every irrigation. Nothing will kill the tree so surely, or more quickly, than to irrigate and let the ground bake around it. Never let a weed show itself in the orchard, and do not plant peas, pumpkins, potatoes or anything else there, as many do. Carefully watch the young growth, and thumb-prune away such as is not wanted, reserving that which goes up at a proper angle to support the heaviest weight.

I crown my trees low, and shape them like an egg, big end down. Many people keep the stem as smooth as a walking-stick up to a nice little tuft on top. I often wonder why. The Japanese pursue this course when they wish to permanently dwarf a tree. The more foliage you have the stronger will be the life and growth of your tree. Control the growth, but do not destroy it until you can spare it. This can be done by pinching the ends.

Watch closely for scale at all times, both in nursery and orchard. If you find any, go after them with starch, pure and simple, 30 or 35 pounds to 100 gallons water. Cook properly and spray, using pretty hot. It will not hurt the fruit or foliage and will kill every scale it reaches, and that is all that can be accomplished by a more expensive process.

Conditions of Success.

If a decided success is not achieved here, all the time and money spent in the propagation of orange trees is a dead loss. In order to achieve

the best results, certain conditions are requisite in the man who is engineering the plant. He must recognize the fact that certain inexorable laws have been ordained to govern. He must find them out and get into harmony with them. Spasmodic effort will not do. He must have painstaking and perseverance well developed. He must put on his "never-wear-out" overalls, go into the nursery, and stay there until there is nothing left of them but the buttons. He must know more this year than he did last all the time. He must be "clock-full" of trees, and love them so well that he will not leave them to engage in some other business, or depend entirely upon employees. He must secure the proper facilities for establishing perfect conditions, and see to it that they are always maintained from the seed to the fruiting.

There is, perhaps, no other fruit business so exacting in its requirements as orange culture. Be assured that nature will not depart from her established methods for our special accommodation. It is well to "watch and pray," but we must "fertilize, cultivate and spray" at the same time in order to get "fancy" results. In the golden days of Forty-nine and Fifty, some men came here with a coffee sack and a little scoop, expecting to fill it in a few days when they got to the "diggings." Later on I saw them with the empty sack waiting for the "old man" to send them money to get home with. Latterly some men have come here from the East expecting to see the "green-peas and strawberries" make their appearance on the sage-brush and tar-weed, because this is "Glorious Southern California." They have been disappointed and have written back some diabolical letters; while those who have fulfilled the "conditions precedent" by nature's requirement have prospered as no other people have done on the face of the earth since the white man found it, and we are yet in the incipency of development.

Now, in conclusion, let me say "Queen Pomona" permits no violation of law in her domain without exacting a penalty. She makes no mistake in the distribution of her favors, and only those who have deserved it may expect to secure her choicest treasure—the "Golden Apple of the Hesperides"—in full perfection, or hope to realize all the beauty there is in the bud and blossom, and the "golden fruit" which will command the "golden coin" on presentation.

Walnut Culture.

[An essay read at the Santa Barbara Convention by JOSEPH BENTON, Goleta, Santa Barbara county.]

The culture of the soft-shelled walnut as practiced by me is the same as for the common nut and all stone fruits. The seed should be planted in beds during the month of January, and covered about one inch deep, and kept moist, but not wet, until they germinate, which will be in about three or four weeks, according to the temperature at that time.

As soon as they crack and show the sprout, they should be transplanted to the nursery rows, $4\frac{1}{2}$ to 5 feet apart, and 6 inches apart in the row. They will grow the first year without irrigation 6 to 12 inches, and with irrigation 6 inches to four feet; the second year from 4 to 8 feet without irrigation, and about the same with it. I cultivate all without irrigation, and think they make a better tree to plant where irrigation is not to be practiced.

The best aged tree to plant is two years old; not that I think the age makes any difference, but the trees at that age are of a size that they can be seen, and no danger of getting damaged while cultivating. In careful hands I believe one-year-old trees as good or better; and perhaps it would be better still to plant the seed where you want the orchard tree to grow; but if planted in this way, great care must be taken for two years in cultivating, that they do not get trodden down and the tops broken off, which makes the orchard uneven and unsightly.

When planting two-year-old or large trees they should be selected, planting the largest trees first, and keep on doing so until the orchard is finished; by doing so you can get trees of equal size together.

Some say it will not do to plant the seed where you want the tree to grow, that it must be transplanted, and the tap-root cut to make it fruit. I have tested this claim and found it a fallacy, and find nuts planted alongside of one-year-old trees; all have proved prolific, and are larger trees than those one year older. If this theory was true, I think the gopher would attend to the root-pruning generally, and we should feel thankful that the gopher, or some other rodent, struck the tap-root of the first walnut trees.

The soft-shell walnut should be planted in orchard form, 40 by 40 feet. It is more upright in its growth than the common walnut, and will do as well 40 by 40 feet as the hard-shell will 50 by 50 feet.

Low-growing crops can be cultivated for several years in the walnut orchard, until they commence to fruit. Beans and squashes are preferable to potatoes or root crops, as those attract the gopher, who is very fond of the walnut roots.

The soft-shell walnut commences to fruit at six years old, from the seed, and some have been known to fruit as young as the fourth year. My trees have produced full crops each year for the past fourteen years. The hard-shell commences to fruit about the ninth year,

and bears full crops alternate years. The soft-shell is not as strong a grower as the other walnut, it being so prolific retards its growth, and at the same age—taking a number of years together—it will not produce as much fruit per tree as the hard-shell variety, and at the same price it would not be as valuable a tree to plant. But the trees can be planted closer together, and the price can be made so much more that it will be the most valuable tree to plant.

The price is greater at this time, and when there are enough produced to compete in the market, there will be as much difference in price as there is in the hard and soft shell almond to-day. I have sold the most of my soft-shell walnuts each year for seed, and have offered but few in the market, and where I have, the price has been 13 cents. The hard-shell has ranged during the last ten years from seven to ten cents. If we had as many Santa Barbara soft-shell walnuts to put on the market as we have of the other varieties, I think the price would be nearly double, and quicker sale. It is a superior nut, and when better known will be pronounced so by all. The kernel is white, and better for confection and for all other purposes. The shell is thin, rendering them easily broken by the hand, at the same time strong enough to bear transportation to any part of the United States.

The origin of this nut may be of interest to this society, and is as follows: The winter of 1867, I bought in San Francisco a large sack of what they called English walnuts. I cannot say whether they were mixed or not. I had but little experience with the walnut previous to this. I raised about 1000 trees that season, and planted 200 of them the following spring, in orchard form, at Goleta; 60 of them proved to be the soft-shell variety. The balance I sold at one, two, and three years of age; part of those proved also soft-shell. This walnut, like all others, should be planted in deep, rich, sandy soil to insure the best results. The soft-shell is a little later starting in the spring than the common nut, and blooms about ten days later; and I have expected it would come true from seed, but I find they sport some; yet, at the same time, I have found none that deteriorate, and all that have come different I believe to be an improvement. I exhibit some of both varieties for the inspection of this society.

I planted 24 trees raised from soft-shell nuts; 21 came true to parent tree and three made a much stronger growth, and commenced fruiting at the age of six years, same as soft-shell, and produced the improved nuts. I have not had time yet to test their bearing qualities, they having fruited but two years. If they should bear full crops each year, as the soft-shell does, and the tree a more rapid grower, even if the fruit does not prove superior, they will be considered an improvement.

The walnut wants but little pruning, and I cut none but those limbs that run down and are in the way of teams while cultivating. I prop thoroughly while the trees are heavily laden with fruit and foliage, and they should be kept up to avoid cutting. If limbs have to be cut off on the upper side where water is liable to collect, they should be waxed, as the walnut limb is generally hollow, and water enough may collect to rot the limb.

The soft-shell ripens a little earlier than the common nut, and they both vary somewhat according to the season. We generally commence to pick on the 10th to 15th of September, and gathering lasts a month to six weeks. There are different modes of gathering; some clean the trees at once, and others go over them several times. I pick what has fallen without knocking. I then tap those limbs lightly on which the nuts are ripest, and the third time over I aim to clean the trees. The walnuts are picked up and put in sacks and barrels, so as to be easily handled and hauled to a sunny place to dry, and should be placed on elevated platforms made of narrow boards, with spaces one-fourth of an inch between each board. The platform should be about 8 feet wide and 40 feet long, or as long as two men can handle a canvas to cover the beds, which should be done every night the dew falls.

The nuts should be stirred in these beds once or twice each day, and with favorable weather they will dry sufficiently in three days, and are ready for market. I have always dried my walnuts by the sun, and they have given good satisfaction, and for small orchards, I think it the cheapest and best way. Some dry by evaporation, and claim it is preferable to the sun; that it sets the oil quick and prevents the nut from becoming rancid. Others claim that it makes them so; but be this as it may, those having large orchards cannot depend on drying all by natural heat, and the drier will have to be used, even if it is not so good for the fruit.

The walnut is marketed in sacks, the greater portion in what is called walnut sacks, and holds about 120 pounds; others use the common barley sack, holding 65 pounds.

WANTON DESTRUCTION OF TIMBER.—Special Timber Agent Bernhart of Oregon says that while inspecting timber-lands in that State he saw many acres of blackened stumps. He was told by an old settler that on account of a quarrel between two men, 25 years ago, about some rails which one had cut and the other claimed were split too small, the rails were set on fire and they set the forest on fire, and the outcome was that 144 square miles, or four townships of timber, were destroyed.

THE STABLE.

The California Mustang.

A writer for the New York *Spirit of the Times* has been looking up the character and deeds of what he calls the "native horse of California." Although the term might not pass muster from a scientific point of view, it is sufficiently intelligible:

An erroneous impression prevails on your side of the continent regarding the native horses of California. Many associate them with the mustangs of Texas, or the bronchos of the Northwest. There is only a slight resemblance to the Mexican, none at all to the broncho or cayuse. Nearer like the thoroughbred in appearance, especially the type of blood horse which prevailed fifty years ago; many of them of high form, not a few nearly models of beauty, and quite a number which could make a fair showing on the race-course. Old residents of the Southern country inform me it was not unusual for them to run a mile in 1:50, carrying an ordinary-sized man with such a preparation as would be thought by modern trainers an effectual drawback to speed. Whatever their capacities to run short distances, there is not the least doubt that for long journeys or even for hours between "sun and sun" in midsummer, there never was a breed that could cope with them under the same circumstances. There are well-authenticated accounts of distances accomplished in time that to say the least is nearly marvelous, and this is done over hills and dales with only a trail to gallop upon, and for provender the grass that could be cropped within the circuit of a lariat. Great horses, these first settlers of California. From a royal stock, as their progenitors were of the best blood in Spain, and the foremost horseman of his day, William Cavendish, Duke of Newcastle, extols them above all others and gives substantial reasons for his preference. His English work was published in 1667, rather more than a hundred years prior to the time when the Fathers and their military escort brought the starters to this shore, and as they were sound business men in all of their enterprises, there is little hazard in claiming that at least the sires were well chosen. When the records show that the Mission of San Francisco had 84 stallions of good breeding to 2000 breeding mares, it is altogether likely that the other missions were equally as well provided for in that line.

The native horses were bred especially for the saddle. There was no use for harness horses. In 1820, there was not a single vehicle from San Francisco to San Diego that had wheels made with spokes. The missions were so far apart that horses capable of going long distances, while there was daylight, were the kind that were needed, and this necessity be-sought a return. The survival of the fittest! But with the downfall of the missions there came another era which had also an influence in shaping equine form to a higher model. The officers under the Mexican Government were men of rank, and most of them had a fondness for fine horses. They were also partial to the "royal sport," and though the modern accessories of the turf were lacking, this did not debar them from gratifying the passion. Many, in fact most, of the early settlers, those who came from 1820 to 1845, married into native families, adopting their language and many of their customs. These were halcyon days, and, according to all accounts, a happier people could not be found. Hospitality was unbounded. A traveler could go from one inhabited point of the country to another without an outlay of a dollar. If his horse became lame, his entertainer would furnish him with another, and if his journey required dispatch, relays were offered on every ranch. But the purpose is to pursue the horse history of California, and though there is a strong temptation to deviate from a direct course, the main object will be kept in view. It may appear that there is little connection between the horses of early days and those which are now raised on Palo Alto, Rancho del Paso, Santa Anita, Sunny Slope, Rancho del Rio, and others of the great breeding farms of the coast, and yet it will be an argument in favor of the superior advantages, in climatic influences, California possesses. The native horses owe their origin to the same parent stock from which sprung the Mexican mustang. There are a few points of resemblance. The head, legs, and feet are something of the same stamp, and there the likeness ends. The Mexican, small, flat-sided, with so little muscle that it was wonderful that they were capable of carrying the weight of a man of average size. In 1875, I visited Los Angeles, and though it was acknowledged that since the American occupation of the country the native horses had deteriorated, there were several fine looking animals to be seen. Muscular and of fair size, carrying a heavy man with a saddle, which would weigh as much as those of English pattern, as jauntily as though racing weights were on their backs. More care had been taken in keeping up the breed in the section now called Southern California than north of San Francisco. San Diego, Los Angeles, Santa Barbara, Monterey, and up as far as San Jose the best were found, and there are well-authenticated accounts of remarkable performances. Walter Colton, who was chaplain on the Congress, was appointed by Commodore Stockton,

Alcalde of Monterey, then the capital of California, and entered upon the duties of his office, July 30, 1846. In 1850, he published his work, "Three Years in California," very entertaining, the greater portion being copied from his daily journal. There is one part which has so strong a bearing on the capabilities of the native horses that I copy it, as it is not likely that many of the *Spirit* readers have seen it, and not many of those have a proper appreciation of the quality of those wiry steeds. He writes:

"The ride of Col. Fremont from the Ciudad de Los Angeles to Monterey, in Alta California—a distance of 420 miles—and back, exhibits in a strong light the iron nerve of the rider and the capacities of the California horse. The party on this occasion consisted of the colonel, his friend, Don Jesus Pico, and his servant, Jacob Dodson. Each had three horses, nine in all, to take their turns under the saddle and relieve each other every 20 miles, while the six loose horses galloped ahead, requiring constant vigilance and action to keep them in the path. The relays were brought under the saddle by the lasso thrown by Don Jesus or Jacob, who, though born and raised in Washington, in his long expeditions with Fremont had become expert as a Mexican with the lasso, sure as a mountaineer with a rifle, equal to either on horse or foot, and always a lad of courage and fidelity. The party left Los Angeles on the morning of the 22d at daybreak, though the call which took the colonel to Monterey had reached him only the evening before. Their path lay through the wild mountains of San Fernando, where the steep ridge and precipitous glen follow each other like the deep hollows and crested waves of ocean under the driving force of the storm. It was a relief when a rough ravine opened its winding on the line of their path. They reached at length the maritime defile of El Rincon, or Panto Gordo, where a mountain bluff shoulders its way boldly to the sea, leaving for 15 miles only a narrow line of broken coast, lashed at high tide and in the gale by the foaming surf. The sun was on the waves of the Pacific when they issued from the Rincon, and twilight still lingered when they reached the hospitable rancho of Don Thomas Robbins, 125 miles from Los Angeles. The only limb of the company which seemed to complain of fatigue was the right arm of Jacob, incessantly exercised in lashing the loose horses to the track and lassoing the relays. None of the horses were shod—an iron contrivance unknown here except among a few Americans. The gait through the day had been a hard gallop, relieved at short intervals by a light trot. Here the party rested for the night, while the horses gathered their food from the young grass which spread its verdure on the field. Another morning had thrown its splendors on the forest when the party waved their adieu to their hospitable host and were under way. Their path lay over the spurs of the Santa Barbara mountains, and close to that steep ridge where the California battalion under Fremont encountered, December 25, 1846, a blinding storm, which still throws its sleet and hail through the dreams of those hardy men. This path continued over the flukes and around the bluffs of this coast mountain, relieved at intervals by the less rugged slopes and more level lines of the Cascades. The hand-gallop and light trot of their spirited animals brought them at set of sun to the ranch of their friend, Captain Dana, where they supped, and then proceeding on to San Luis Obispo, reached the house of Don Jesus, the colonel's companion, at 9 o'clock in the evening, 135 miles from the place where they broke camp in the morning." The party was detained at San Luis Obispo until 11 A. M., and by 8 P. M. 70 miles were accomplished. That night the horses were stampeded by bears. Fresh horses had been obtained at San Luis. Mr. Colton's words will again be copied: "The horses, by good fortune, were recovered, a fire kindled, and by break of day the party had finished their breakfast and were again in the saddle. Their party, issuing from the gloomy forests of the Soledad, skirted the Coast Range, and crossed the plain of the Salinas to Monterey, where they arrived three hours to set of sun, and 90 miles from their last camping tree. The principal citizens of Monterey, as soon as the arrival of Col. Fremont was announced, assembled at the office of the Alcalde and passed resolutions inviting him to a public dinner; but the urgency of his immediate return obliged him to forego the proffered honor. At 4 o'clock in the afternoon of the day succeeding that of their arrival the party were ready to start on their return. The two horses rode by the colonel from San Luis Obispo were a present to him from Don Jesus, who now desired him to make an experiment with the abilities of one of them. They were brothers, one a year younger than the other, both the same color—cinnamon—and hence called *el canelo* or *los canelos*. The elder was taken for the trial and led off gallantly as the party struck the plain which stretches toward the Salinas. A more graceful horse and one more deftly mounted I have never seen. The eyes of the gathered crowd followed them till they disappeared in the shadows of the distant hills. Forty miles on the hand-gallop and then camped for the night. Another day dawned, and the elder canelo was again under the saddle of Col. Fremont, and for 90 miles carried him without change and without apparent fatigue. It was still 30 miles to San Luis, where they were to pass the night, and Don Jesus insisted that canelo could easily perform it, and so said the horse in his spirited look and action. But the colonel would not put him to

the trial, and, shifting the saddle to the younger brother, the elder was turned loose to the remaining 30 miles without a rider. He immediately took the lead and kept it the whole distance, entering San Luis on a sweeping gallop, and neighing with exultation on his return to his native pastures. His younger brother, with equal spirit, kept the lead of the horses under the saddle, bearing on his bit and requiring the constant check of his rider. The whole eight horses made their 120 miles each in this day's ride, after having performed 40 the evening before.

"After a detention of half a day at San Luis Obispo by a rainstorm, the party resumed the horses they had left there, and which took them back to Los Angeles in the same time they had brought them up, thus making their 500 miles each in four days, with the interval of repose occupied in the ride from San Luis to Monterey and back. In this whole journey from Los Angeles to Monterey and back—making 840 miles—the party had actually but one relay of fresh horses; the time on the road was about 76 hours. The path through the entire route lies through a wild and broken country, over ridges, down gorges, around bluffs, and through gloomy defiles, where a traveler, unused to these mountains, would often deem the slow trot impracticable. The only food which the horses had, except a few quarts of barley at Monterey, was the grass on the road; though the trained and domesticated horses, like the canelos, will eat or drink almost everything their master uses. They will take from his caressing hand bread, fruit, sugar, coffee, and, like the Persian horse, will not refuse a bumper of wine. They obey with the gentlest docility his slightest intimation; a swing of his hand or a tap of his whip on the saddle will spring them into instant action, while the check of a thread rein on the Spanish bit will bring them to a dead stand; and yet in these sudden stops, when rushing at the top of their speed, they manage not to jostle their rider or throw him forward. They go where their master directs, whether it be a leap on the foe, up a flight of stairs, or over a chasm. But this is as true only of the conduct and behavior of those horses trained like the canelos, who vindicate in the mountain glens of California their Arab origin. They are all grace, fleetness, muscle and fire; gentle as the lamb, lively as the antelope, and fearless as the lion."

Enthusiastic as the Duke of Newcastle was in his praise of the Spanish horse, the reverend Alcalde is not far behind in his panegyrics. I have heard many of the first American settlers of this country relate feats which will compare with those quoted, and there is not the least doubt of their great capacity for long journeys, and in time which no other breed could equal on the same fare. Quite a number of the best trotters in California can only be traced for two generations, and the "unknown" must either be native or emigrant. That the native is no bad element must be conceded.

A REMNANT OF THE BUFFALOES.—William Corbin of Weatherford, Texas, recently furnished the following information to a newspaper reporter: "A sale recently took place on the border-line between Texas and New Mexico, which was remarkable for the fact that it carried with it the last remnant of the great southern buffalo herd. A ranchman, whose name I cannot recall, has on his range 200 head, which he has carefully preserved and guarded in every way. They had increased in numbers, and there are probably 300 now. He recently sold out and they have passed into other hands. It is hoped that the present owner will pursue the same course as the former, as, with the exception of a small herd in the far north, the buffaloes on this range are the only ones outside of the zoological gardens. It would be more profitable than raising cattle, and for this reason I believe this remnant will be shielded from destruction."

ARIZONA STOCK INTEREST.—Hon. Patrick Hamilton of Arizona, who has been in San Diego for the past five months, on account of ill health, tells the *San Diego Union* that the "boom" in Southern California has opened markets for all the beef which Arizona has to sell. Instead of shipping to Kansas City or Chicago, there is now a nearer and more lucrative market either in San Diego or Los Angeles.

HOME AND FOREIGN CONSUMPTION OF WHEAT. The total wheat crop of the world is about 2,000,000,000 bushels, and at least 1,500,000,000 bushels are consumed in the countries in which it is grown, leaving a balance of 500,000,000 to supply countries growing no wheat or growing less than they consume. Speculation deals only with this balance that goes into general trade, and the speculators of the world in a single year will sell or transfer in their peculiar way 40 or 50 times 500,000,000 bushels of wheat.—*Glasgow Herald*.

It is proposed now to carry into effect the proposition of bringing water from the American river to the town of Folsom by a canal six feet deep, 32 feet wide and with a fall of nearly 100 feet. This will give employment to the State prisoners, give power for manufacturing purposes, and make Folsom a manufacturing town. The canal can be used for irrigation purposes.

LUMBER IN PLACER COUNTY.—It is estimated that Placer county has 450,000,000 feet of lumber fit for manufacturing purposes in her forests.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

San Jose Grange—Co-operation, Etc.

We enjoyed a very pleasant visit with the Grange of the Garden City last Saturday. We entered just as Bro. D. C. Feely was speaking of the duties of County Assessors and the unequal taxes which have to be borne by farmers, and thought that some remedies might be found. He could see no reason why an itemized list of the personal property of the tillers of the soil should be required while the merchant and manufacturer and others are allowed to estimate their personal property in bulk. It certainly stands farmers in hand to look into this matter, and stop any and all such unjust discrimination.

Bro. S. P. Sanders suggested that as the Secretary of the State Grange was present he might give some of the needed information, and upon being invited, we gave them as complete information as we could of the plan adopted most extensively and successfully in Pennsylvania.

We also spoke of the Rochdale co-operative plan that has been so successful in England, and mentioned the fact that in 1874 or 1875 the National Grange had sent Bro. Past Master Wright to England to gather statistics and information in regard to the co-operative associations there. He filed a full and interesting report. A number of prominent Patrons from different parts of the Union devised and reported to the National Grange a plan of organizing a Mississippi Valley International Co-operative Association, and the same was favored by the National Grange, if our memory serves us right, in place of the Rochdale system in all its simplicity.

The scheme was a large undertaking, and for lack of subscriptions or some other cause, failed to come into operation. We always thought it unfortunate that the Rochdale system was not recommended instead, believing that its four principal features are the best adapted for the government of co-operative associations, and are indispensable for perfect and lasting success, and for securing the greatest amount of benefit to its Patrons.

These points are: First, to buy for cash, and cash only. Second, to sell for cash, and cash only. Third, to divide the profits of the business equally (half and half) between shareholders and the purchasers of goods. And fourth, and perhaps the best of all, that no stockholder, no matter how many shares he may own, shall cast but one vote in the election of officers or any other transactions at the stockholders' meetings.

Where these provisions are engrafted in a co-operative association, there seems to be no chance of failure, whereby any individual can lose any considerable amount of money. This plan has never been tried in California so far as we know. We believe that it is surely worth a fair trial, and we hope that some Grange will organize a co-operative association on this plan, no matter how small its beginning must necessarily be.

We promised San Jose Grange to give Patrons in our columns as much more information on this important subject as practicable.

Bro. Wingate thought it well to appoint a committee to consult with merchants and see if they would co-operate with the Grange in some system of dealing with Patrons on the card system, and allow a discount on purchases made for cash.

Bro. Keesling considered that the merchants could afford to favor farmers, as a general thing, in cash sales, for the reason that living at a distance, they formed the habit of making their purchases in larger quantities than city people and townspeople who live near the store and can visit it more frequently.

Bro. Coates thought it might be injurious to the local growth and welfare of towns if purchases were made abroad from larger places and commercial centers.

It was remarked that it was difficult for most farmers to pay cash as they go. Bro. Sanders considered it the part of wisdom to borrow money and pay interest on the same in order to pay cash down for goods.

Bro. Webb mentioned that the sisters were equally interested in this question and often had the buying to do, and he would like to hear from them.

Bros. Feely and Sanders had often found by experience that in patronizing credit-giving stores they were obliged to pay sufficient profit on their purchases to make up the losses of other creditors who never paid their bills.

Capt. Hamilton (who until recently had been in the habit of purchasing supplies for voyages from San Francisco, and was thereby conversant with the comparatively low prices obtainable at wholesale houses) had been accustomed lately to visit the metropolis, and purchasing supplies in quantities, he could save his transportation fare and a goodly sum besides.

On motion of Bro. Feely, a committee was appointed to consider the advantages and practicability of adopting the Rochdale system and other means of co-operation for buying and selling to advantage.

The Worthy Lecturer of Temescal Grange, Sister Dewey, being called upon, made some very acceptable remarks, and extended a hearty

invitation to the brothers and sisters to visit Oakland and attend Temescal Grange.

The subject of Mildew on Roses was mentioned. Bro. Wingate stated that he has one of the finest Marechal Niel roses. He treated his bush to soapuds frequently, it being conveniently located for that purpose. He had been told by Mrs. Newhall, who has been a successful propagator of roses, that they succeeded best when so placed as to be shaded one-half the day.

Sister N. A. Sanders spoke of the fact that her roses this year were in far superior condition to that at any former period. She attributed it to the fact that last season she had frequently deposited tea and coffee grounds at their roots. It seems that the benefit of such care was to be derived the following season, rather than at the time of applying the grounds.

Sister Dewey had noticed that roses in Oakland seemed, as a general rule, to thrive better this year than formerly. She had concluded that it was owing to the fact that last winter was the most severe one experienced for 35 years, and that the cold was unusually long continued, so that the shrubs had had a far longer rest than usual and were much improved thereby.

Bro. Webb remarked that in our experiments in farming and horticulture, we should be more careful to cultivate plants side by side in the old as well as in the new way, so that we could determine more positively the effects of the varied cultivation.

Worthy Secretary Alley called the attention of the Grange to a lot of circulars and printed information in relation to the Patrons' Mutual Fire Insurance Company of Massachusetts, which documents were referred to the Committee on Co-operation. During the meeting the question of fire insurance was spoken of, and the fact mentioned that farmers as well as other property-holders of our State were probably more excessively taxed in this direction than those of any other part of the Union, prices having advanced from one-half to double the rates prevailing some few years ago. It is well known they were high enough then.

The meeting was a small one for San Jose Grange, although more than 20 persons were present, the brothers noticeably outnumbering the sisters. It being the opening day of the Floral Fair in San Jose, no doubt accounted for the absence of many good members.

We were very much pleased with the good spirit and determination of the brothers and sisters of San Jose Grange to persevere and advance the work of the Order.

Temescal Grange.

Temescal Grange held an interesting meeting Saturday, April 21st. The degree work being postponed, the question laid over for discussion was taken up, and Bro. Renwick gave his common-sense views on "Practical Education" without finding any one to quarrel with his ideas. According to his observation, a large portion of our highly educated boys were rendered worthless for work and practical business vocations.

Sister Blackwood being called upon to express the views of a teacher on the subject, said that most scholars passing the grammar grade of the public schools received all the education necessary or advisable for most children.

Worthy Master Goodenough agreed with Bro. Renwick, that more instruction in mechanical and industrial knowledge should be taught.

Brother Dewey suggested that it would be better if our children were required to occupy a longer term in obtaining their education. Let them occupy only one-half of the day in study, and the other half in industrial pursuits and recreation.

Other brothers and sisters made interesting remarks which were well received.

YUBA CITY GRANGE.—A meeting of Yuba City Grange was held April 21st, at which seven were initiated, says the *Sutter Farmer*. The usual harvest feast followed, and in the afternoon the members were favored with some excellent musical and literary exercises. The Grange is steadily gaining in standing and membership, and its meetings are spirited and interesting. The Picnic Committee is hard at work preparing a program and making arrangements for the annual gathering at Hock Farm, to take place May 15th. They expect to hold the best picnic that has ever been held on those grounds. Everybody will go that can.

SACRAMENTO GRANGE PICNIC.—We have no doubt the Sacramento County Grange picnic was largely attended on the 3d inst. We went to press too early in the week to receive any information in regard to it, but we know that the Patrons of that county have exerted every effort to make this the grandest affair of the season. The picnic had been well advertised in the local papers and every respectable person was invited.

BENNETT VALLEY GRANGE will hold its picnic on Saturday, May 26th.

Sentinels, not Spies.

That staunch champion of agricultural rights, the *Sutter Farmer*, referring to the flings of the slickens organs about "anti-mining spies," observes: "We want to call attention to the fact that we send no spies to the mountains. The term spy has attached to it a disgraceful significance, because spies go under cover of a disguise into the camp of the enemy, and, while pretending to be friends, are seeking information that will overthrow those among whom they are. There is an appearance of being a traitor when a man becomes a spy."

"Owing to the fact that some of the people of the mountain counties are not law-abiding citizens, and that, through their education, they think it right to disobey the courts and defy their decrees, we of the valley are compelled, in self-defense, to send watchmen among them. Our men go openly; they wear no disguise; they attempt no subterfuge, and they only ask to be allowed to go about their business. If they find no wrong-doers, they will trouble no one. If no law-breakers are to be seen, no arrests will be made. This system of watching is a hardship imposed upon us. The mighty Government of the United States has made the laws; the courts have decided upon them; but the citizens of Sutter and Yuba counties have to enforce them. We propose to do so, for we have justice upon our side, and justice is mighty and will prevail. If a man steals a horse in Sutter county and escapes to another county, every one is willing to help our sheriff catch him. The hydraulic miners would steal our homes. They would not only take away from us, but from our children and their children. When we attempt, through due process of law, to catch them, their press, their officers who are sworn to execute the laws, their judges who have taken a solemn oath to decide upon the law, all stand ready to protect the law-breaker, even if he be a Chinaman. When we object, they call us hard names. It is a matter of small importance, however. We have won the battle, and shall soon enjoy the fruits of the victory."

The Mineral Land Dodge.

The *Ventura Democrat* reports that a big land steal is being perpetrated in the eastern part of Ventura county. The promoters of the steal pretend that the land is mineral land, and have already succeeded in having it so designated by the General Land Office. Their purpose is to secure the tract, much of which is valuable for agricultural and horticultural purposes, and none of which is mineral land within the meaning of the law, for grazing purposes. There is much valuable land for homesteads in this district, and in quantity sufficient to settle 50 or 60 families in comfortable homes. This land is being denuded of timber by the same parties, who claim it, and over 130 cords of wood are said to have been traced. It is time such depredations on Uncle Sam's domain were stopped, and we are glad to be able to report in this connection that Mr. Brooks has the matter in hand, and is gathering facts to be submitted in evidence to defeat this piece of rascality. The public land belongs to all of the people until disposed of by the proper authorities; and for one man to strip it of timber or possess himself of a title to any portion of it by other than lawful means is a crime against the rights of all the rest which should not be quietly submitted to.

The Late Chief Justice Waite.

[By Mortimer Whitehead, Lecturer National Grange.]

The death of Chief Justice Waite, of the U. S. Supreme Court, has taken from active life one who will long be remembered as a benefactor to his country. Of the many new forces that this century has developed, none have grown faster, sooner attained the size and strength of a giant, or in a more threatening manner attempted to use its power for evil, than have corporations. Brought into existence by the people, all their rights and privileges granted them through the people's representatives in Legislature, they were not content to use, but abused the trusts with which they had been favored. Little by little, as they grew in size and strength, did they encroach upon the rights of the people, and when appeal or even the force of law was used to stay their pressure, they fell back upon "vested rights," "chartered rights," etc. The farmers of the country were the first, in a resolute and determined way, to call halt. In the strength of their young and almost untried organization, the Grange, in several of the Western States, secured the passage of laws that for the first time said to corporations, "so far shalt thou go and no farther" in your oppression

of the people by reason of your charter as corporations. It was a new idea, this young David meeting this Goliath, with a new weapon. Test cases upon the constitutionality of such laws, that could even go behind and above "chartered rights," were carried to the Supreme Court of the United States for final action. And in the now celebrated "Granger cases," as they were first called in derision, Chief Justice Waite made his remarkable decision that will ever be his noblest monument. He said: "It is a principle too long forgotten, and ought never again to be lost sight of, that the creature is subject to the Creator." That settled it; the power that grants a charter (the people) can also control that charter, "even to its absolute destruction," said the same righteous judge in a later decision. From these decisions have come our Interstate Commerce law, and others equally important are sure to follow.

Purchasing Bags From the State Prison.

Worthy Master Overhiser has received the following letter from John McComb, Warden of the State Prison:

DEAR SIR:—I am in receipt of your favor of the 12th inst., and am glad to hear that the plan adopted of selling grain bags to farmers direct has met the approbation of the different Grange organizations of this State, and also appreciate the way in which members of your Order show their approval, by sending in their orders, which we receive now about as fast as the bags can be manufactured. In selling these bags, our aim is to make no distinction between buyers of large or small quantities, and our price is the same to all, whether they order 500 or 50,000 bags. The price has been fixed at eight cents by the State Board of Prison Directors, and will not be changed at present, unless the market should fall below this fixed quotation, when, of course, we should have to lower the price. This exigency is not expected to arise during this season by anybody, whether consumer or seller, but, on the contrary, everybody expects to see higher prices yet. Our quotation (eight cents), in case the market should get higher, will not be raised, unless by order of the Board of Directors.

I herewith inclose you several of our circulars, giving terms on which bags will be sold by us, which may help you to post farmers with whom you will come in contact while visiting different parts of the State. Wishing you and your honored Order all success, I am Yours truly and respectfully, JOHN MCCOMB, Warden.

Tulare Grange Picnic.

We stop the press to comply with a request just received from Bro. J. W. Mackie of Tulare that we give notice of their Grange picnic, to come off next Wednesday, 9th instant. He says: "We expect Lucerne and Buena Vista Granges to assist us. We are going to have a brass band and colors flying, driving from Goldman's hall to the picnic grounds in a fine grove of oaks at 10 A. M. We are going to have a good time of fun, wit and wisdom. * * * I hope all the readers of the *RURAL PRESS* and the *Patron* within convenient distance will be there. They will have a warm welcome. If brother and sister Grangers will be pleased to wear the badge of the Order they will be certain to find a pilot to guide them to the pleasure grounds."

A SHOT AT THE TRUSTS.—Representative Rayner made an argument before the House Committee on Manufactures a short time since in support of his bill to prevent the creation of trusts. He said that the bill declared it unlawful for individuals, companies or corporations doing business in any State or Territory to make contracts, agreements or arrangements with individuals doing business in another State or Territory by which the price of an article dealt in shall be fixed at any standard or figure by which its price to the public shall be fixed or established. Under that provision of the Constitution, he said, which gives Congress the power to regulate commerce between the States, Congress had authority to enact such laws as would prevent the formation of these trusts and combinations doing interstate business. If it was conceded that this constitutional authority could be so exercised, it followed that Congress could prohibit the trust from making agreements to fix the prices of the articles they produce to preclude free competition. He contended that Congress had authority to prohibit the formation of these pools and to declare it unlawful for them to make contracts or agreements not to compete with or undersell each other and to regulate prices to the detriment of the public welfare.

San Jose Grange.

There was a large attendance of members at the session of the San Jose Grange, April 21st, says the *Mercury*, W. M. Hiram Pomeroy and Secretary O. F. Alley being on hand.

Captain Frank Dunn offered the following resolutions, which were unanimously passed:

WHEREAS, At the last meeting of the Willows Horticultural Society and the Santa Clara Viticultural Society, a committee was appointed to request the Hon. C. N. Felton, now in California, to appoint a day when the above societies could meet him at San Jose and exchange views on the subject of the proposed revision of the tariff; and

Whereas, The promptness with which Mr. Felton responded to the request deprived many of the more distant fruit-growers of the county from attending, we here assure Mr. Felton that the views of the Santa Clara County Fruit League are those of the whole fruit-growing community of the county; therefore, be it

Resolved, That the thanks of the fruit-growers of Santa Clara county in general, and this Grange in particular, are due and are hereby tendered to Mr. Felton for the prompt attention paid to our request,

Resolved, That we regret sincerely not having more time to collect the more distant fruit-growers to emphasize the sentiments expressed.

Resolved, That a copy of these resolutions be sent to the Hon. C. N. Felton, and that the San Jose *Mercury* publish the same.

It was stated that the Board of Supervisors were seriously considering the proposition of abolishing the position of fruit inspector in this county, and on motion Messrs. Wingate, Cyrus Jones and Capt. Dunn were appointed a committee to wait upon the board at their next meeting and request them to continue the office of county inspector of fruit pests.

The general sentiment was that the position had greatly benefited the fruit-growers in compelling many persons, who otherwise would not, to take active measures in destroying the pests, and that the orchards of the valley had been greatly benefited thereby; that an interest had been awakened among the farmers on this subject and on the preservation of their trees, and that, should it be abolished, much of the benefit thus far gained would be lost, for the valley is by no means free from these pests, which require the most active measures in preventing their spread and thereby working incalculable damage. No matter who might occupy the office, it was thought that it should be one constantly maintained by the county.

Pescadero Grange.

MESSRS. EDITORS:—Various causes delayed the election of the officers of Pescadero Grange until March, and the installation until the first Saturday in April, when the following officers were installed by Past Master Woodhams of La Honda, assisted by Mrs. B. Hayward of Pescadero:

M., I. C. Steele, Pescadero; O., E. Leighton, Pescadero; L., M. Woodhams, La Honda; S., B. Hayward, Pescadero; A. S., Mrs. G. H. Piper, Pescadero; C., Mrs. M. R. Ellis, Pescadero; T., B. V. Weeks, Pescadero; Sec., Mrs. L. Chandler, Pescadero; G. K., Mrs. E. Leighton, Pescadero; Ceres, Miss M. Leighton, Pescadero; Pomona, Miss Laura Weeks, Pescadero; Flora, Miss Jennie Thompson, Pescadero; L. A. S., Mrs. Anna Weeks, Pescadero; Organizer, Miss Emily Leighton, Pescadero; Trustee, M. Woodhams, La Honda.

Pescadero Grange is the only one in San Mateo county, and when it is known that some of its members travel 17 and others 14 miles to attend Grange, some of the obstacles to be overcome will be understood. Yours fraternally, I. C. STEELE.

Beware of Discounting the Future,

A gentleman, who appears to have known what he was talking about, lately told the *Visalia Times* why it is that many farmers are always "hard up" and compelled to struggle for a living.

He said he had noticed a great many agents traveling through the country in the early part of the season, when crop prospects were most favorable, and they were reaping a rich harvest off the farmer in selling him numerous articles, to be paid for after harvest, that he could just as well have done without.

The number of farmers who were sporting fine buggies, drawn by horses wearing decorated harness, for which they had given their notes bearing one per cent per month interest, due at harvest, was noticeable.

An instance was cited where a farmer had purchased a buggy, a two-horse wagon,

a breaking cart, a windmill, and several other articles, all on his prospective crop. To-day that rancher's crop is a failure, and when his notes come due in July and August next he will have to mortgage his home for money at an exorbitant rate of interest to pay them, and from that time until next harvest will stint himself of the necessities of life that the mortgage may be lifted. In case of another failure of crops the man will find himself financially ruined. If he had waited until he harvested his crop before making such investments he would have been in a condition to weather two or three dry seasons, and in the long run would have been able to ride a "high horse" without fear of molestation by creditors.

Such instances, we are sorry to say, are not rare in any part of California.

List of Grange Picnics.

Contra Costa County Granges, at Danville.....May 5
Sebastopol Grange, at Morris' Grove.....May 12
Yuba City Grange, at Hock Farm.....May 15
Magnolia and Grass Valley, at Indian Springs, May 25
Bennett Valley Grange.....May 26
San Joaquin County Granges, at Lodi.....May 18
Pescadero, San Mateo County.....May —
Tulare County Granges.....May —
Secretaries are requested to send in dates of picnics yet to be held as soon as possible.

Executive Committee.

The adjourned meeting of the Executive Committee takes place on Friday of this week, after we go to press. But little business was transacted at the former meeting in April. We are in hopes to have some thing of interest, however, to report in our next issue.

CONTRA COSTA GRANGE PICNIC.—The Granges of Contra Costa county will hold their picnic at Danville to-day. Bro. Loucks has arranged to have conveyances ready to take visiting Patrons to the grounds from the train. The carriages will be in waiting on the arrival of the early Sacramento and Stockton trains at Martinez, and will return in time for late San Francisco trains. The Saturday morning train from San Francisco will arrive at Martinez too late for these conveyances, so that those going from S. F. will be obliged to start Friday afternoon and stop over at Martinez until the following morning. It is expected that several of the State Grange officers will be present.

JOINT PICNIC OF MAGNOLIA AND GRASS VALLEY GRANGES.—Bro. J. W. DeGolia advises us that Magnolia and Grass Valley Granges will hold a picnic at the camp-meeting grounds, Indian Springs, May 25th. The locality is in the farming country, and eight or ten miles from either Grange. Bro. DeGolia says: We expect the W. L. and perhaps the W. M. of the State Grange to be with us.

OREGON STATE GRANGE.—The Oregon State Grange will convene in Salem on May 22d. Reduced rates have been made on the O. & C. Railroad and reduced rates for hotel accommodations have been made at the Chemekete hotel.—*Herald Disseminator*.

DISGUSTED WITH THE OLD PARTIES. One hundred citizens of Woodland have requested the local papers to call a non-partisan convention to nominate municipal officers. The citizens claim that both the old parties have sold out to the liquor dealers.

THE HARVEST FEAST given by Bennett Valley Grange last Saturday, though not largely attended, owing to the busy season of the farmer, was none the less a success.

THE FLOWER FESTIVAL at LOS ANGELES, so vividly pictured by our local correspondent last week, ran its course with joy, and came to a successful close Saturday evening, April 28th, after 11 days and nights of beauteous brilliance. The judges found themselves embarrassed by the great merit of the competitors, and by the fact that there were but two prizes to be given in each class. They were relieved, however, by the officers of the society adding \$200 to be used in special awards. Alhambra won the first prize for design, \$100; and Long Beach, second, \$75. For general excellence, having in view, 1st, the beauty of the display; 2d, artistic effect; 3d, neatness; 4th, variety and number of flowers, Santa Monica's exhibit was awarded the first prize, \$200, and Alhambra the second, \$150. The special fund was apportioned as follows: \$100 to San Fernando and Pacoima, \$50 to Anaheim, \$35 to Mr. Lyons, and \$15 to pansy exhibit. "Inglewood" was accorded most honorable mention. The total receipts for the festival were \$14,335.96. The expenses will be but about \$500, leaving a handsome profit for the Orphans' Home.

Developing Kern County.

EDITORS PRESS:—The people of Kern county have been putting in some "hard licks," not upon a barren soil and boulders, but upon a virgin soil, which has responded bountifully in all the varied industries that have been thoroughly tried. Stock-raising, dairying, wool, hops, cotton, fruits and nuts all prove remunerative. To one who has given this section but slight attention, our water supply is a matter which immediately becomes interesting. Two gentlemen from Los Angeles stated that in a large ditch taken from the north side of the river flowed more water than the entire supply south of Mojave desert, and it is a fact that today three-fourths of the volume of Kern river goes to waste.

One prayer of the Kernites has been for some one to move in the subdivision of land and development of the county, and this blessing seems about to be heaped upon their heads. Gen. E. F. Beale owns several thousand acres of land adjacent to the old military post—Fort Tejon—to which he was appointed in 1852 and which has been under his personal supervision or ownership since. A survey of the S. J. V. R. R. passes through this tract longitudinally, and a right of way has been granted to the road conditionally.

The General is a warm friend of Kern and its shire town, Bakersfield. His plans are perfected for surveying, subdividing, developing water (of which there is an abundant supply), and establishing a town. These lands are to be sold to actual settlers, and in small lots to suit the wants of men of limited means. For a number of years the General has been cultivating a portion of this tract, so that he is now able to demonstrate its quality by placing before the inquiring visitor a full line of the products of his possession. Ripe oranges picked from the tree or fine thoroughbred stock are evidence in the case which none can gainsay.

The General is now upon the grounds to direct the movement of his forces in this great task which he has undertaken. Judging from the general bearing and social position of the man, we bespeak for him success, and hope that many cultivated and desirable people will find homes upon these lands.

We are also informed that Mr. Henry Miller of Miller & Lux has matured plans for subdividing a portion of the land held by said firm. All these movements are pleasing the people of Kern because they are not a selfish class, but wish to divide the good things of this life with their less fortunate fellows. Any who are interested may learn by following subsequent notes how we here in what is generally represented to be a sickly, deadly climate, laugh and grow fat. The rattling, yellow coin is very conducive to health. W.

Bakersfield, April, 1888.

Floral Fair Next Week.

We mentioned in our last issue that the benevolent ladies who manage the S. F. Women's Exchange were planning ere long to hold another flower festival. They have now so far completed their arrangements as to announce that the beautiful display will take place in a store on Market street, under the Grand hotel, opening Wednesday, May 9th, and continuing throughout the week.

The exchange was set on foot a little more than three years since, to aid needy women in making sales of their work, and has grown healthily and steadily, until now its beneficent work is carried on in central and convenient rooms at 116 Sutter street. The report of the president for 1887 shows that the class for whose aid the exchange was started has been paid nearly \$16,000 for articles disposed of. The Board of Directors this year includes Mrs. John F. Swift, Mrs. Moses Hopkins, Mrs. Henry Wetherbee, Mrs. S. W. Forman, Mrs. Michael Castle, Mrs. John Curry, Mrs. Samuel D. Mayer, Mrs. H. L. Dodge, Mrs. Louis Sloss, Miss Birdsall and Mrs. Rosalie Kaufman.

Prizes are offered as follows: For displays of potted plants—best, \$25; second, \$15; third, \$10. For the best display of roses a prize of \$25 will be given; second, \$15, and third, \$10. A prize of \$5 will be given for the best display of cut flowers.

Wells, Fargo & Co. contribute to the festival by giving free carriage to all boxes of flowers intended therefor. A grand concert is expected, under the management of Henry Heyman. And with the prestige of successes the ladies and their patrons may well anticipate a delightful and profitable display.

SAN JOSE'S DISPLAY OF FLOWERS was opened on Saturday last (somewhat in advance of the date first fixed upon, to give the excursionists from this city an opportunity of enjoying it) and is in successful progress the present week, with throngs of amazed and delighted visitors in attendance. We shall try to give some account of its varied beauties in a future number.

A GRAIN DEALER'S SUSPENSION.—Lewis W. McGlaufflin, grain-dealer and commission merchant, 309 California street, made an assignment for the benefit of his creditors on Tuesday of this week. He was entangled with the Dresbach-Rosenfeld wheat deal. He expresses a hope that his assets will prove equal to his liabilities, and that he may soon be enabled to resume.

News in Brief.

DESTRUCTIVE floods in Texas have done damage.

THE State Treasurer of Nevada has on \$465,248.45 in coin.

THE Chicago anarchist paper, the *Alarm*, has suspended publication.

EARTHQUAKE shocks were felt at a number of towns in California on Saturday last.

THE main tower of the New City hall in San Francisco will be 420 feet in height.

REAL ESTATE to the value of over \$2,000,000 changed hands in San Francisco in April.

A PROPOSITION is being agitated to make a closed season for fur seals all over the world.

THE steamer Ancon brought 10,000 seal-skins from Alaska on her last trip to Seattle.

THE Fort Bragg Redwood Company's saw-mill was burned on Saturday. Loss, \$50,000.

A CONTRACT has been let for large iron and steel works at the Snoqualmie mines in Washington Territory.

HUGH O'HARA has struck a 25-barrel oil well in Santa Paula canyon, not far from the town of the same name.

STOCKTON'S Board of Trade has asked the City Council to call an election to vote on the issuing of bonds for constructing a system of sewerage.

A SYNDICATE of Tacoma capitalists have purchased of the Northern Pacific railroad 60,000 acres of land in the Sunnyside country, Yakima county.

SUBSCRIPTIONS to nearly \$81,000 have already been taken in Yreka toward the \$100,000 capital stock of the Yreka branch railroad to Montague.

CONSUL MONOGHAN writes from Mannheim, Germany, that the recent increase in the German tariff on wheat and flour practically closes the market against American grain.

THE recent order of the War Department, directing that regiments ordered to change stations do so by marching, will probably lead to the retirement of several decrepit officers.

THE work of laying rails on the Santa Rosa and Carquinez railroad is being pushed through with great rapidity. Great efforts are being made to complete the road by the 1st of June.

GOVERNOR WATERMAN has, for reasons best known to himself, made a rule that hereafter no paid attorney will be allowed to come before him to plead in behalf of an applicant for pardon.

NEVER before in the history of Castle Garden has the proportion of paupers, cripples, lunatics and generally objectionable persons among the arriving immigrants been so great as it is at present.

THE piles and material for the new wharf and chute at Point Arena are being hauled and put in erecting condition. The piles will average over 45 feet in length and 14 inches in diameter at the small end.

THE Pixley people are arranging for the largest rabbit-drive that has yet occurred in the San Joaquin valley. A grand barbecue will follow the drive, and a great time is expected. The date has not yet been set.

THE Fresno Milling Company has secured the contract for supplying the Government with flour for the Department of Arizona, New Mexico and Southern California. This is the fourth time it has secured the contract.

B. F. LANGFORD of Lodi, a stockholder in the Mokelumne Irrigation Co., was convicted in the Justice Court at Jackson, for maintaining a dam across the Mokelumne river, near Lancha Plana, unprovided with fish ladders, and was fined \$250, or 100 days in jail.

THE steamer Queen of the Pacific sprung a leak while at sea, but was successfully brought into Port Harford before sinking. No lives were lost. It is found that a deadlight had been broken or left open. The vessel is being pumped out, but all the cargo is badly damaged.

ATTORNEY-GENERAL JOHNSON, in an opinion relative to which one of the two Boards of Fish Commissioners was entitled to hold office, has decided in favor of the old board, Joseph Rottier and J. Downey Harvey; also, Charles Josselyn, who was appointed by Gov. Waterman, vice Sherwood, resigned.

It is stated that a heavy syndicate of Texas capitalists has completed arrangements for shipping a fine quality of yellow pine lumber from the heavy forests of Texas and Louisiana to Southern California, over the Southern Pacific, and that prices will be reduced from 35 to 50 per cent. The arrangements for shipping the lumber have been completed with the Southern Pacific.

It appears that the sugar refineries have an overplus of sugar on hand just now, and the matter of its disposal is becoming a momentous question, more especially in the case of the American Company, which has about 6000 tons of raw Hawaiian sugar aboard vessels lying in the stream, with no means of discharging or storing it. Both the American and California warehouses are full.

THE public sale of the Araquipa ranch took place Saturday on the property near Vacaville. A large excursion left San Francisco, and, connecting with the one from Sacramento, resulted in landing on the grounds over 1000 people. About one-half of the property was offered, comprising about 50 parcels as announced by the auctioneers, and resulted in a total of \$114,000, producing an average of about \$275 an acre, and including a small portion of improved property.



Rest.

[Written for the RURAL PRESS by MAUDE S. PRASLER.]

Some day, dear tired heart,
Will come your rest;
Though under daisies laid,
You will be blest.

Faith brings its own reward,
Soon will it come;
Rest comes to few on earth,
Never, to some.

Yet, if our faith is firm,
Close to His feet,
All of our troubles past,
Rest is complete.

The Newly-Discovered Eden.

[Written for the RURAL PRESS by A. M. R.]

Southern California, the land of contrasts and surprises, is an enchanted world to the lover of nature. The pure air of its hills, its brilliant sunshine, its varied scenery, are all exhilarating to the imagination, give buoyancy to the spirits, and a sensation as if somehow the world had been made new for our enjoyment.

The perfect loveliness of the early morning gives one a feeling that it is a sin against nature to remain within doors, and a ramble or a ride is the only proper way of spending the hours of the forenoon.

The roads are as hard as a pavement, and though hilly and sometimes rough, the never-ending panorama of beauty which rewards the climb to the rugged summit is a more than sufficient recompense for the labor expended.

The blue-green of the sage interspersed with moss-covered rocks, the warmer-tinted greens of the waving grain, and the rich dark coloring of the live-oak in the valleys make up a landscape perfect in its shading whose beauty leaves a memory to be enjoyed forever; for to the soul who is able to appreciate the loftier moods of nature, there comes a sense of possession, a complete ownership unknown to the millionaire who has invested so many dollars and cents in a rare painting, and counts its value only in proportion to the amount of money expended in its purchase.

Emerson says no land proprietor owns the landscape. "There is a property in the horizon which no man has but he whose eye can integrate all the parts—that is the poet. This is the best part of these men's farms, yet to this their warranty deeds give no title."

This property, however, is not the *sine qua non* which the rushing, eager throng of strangers is seeking in our land at present, not the valuable commodity which has given impetus to the unprecedented boom, though no one can weigh the amount of enthusiasm wrought in some soul by the unconscious influence of a lovely landscape, and which in turn has found another mind with the idea of untold value contained in sun-kissed valleys and rolling hills, and so on, ad infinitum.

A refuge from the dreary cold of the Eastern winter, a picture of vine-covered hills, orange groves laden with the rare golden fruit, sunny days of repose, and last, but not least, the one paramount idea of the Yankee nation—a chance to make a fortune in speculating, the sudden haste to be rich, the insane greed of the gambler, the desire to receive something for nothing; all these mixed motives have sent a multitude to spy out the land and build homes in this corner of the world, which was once considered barren and worthless.

Many who have with simple faith given credence to the too highly drawn pictures, so freely furnished, are disappointed in the reality, and return to their former homes disgusted. Their ideal would be as impossible of realization as was the vision of the fountain of immortal youth.

There is no occult power in the atmosphere here which will furnish new lungs, ready made, exorcise rheumatism in a few days' time, or give perfect contentment to a restless mind.

Poor human nature is a long way from perfection yet in every line, and there really seems to be a greater lack of harmony between the brilliant, cloudless days which make up our climate and the shortcomings of mankind than is felt elsewhere.

When Nature is gaily ringing the higher notes of the scale, if man must take up the refrain in a lower key, the result must be a jangling discord, a lack of correspondence with the environment which is often pitifully described as a "fish out of water" feeling.

It is not easy, either, after one's ideas have been raised to an expectation of entering a Garden of Eden, highly improved according to the latest horticultural rules, with luscious fruit of all kinds just ready to fall into the watering mouth of the weary traveler; at least, it is something of a jump downward to commonly developed imaginations, to take up the

prosaic, matter-of-fact view of things which must be accepted sooner or later.

If mankind in the innocence of the early childhood of the race abused the privilege of a paradise given him for enjoyment without effort of his own, and was sent out to eat his bread in the sweat of his brow as a step upward in the scale of being, a necessary adjunct to his increase of knowledge, the many inventions he has sought out, his wider range of thought, his restless ambition, have not given him a right to expect reward without labor; he still needs the brakes put on, the discipline of toil and endeavor.

To those who are willing to accept the inconveniences attending a state of transition, who enjoy watching the first beginnings of all parts of the social state, those who can safely bear transplanting—for there are natures which can no more be torn from old associations with security to happiness than some choice plants whose fibrous roots will not accept new conditions—to those who have vitality and depth of character enough to expand in the strange environment, the climate of Southern California offers a renewed lease of life—a widening of the mental horizon, a quickening of the pulse of happiness which well compensates for luxuries and conventionalities left behind.

Very few of those who are seeking our climatic advantages are aware that they are coming, in any sense, to a new country, which in reality is the case.

True, some portions of its area have long been inhabited by Spanish and Mexican families, but their improvements have been circumscribed and separated by long stretches of waste land. The character, too, of their former principal industry, the management of large flocks of sheep, has added nothing to the natural resources of the country, but on the contrary has been a continual drain.

But with the new regime all this is rapidly changing. Large fields of waving grain are replacing the stretches of sagebrush, old adobes are crumbling, and the less picturesque Yankee habitations hastily constructed of redwood boards take their place.

Orchards and vineyards are being planted, here, there, and everywhere, and in a few years the expectation of fruit in abundance, which is so often sadly disappointed now, will be fully realized.

Happily the craze for founding cities has run its course; the demand for white stakes is decreasing. The citizen whose time was fully occupied in making up corner lots can more profitably, to the well being of the country, elevate his attention to the needed improvements on the same.

They say the boom has burst. Perchance the blister needed pricking, anyhow, and the result will be a quick healing and a healthy growth of flesh, and muscle, and bone.

Already the feverish excitement which saw no need of improvement on land so rapidly advancing in price from the impetus of the boom is abating, and as for those whose ambition ran in but one channel, the addition of another town to the "thousand and one" cities which Joaquin Miller tells us have been laid out in the past 12 months, and which, he says, will surely be built in time; if these wide-awake people have not yet begun to plant the fine trees that he tells us are to go toward the building of the larger number of them, they are still very largely giving their time and attention to the planting of a great variety of fruit and ornamental trees, and no doubt if the demand for cities grows imperative before the unplanted forests shall grow, Yankee ingenuity will find some way to obtain material for their construction, for our sunny climate is very stimulating to all those characteristic traits inherited from the inventors of wooden nutmegs.

Therefore no one need be deterred from seeking a home in our fair land because poetic license has placed the building of our laid-out cities so far in the future.

If we have the vine and the fig tree ready, the will, no doubt, can soon find a way to provide a habitation.

Fallbrook, San Diego Co.

OLD AMERICAN CITIES.—In the *American Magazine* for May, William Eleroy Curtis will begin a series of illustrated articles on "The Oldest of American Cities." The first paper will deal largely with Carthage, which was the first city founded on the continent, although several colonies had previously been established on the near-by islands and a fortress had been built at Panama. The city became the rendezvous of the Spanish galleons that went to South America for treasure, and consequently a most tempting field for pirates. Incidents in relation to these, together with descriptions of the large churches, palaces and other buildings, afford great scope for an article of this character, and Mr. Curtis has taken full advantage of the opportunity.

EDITORS are the kindest-hearted people in the world. A subscriber to a certain paper died a few years ago, leaving 14 years subscription unpaid. The editor appeared at the grave when the lid was screwed on and put in the coffin a palm-leaf fan, a linen duster and a receipt for making artificial ice.—*Exchange.*

UNDER the new system of recording convicts, no one who escapes can fail to be reidentified. Arms, legs and fingers are measured, the size of the feet is taken, and in some cases facsimiles of ears and nose are preserved in plaster.

The Future of Santa Barbara.

[Written by Albert F. Kercheval of Los Angeles, and read at the Fruit-Growers' Convention in Santa Barbara, April 12, 1888.]

Where the tall Sierras gleaming
Gaze upon the slumbering sea,
Like a maiden rapt in dreaming
Of the future years to be,
Sits she in her rose-wreathed Eden
Where the ocean laves the lands,
Like some pensive tender maiden
Stretching forth her yearning hands,
Land of plenty, hope and gladness,
Flower and fruit and wine and oil;
Here no winter's maniac madness
Comes to mock the laborer's toil!
Here no frenzied storm's cyclonic,
Here no snow king's bitter breath
With its fury wild demonic
Comes to scourge with woe and death.
All the schemes of mad ambition,
Power and lust are put away,
And the trees with full fruition
All the laborer's toil repay.
Zephyrs from the soft seas drifting
Lull the soul to dreams of bliss,
O'er the lands sweet perfume wafting
Like some tender maiden's kiss.
Of thy future and thy story,
Of thy budding promise high,
Of thy grandeur and thy glory,
Who shall dare to prophesy?
Touched with magic of Aladdin,
Changing at the mystic sign,
All the gifts that please and gladden
In the future shall be thine.
Fain while yet the Present lingers
Would we read the fairy tale,
Lo! with reverent, trembling fingers
Let us lift Time's mystic veil!
Lo! we see a dim procession
Fleeing from the Northern blast,
Marching forth to take possession
Onward, westward, pressing fast!
From the far-off Eastern regions
Where the bitter frost assails,
Comes the tramp of murmuring legions
Hasting to thy flowery vales.
Here where Santa Ynez gazes
Like some tender, wistful bride,
Dream-rapt through her purple hazes
O'er the ocean's shimmering tide;
Where the brave old padres founded
Empire mid the lonely space
In a holy faith unbounded,
Other empire takes its place.
Empire fairer, nobler, grander
Than hath sprung from fire and sword,
Than the mighty Alexander
Conquered with his ruthless horde.
Where Castilia's dark-eyed daughters
Watched the sunset's dying gleam,
Dreaming by thy cry: "I waters,
Other maidens sigh and dream.
Like the clouds of twittering swallows
Hasting to their nests in spring,
Crowd on crowd impatient follows,
In thy sweet vales clustering.
In thy bowers of beauty blended,
Here they rest at life's decline,
When the heat of day is ended,
Each beneath his fig and vine.
'Neath the olive's glistening burd'n,
Or when noontide spreads its calm
Dream within the rose-wreathed garden
'Neath the trembling, waving palm.
Here amid the vacant spaces
Soon thy countless spires shall rise—
Temples of all creeds and races,
Pointing proudly to the skies.
Every slope with grapes shall redden,
Every olive-shadowed height,
Every glen in verdure hidden
Gleam a vision of delight.
Fairest flowers and fields elysian,
Golden groves and blooming bowers,
Greet the weary wanderer's vision,
Soothing life's fast fleeting hours.
Softest tints o'er vale and mountain,
Softest zephyrs on the shore;
Sea and sky, and fruit and fount in—
What hath earth to offer more?
Here beneath thy towering mountains,
Gazing o'er thy wave-washed strands,
Resting by thy crystal fountains,
Who would roam in alien lands?
Let old Europe's peasants grovel
Slaves to kingly power and lust,
Like the beasts in pen and hovel,
Prone in wretchedness and dust!
Let the East her idols cherish
'Neath old Asia's hopeless sky,
Like the brutes that grope and perish—
Let them toil and sweat and die!
Tell me not of sleepy Naples
Where corruption taints the breeze;
Here are freer, happier peoples,
Here are brighter, softer seas.
Here no lazy lazzaroni
Through the live-long, tender day,
Dreaming but of macaroni,
Does life's sweet gifts away!
All thy subjects, true and loyal,
Yield submission to thy claims;
All thy families are royal,
Nobler far than Europe's name.
Where thy roses shed their luster,
Blest with plenty, hope and peace,
Here thy countless homes shall cluster,
Rich in all of earth's increase.
Here the sails shall gleam and thicken,
Gliding o'er thy placid sea,
And a million heart-throbs quicken
In thy future days to be.

My First Sweetheart.

[Written for the RURAL PRESS by DOROTHY SHIRLEY.]

It was the summer I was seven years old that I met him at the birthday party of a little friend. He was ten, but so short for his age that we were nearly of a height.

My short brown hair was curled, and I wore a white Swiss dress with hand-embroidered sleeves and tucker. I also wore my most cherished possession, a coral necklace; and was so happy that even Charlie's round, freckled face looked pretty to me.

I remember he was very nice to me all afternoon, swinging me a long time, and then letting me beat him at croquet, till I, suspecting his deceit, threw down my mallet, saying I thought it as bad as cheating. In my heart, however, I thought him a very nice boy to let me beat him every time.

I was very fond of a paper I was taking, the *Youth's Companion*, and offered to let him read it. His mother was dead, as was mine, and he had no dear "Auntie Mamma" to love and care for him. I told auntie about him, and she promised to be good to him and love him a little; because I said, "He has no darling auntie as I have."

He used to come often to our house after that, and we had very nice times. I was the only child in our large, pleasant home, and was often lonely.

We were not old enough to fancy ourselves in love. I know he never even kissed me—
auntie wouldn't have liked that at all.

What pleasant afternoons we spent together out under the apple trees, sometimes white with fragrant blossoms, and later on loaded with crimson and golden fruit.

Often we read—sometimes from the same book. When tired of reading, he would lie contentedly down in the grass, watching the lovely white clouds like banks of snow against the blue sky, and listen while I told him stories I had read, or more often wrote, marvelous tales of knights of old and ladies fair, of horrible serpents and nine-headed dragons, of granted wishes and happy years as a reward of virtue.

Many an afternoon has lengthened into quiet evening, while I sat and spun my glittering romances, regardless of time, till, roused by a faint snore from my attentive listener, I started a grand romp by pulling his hair in revenge. Clear in my mind is the memory of many pleasant winter evenings when we played Casino and Old Maid, while we ate pop-corn and apples.

I think such childish love rarely lasts; ours did not, and with the memory of our happy hours together before me, I shrink from trying to recount the details of our miserable little quarrel. I have not seen him since it happened, years ago, but I think I shall always have a warm corner in my heart for my first sweetheart—homely, honest, good-hearted Charlie Gray.

Educating to Dishonesty.

The fathers and mothers of the country, who are trying to bring up their children in "the nurture and admonition of the Lord," or even those who make no definite religious profession, might have been rather unpleasantly surprised if they could have had the privilege of listening to a remark with which a teacher closed a lesson the other day, before a large class of 14-year-old pupils. He had been gleefully showing them how a little "crooked" book-keeping could be safely done with considerable advantage to their own pockets and with very little risk of discovery.

"You see, boys, how easy it is to be smart in business, if you only keep your eyes peeled and know what you're about."

One of these boys reported lesson and the comment verbatim to his indignant mother, who at once went with the story to the chairman of the committee of the school. He did not share in the indignation—quite the contrary. The story pleased him highly, and he advised her "not to make mountains out of molehills; it was too silly a thing to make such a hue and cry about, and she couldn't expect, anyhow, could she, to run the school her own way?" No, unhappily, she could not expect that, therefore she availed herself of the only liberty left her—she withdrew her son from the teacher's pernicious influence. There was no other school to which he could be sent, so he was put to work in a wholesale grocery store at \$3 a week. "Of course it puts an end to his education," she said sorrowfully, "but I would rather he would know nothing—I would rather see him dead—than under the tuition of such a man as that." More than one mother—a good many fathers—would feel the same way. Are they to make no protest, to be debarrd from any expression of opinion on such vital matters? It is interesting to speculate on the probable result if each mother, not alone this poor widow, had withdrawn her son from the class at the same time and for the same cause. It is hardly likely that the salary of the teacher would have been increased \$250, as actually happened later.—*Caroline B. Le Roy, in "Woman" for April.*

THE man or woman who comes to California for health, says an exchange, should spend every moment out of doors that he can. It is outdoor climate, not indoor climate, that California boasts of.

YOUNG FOLKS' COLUMN.

Our May Queen.

Written for the RURAL PRESS by ADLAIDE SAMSON.]

Whom shall we choose for our Queen of May?
Shall it be Bess, so pretty and gay?
Winsome and bright-eyed with golden hair,
Surely none could wish a queen more fair.
Bess met a beggar but yesterday,
And she roughly bade him go his way—
No, not Bess our Queen of May shall be,
Our queen must be more than fair, you see.

Shall we choose Nell for our Queen of May?
Stodious Nell, whom none disobey;
Clever and wise is our learned Nell,
And who can parse or cipher so well?
But clever Nell is not always kind,
There is a wisdom, not of the mind—
No, not Nell our Queen of May shall be,
Our queen must be more than wise, you see.

Shall we choose Maud for our Queen of May?
Maud possesses a fortune, they say;
A score of servants attend her call,
She is mistress of a princely hall.
But Maud is haughty and scorns the poor,
She turns the wanderer from her door—
No, not Maud our Queen of May shall be,
Our queen must be more than rich, you see.

Shall we choose Kate for our Queen of May?
Not clever is Kate, nor rich, nor gay;
Kate possesses no beauty of face,
Nor does she boast of a lordly race.
But Kate's eyes glow with a gentle light,
Her speech is mild, she strives to do right—
Yes, yes, Kate our Queen of May shall be,
Kind hearts are worth more than all, you see.

New York City.

Freaks in the Barnyard.

[Written for the RURAL PRESS by AUNT RENA.]

Having just read the "Rooster's Family" in the RURAL PRESS reminds me of the story of an old gobbler we owned at one time. He was a fine old fellow, and when a wife was finally given him, nothing could exceed his pride and pleasure. He strutted, gobbled and cooed around his bride from morning until night.

At last the old hen was missing for almost a month, when one morning she came to the door with a young family, at which the fatherly air of proprietorship of the gobbler was really wonderful to see. In a few days the gobbler began to care for the little charges, and a funnier sight could not well be imagined, for the old fellow was so large, his neck so long and his "snout" had such a funny in-the-way look! Then he would coax, squat and seem to have such a time trying to get the little ones to hover. No one could look at this great unwieldy, awkward, long-necked fellow hovering his brood, with drooping wings and tail, without laughing. He looked so humble, with yet such a protecting air.

The old hen was absent a portion of each day, when she would return and try to assume her maternal duties; but the little ones stood shy of her and clung to their paternal protector, and the mother gradually let go her care and finally was again entirely missed, when at last she brought forth her second brood. This time, though the gobbler evinced much pleasure at sight of his young progeny, yet he clung to the first brood, scratched, hunted dainty bits in the shape of worms, and hovered them just as their mother would have done, at the same time giving no further attention to his wife and her second brood, the whole care of which he gave over to her. To his mistress it always seemed as though he should have shown some paternal affection for the second brood, instead of which, if one of the little fellows ventured too near, he would give it a little peck with his bill, which would send the luckless chick peeweeing back to its mother.

At another time a gander was the special wonder of the barnyard fowls and the little folks. One spring we thought to raise geese, so 18 goose eggs were bargained for and "set" under six old biddies. At the end of six weeks one lone gosling came forth which was a perfect prodigy in size, color and form. Even his mother looked in round-eyed astonishment at the wonderful size and actions of her chick. Still like the most of mothers, the maternal tie was strong, and she watched, hovered and scratched as persistently and industriously for this independent, disobedient gosling as if he had been a real chick. It was not long before he was as large as the old hen, which he persistently followed, despite her efforts at weaning.

As he grew in age and size, he assumed airs and privileges, until he was the acknowledged master of the barnyard.

Each spring he would select a hen which he would guard with his life if need be, and when she would come off the nest with a brood of young chicks, he redoubled his care. He would fight a person who ventured to even come in the direction of his adopted charge. Neither roosters, hens nor hawks dared intrude. In fact, he was such a quarrelsome and vicious fellow that we had little sympathy for him, and even "sicked" Dido at him. This little dog was a queer, quick-motioned, bob tailed creature not so large as the gander, but when we pointed at him the dog gave chase and caught the gander by the neck, and we thought his day had come, but Dido loosed her hold, when the gander caught her by the tail; then there

was flapping of wings and howls of pain. All battles end, and both combatants walked dignifiedly in opposite directions, victors. In later years the children made a playmate of the gander, leading him by the wings around the yard, and to the watering-trough, where it was his delight to swim and theirs to watch him. At the age of seven years we sold the gander to a neighbor who wanted "baked goose" for dinner, but the children reported "he was the toughest goose! We boiled and boiled him all day, and then we could hardly bite him he was so tough."

Queer Things in Arizona.

EDITORS PRESS:—It has been so long since I have written to the RURAL that I expect most of the old people who read the RURAL have forgotten my name, and many of the young people never heard of me. However, I have been reading the RURAL all the same.

But what I want at this time is to tell the young folks something new. Were I to write up my journal that I have kept the last four years (and I may do so one of these days), there would be many things therein new to the young readers of the RURAL. At some other time I may tell you of riding an Arizona blackamoor horse into a herd of antelope, and of looking down the perpendicular banks of the great Colorado, where it is more than a mile down to the water; of the fierce Apache Indian, and how I rode the blackamoor, just because he snuffed and snorted at moccasin tracks. But this time I will talk about an ethnological hunt. Now get the dictionary if you don't know who or what about ethnology.

Where I am now living there was one day a city, with houses that had great walls around them, and these people had large churches and every church had an altar in it. One large church that I visited last July, just as the workmen had excavated the altar, there was plain to be seen on the altar the evidence that a child not two feet long was on the altar when the building fell in. Other marks and signs proved that people were standing round the altar at the same time. Lieutenant Frank H. Cushing is commanding a large force of men and mules, who are delving and plowing and using scrapers and picks and shovels, digging up these temples and cities and towns. This work is the ethnological hunt. When Lieutenant Cushing gets his book printed, he will tell you of his find. But I will tell you of my find.

Not long since I was digging a ditch, that passed just to the east of an old wall, when I dug up a glazed earthen pot and a queer-shaped, glazed earthen animal image. They were small; the two would not weigh above six pounds. The pot was the shape of an old-fashioned inkstand, and in the small bowl was a black substance that seemed as if it had once been burned with a great heat. The animal image seemed to be placed as a guard over the pot. The beast was a queer-looking fellow. He had the body of a goat, legs like an elephant, tail like a bear, neck and ears like a bear, but the face and nose and mouth and lips were like the camel's, broad and thin. But the queer part is, this beast held up his head and neck very high, about as high as a dog does when he is howling.

You young people frequently enjoy working out enigmas and puzzles. Can you tell us who put this howling-beast image and the pot of carbonized substance down on the east side of this wall, two feet below the surface of the surrounding soil? Both the pot and image stood on a solid lime-cement floor. I notified Lieutenant Cushing of my find, and he now has a part of his force at work near my house.

In my next I will tell you my views of the howler and the pot, and will tell you of the tombs, crematory furnaces and of the phrenology of some skulls found here in these tombs. Tempe, Arizona. GEO. KAY MILLER.

PROFESSIONAL DUSTERS.—That dusting has been made a difficult household art by the accumulation of bric-a-brac in our houses, says the Boston Journal, is proved by the new occupation of bric-a-brac cleaning. It is known that in New York, women who clean ornaments go from house to house, making a remunerative employment for themselves. They possess a delicate touch, and have especial brushes for the purpose. The chief fault of amateur dusting is the haste with which it is done. Look at the duster in a large crockery store. She wipes each article with a cloth, carefully and slowly, and when necessary, polishes the surfaces thoroughly. Her leisurely manner is in great contrast with that of the average housemaid, who whips her cloth rapidly over the surface. A visitor to Holland says that the weapons of a Dutch cleaning woman are cloths and chamois, "brooms and brushes, scrubbing brushes for the floors, hair brushes for the wainscots, feather brushes for the walls, tooth brushes for the corners, geese wings for the stoves, hen's feathers for cleaning out the keyholes, small sticks of wood for poking the dust out of cracks in the floors." It is no wonder that the Dutch house is burnished brightly.

RAILROAD ACCIDENTS.—A French writer says the percentage of deaths and wounds from railroad accidents is only about one-quarter as great in Europe as in the United States.

GOOD HEALTH.

Female Physicians in New York.

There are 150 female physicians in New York, and the number in Brooklyn and the surrounding cities about doubles that. Among those in New York City there are quite a number who have incomes of \$10,000; two or three make yearly sums ranging from \$15,000 to \$20,000, and one has averaged for the last four years a steady income of \$25,000. Dr. Emily Blackwell is the President of the Woman's Medical College, and has besides a large practice. She has adopted children and makes a charming home for them. Dr. Mary Putnam Jacobi has a large clientele, and consults with the first male physicians of the city; indeed more than one physician has a regular female confrere, to whom he recommends some of his patients to go for special courses of treatment. Several of these female practitioners are house physicians to hospitals, and the Lucretia Mott Hospital in Brooklyn is entirely officered by them.

Some women physicians work in partnership with each other, among whom are Drs. Eliza M. Mosher and Lucy M. Hall of Brooklyn, and the two sister doctors, Sarah and Julia McNutt. Dr. Sarah has charge of the babies' ward of the Post Graduate hospital, and Dr. Julia has founded a training-school for nurses. Both are physicians in high standing, and have a large practice, especially among children. Drs. Annie Daniels and Kate Parker are both women of influence and of the widest-reaching charity. Dr. Elizabeth Cushman is a celebrated anatomist and successful ovariologist, and yet is a small, feminine, quiet-voiced little woman. Drs. Lozier, Post, and Faunce are all well known for good work. Without exception, these women are quiet, well bred, gentle-mannered and soft-voiced. One lonely young woman, whose physician was of the same sex, said a short while ago: "When I am homesick and miss my mother, I go and talk ten minutes to my dear doctor, and I come home quite happy again."—N. Y. World.

A NEW TREATMENT FOR BOILS AND CARBUNCLES.—In a communication to the French Academy of Medicine, at a recent meeting, M. Verneuil says: The topical applications (prominent among which stand the carbolated and borated solutions) employed in a certain way, and particularly in the form of powder used repeatedly and for a long time, are of remarkable efficacy, and at the same time are absolutely harmless and easy of application. These applications of powder, with few exceptions, arrest the progress of the disease in the gravest cases, ordinarily cause the pains to quickly cease, reduce the fever, disinfect the purulent and gangrenous centers, hasten resolution and promote the formation of healthy granulations. This treatment is suitable for all regions, and for all forms and periods of the disease. It is never harmful, and leads to a cure in a large number of cases. It assists surgical interference when that is necessary. Finally, it tends to prevent auto inoculation and general infection.

A NEW ANTIDOTE FOR RATTLESNAKE POISON. On the morning of March 29th, says the Indiana Farmer, Mr. M. B. Smith, who works in a Southern Express office, at Atlanta, Ga., was bitten by a rattlesnake that lay concealed in a crate of cabbage. As he placed his hand upon the crate he felt a stinging sensation in one of his fingers and saw that a huge snake had fastened its fangs in his flesh. In a few seconds the hand and arm began to swell and Mr. Smith was driven hurriedly to Dr. Gaston's office. Dr. Gaston saw the young man was in danger of losing his life and he gave him a hypodermic injection of permanganate of potash—a solution of two grains to a dram of water. This antidote to snake poison was first used by a Brazilian physician, and its efficacy was so great that the doctor was given a handsome reward by the Government. The treatment relieved Mr. Smith immediately and he was sent to his home. From last accounts he was doing well. Dr. Gaston is of the opinion that Smith would have died but for the timely antidote administered.

INSECTS IN EARS.—Few troubles are more annoying or more productive of serious difficulty, if not removed, than insects in ears. Lying upon soft meadow grass, or sleeping upon a camp-bed of fragrant spruce, bugs of different denominations seem possessed with a desire to inspect our auricles. Once inside, their frantic efforts to escape cause such agony that people have gone temporarily crazy with it. This may be instantly stopped by pouring the ear full of sweet oil, which suffocates the insect, and he is easily removed later by a syringe and warm water. Avoid intruding pins, etc., into the ears. Much harm may thus be done to their delicate mechanism, and little to the cause of all the trouble. If oil is not readily accessible, use water, which is almost as good. Earache in any form may be quickly relieved by filling the organ with chloroform vapor from an uncorked bottle, vapor only, not the liquid.

THE HOT-WATER CURE.—The results of the hot-water cure are said by a physician to be the stimulation of the stomach at first, but after repeated use a lessening of the tone of the digestive tracks, which causes congestion and dyspepsia. Hot drinks tend to lessen bronchial irritation, and may be used profitably in some cases of consumption.

DOMESTIC ECONOMY.

Delights in Grapejuice.

One man of the present deserves well of his day and generation, and that is the man who has brought fresh grapejuice in use again. The absolute luxury of a draught of pure grapejuice, just as it leaves the press, and filtered from sediment, is only to be judged by those who have tasted it. It is what it purports to be—wholly grapejuice, undiluted, unsweetened, unfermented, delicious as the wine in the cluster, innocent as mountain water, health-giving as the fountain of youth. It is the most beautiful liquid in the world—deep, rich in color as fluid gems, all fermented wines being pale beside it, for they are diluted, while this is the full blood of the grape of sweet and divine odor. Its effect is simply wonderful in restoring strength.

For years, daily, after working up to 11 o'clock mornings, there has come that reaction, the fatigue which writers and nervous people know, that no food or medicine ever seemed to relieve, and which made the rest of the day's work a dragging effort. A glass of the grapejuice changes all this, and on three or four glasses a day I work with an ease and sustained strength which make me a novelty to myself. It is food and drink both, like milk, only a thousand times better; and though no vegetarian or dietist, I had rather live on cracknels and grapejuice wholly than go without it. It banishes bilious and dyspeptic symptoms, humors and consumptive ailments, like magic. Here I stop, not for want of more to say, for this subject is barely begun, but it is best to leave each person to test it for himself. It is easily done. Any one can squeeze a pound of grapes in a towel and strain the juice for drinking at once, after the imperial court fashion ages ago. A delightful little hand-press with porcelain sockets, sold for \$2, does the work much better. Once people get a taste of this blissful fluid, there will be no danger of raising too many grapes in this country or any other, especially as it is perfectly easy to put up this pure grapejuice so that it will keep unfermented, unchanged, fresh as when it left the cluster, for 20 years. Don't say it can't be done; it has been done for centuries. You can taste it in New York shops fresh from the press before your eyes, and bottled for years, and can't choose between the two. The grape-grower whose intelligence provided this treat for the public has done a very good thing for his own profit, but a better one for the country, both for growers and consumers, and the next five years will prove the strength of these words.—American Garden.

LEMON BISCUIT.—One and one-half cups of sugar, one cup of butter, four eggs, 1½ pints of flour, one teaspoon of extract of lemon. Mix the butter, sugar and beaten eggs together, add the flour sifted with two teaspoons of baking powder; flour the board and roll out the dough one-fourth of an inch thick; cut out and lay on a greased tin; wash over with milk, and lay a thin slice of citron on each. Bake in a hot oven ten minutes.

TAPIOCA PUDDING.—Take six tablespoonfuls of tapioca and soak it in milk for some hours before you intend to use it; when you are going to make your pudding, put the tapioca into a quart of milk, place it on the fire, and, as soon as it boils, sweeten it to your taste and let it simmer for a quarter of an hour. Pour it into a basin and stir in a little fresh butter and three eggs well beaten. Bake one-half hour.

VANILLA CAKE.—Rub one cup of sugar with one-half cup of butter to a cream; add the whites of three eggs, one-half cup of sweet milk, two cups of flour, one teaspoonful of baking powder; bake in three cakes. Take the yolks of the three eggs, one cup of pulverized sugar and one teaspoonful of vanilla; beat together 15 minutes. When the cakes are cold or slightly warm, spread this mixture between them.

BEEF OMELET, which may be eaten cold for supper or warm for breakfast, is made of one pound of beefsteak, one-quarter of a pound of suet, salt, pepper and a very little sifted sage, one egg and three milk crackers; chop the beef and the suet very fine, roll the crackers to a powder, mix all together and bake in a shallow tin, or fry in butter over a slow fire.

ORANGE FLOAT.—One quart of water, the juice and pulp of two lemons, one coffee-cup sugar. When boiling hot, add four tablespoons cornstarch. Let boil 15 minutes, stirring all the time. When cold, pour it over four or five oranges that have been sliced into a glass dish, and over the top spread the beaten whites of three eggs, sweetened and flavored with vanilla.

BLACK PUDDING.—One-half cup each of sugar, butter and milk, one cup of stoned raisins, one teaspoon of ground cloves, 2½ cups of flour, one teaspoon of baking-powder; steam one hour. Sauce: Mix a little flour, cornstarch and water together; let it boil two minutes; add a small piece of butter, sugar and nutmeg.

MOLASSES CAKE.—One cup of molasses, one cup brown sugar, one cup of cold water. Boil together, then add a cup of butter and set aside to cool; flour as thick as a pound cake, add four well-beaten eggs, one pound each of raisins and currants, one-half pound of citron. Bake two hours.



A. T. DEWEY.

W. B. EWER.

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Agricultural Implements—P. P. Mast & Co.
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Agricultural Implements—Baker & Hamilton.
Agricultural Machinery—Byron Jackson.
Agricultural Implements—Truman, Hooker & Co.
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Cattle Sales—Kilip & Co.
Winery—L. R. Stephens, Woodland, Cal.
Real Estate—Ostrander & Sons, Merced, Cal.
Flour Mill—Ostrander & Sons, Merced, Cal.
Commission Merchant—Samuel Breck.
Blumeyer Iron Works—Cincinnati, Ohio.

See Advertising Columns.

The Week.

It is the first week of May, and the timely floral events multiply. Grand artificial aggregations of bloom have pleased admiring thousands in several of our towns, and natural collections by acres have delighted those who go forth among the wildlings on plain and hill-side. Both garden and field bloom are among the glories of California, and it is gratifying that as the latter are constantly narrowing by the encroachments of cultivated areas, the former are increasing in extent and in manifestation of taste and appreciation.

We are glad to see that the floral fairs are so carefully planned and richly endowed, because it shows that all our horticulture is not upon a commercial basis, and that though the country is new and our industrial arteries fairly throbbing with enterprise, we are not too sordid to be moved by the appeals of the beautiful.

THE President has appointed Melville W. Fuller of Illinois Chief Justice of the United States.

Partisanship.

There is no contagion more subtle than partisanship, and we are all liable to catch it. It is a sort of malaria in the air and we are apt to become badly poisoned by it before we are aware of its existence. It is hard to cure for the reason that the infected victim is under the hallucination that it is something good to have. There are seasons when it rages epidemically, and there are indications that we are about coming into one.

The usual symptom is an unreasonable attachment to party, and when one has got the distemper very bad he imagines his party is the sole depository of all that is true, beautiful and good, and whatever opposes its success is the enemy of patriotism and all righteousness. An election is called a campaign. The parties with banners and drums are arrayed in order of battle. Half the nation stands for truth, peace and prosperity, and the other half is supposed to stand for something very opposite. Combativeness mounts guard and takes the place of kindness, good-will and decency. Suspicion grows rank in such an atmosphere. The best words and deeds of an opponent are attributable to base motives. His opinions are unworthy of consideration, his arguments are not worth heeding. He is to be ostracised as the enemy of the country. In such a war there is no quarter, no neutrality, and the man who fancies he sees something good on both sides is denounced as a coward, trimmer or apostate. He is pelted with the meanest epithets. The fate of the nation is declared to hang on the success of a party; its triumph gives an assurance of peace and prosperity, and its defeat is portentous of disgrace and disaster.

And what is strange about all this fuss and splutter is that the partisan is not conscious of a selfish zeal or ignoble motive. His zeal is holy zeal, and it is likely to impel him to the use of dangerous motives and the perpetration of very unholy acts. He says all is fair in war; the end sanctifies the means; we must fight fire with fire; we must beat the devil with his own weapons. The enemy is corrupt, therefore there is no harm in using corrupt on. The enemy lies, we may lie in return. He vilifies, we must get even with him. This is what may be called the retaliatory stage of the disease.

But it does not stop there; the partisan soon reaches the last stage of the disease. He no longer cares for the truth, seems to like a big, round, plump lie the better, as it hurts harder. He rejoices in iniquity. He justifies the immoralities of his own managers, and magnifies the weaknesses and infirmities of the other side. The plans of the campaign must not be too sharp'y looked into; the platform must not be criticised. You must shut your eyes and swallow the whole dose prepared by the political doctors and ask no questions. One must be badly rattle-headed that expects to have clean hands while handling the guns. One thing at a time; after the battle he can take a bath. The result is that our elections become battles of stinkpots. Falsehood follows inuendo, calumny reinforces suspicion; every miserable subterfuge, mean evasion and petty concealment is resorted to. The atmosphere is black with the lies shot from one camp to another.

Already the pestilence is in the air. It is likely to grow worse till next November. Would it not be well for us all to be on our guard against the first approach of the disorder? Surely it is our duty to be charitable to our political opponents, and award to them the same patriotism and honesty we claim for ourselves. All is not fair in war. No honorable man will fight the devil with his own weapons. Purity of your own party is worth more than a triumph, honor is more to be prized than a victory. Search for good motives, not evil ones. There is good and bad in all parties, and let the one without sin cast the first stone. If half the country were as bad as the other half says it is, the whole

thing would go to pieces like a ball of quicksilver. The heart of the American people is in the right place, vote as they may. Have faith in it. Be proud of your party if you like, but prouder of the American people.

Apricots.

The apricot is again the great sensation in the fruit industry. The great yield of last year has induced many of the older trees of certain varieties to take a rest this year. More than this, some other unfavorable influences have been at work, perhaps, and the shy Moorpark shows its customary disposition, with or without reason. All accounts of the Blenheim go to approve the estimate of this variety which we have already given in the RURAL. We hear from widely distant regions that the Blenheim is full this year, though it bore a large crop last year. The tree may not fill as the Royal does, though it sets full enough sometimes to need thinning of half its fruit. In the University collection at Berkeley, the Blenheim is the only one of 20 varieties which bears a full crop this year. Many varieties which fruited heavily last year are almost empty this year. We will give fuller data on this point at another time.

Apricot prices are lifting fast now and canners are scurrying around to secure supplies. Buyers are thicker than laborers in the fruit regions. Sales are already pressing hard upon the three-cent mark, and many are using their apricots to sell peaches, which are more abundant. It looks very much as though it would be difficult to get enough apricots this year to fill canners' orders, and the poor people who learned last year how good California dried apricots are may have to wait awhile for more of them. But there are plenty coming. The following dispatch from New York, May 2d, shows that supplies are small:

California evaporated apricots continue to move out well into consumption, and the previous strong tone of the market is retained. For good, fair stock, 14c is quoted the inside, and at this figure only limited quantities are available. Fancy is held at 16c. The entire stock of this market is said not to exceed the equivalent of 800 boxes.

Crop Prospects.

The San Francisco Call of Wednesday morning contains two columns of brief reports, giving the condition of the crops on the first day of the current month in over 30 counties of the State. Their general tenor, as to grain and hay, is quite unfavorable, and recent drying winds have made the absence of rain yet more discouraging.

Summer-fallowed wheat, however, is doing fairly well in many districts—especially north of San Francisco bay—and may even reach an average crop in the more favored places, provided there be rain within a week or two; but as to this, "everything depends upon the weather." Winter-sown wheat, for the most part, is decidedly below the average, and in some localities will hardly make first-class hay.

Reports from San Luis Obispo and adjacent coast counties are rather more hopeful in tone than those from the great interior basin, and moist spots here and there, even in the San Joaquin, give better promise than the average, while Los Angeles expects "the biggest crop of wheat the county has ever known," but such reports are exceptional. Hay, too, as a general thing, is light and feed scanty.

In the extreme southern counties, however, recent rains have proved very beneficial to the barley; and the aspect of fruit trees and vines throughout the State is highly satisfactory and cheering to orchardist and vigneron.

PUBLIC affairs are active. The Republican State Convention has met in Sacramento and chosen delegates without pledging them for any candidate for the presidency. The U. S. Supreme Court has decided in favor of the railways in their refusal to pay taxes levied under the New Constitution of California. Abroad there are the usual sensations and rumors, and at home there is peace, except the tiny conflicts in Congressional halls.

SILK CULTURE.—On and after May 10th the rooms of the State Board of Silk Culture in the Flood building, at Fourth and Market streets, will be open to the public between the hours of 11 A. M. and 3 P. M.

Hints for a Dry Time.

The promise of a storm, which seemed very good a few days ago, passed without much accomplishment, and we are now fast approaching a time when a downpour would be of doubtful value, because of the mixed good and evil which it would entail. A good wetting would be of great advantage to the newly-planted orchard and vineyard area, and it would maintain the growth of pasture-plants much later than they now seem likely to hold their verdure; but much of the grain has gone too far to be helped either for grain or hay. So far as orchard and vineyard interests are concerned, they can be materially helped by unusually good cultivation. Keep the surface well pulverized and evaporation will be checked and nearly all the moisture now in the soil will be held for the use of the roots. Read again the excellent article on cultivation by Gen. Chipman, which was recently published in the RURAL, and then practice what is there taught. This will save many trees planted this winter, and will cause others to make quite satisfactory growth. In older orchards and vineyards it will give larger fruit and save the trees from exhaustion. Ill-kept trees and vines will have a hard time this year unless the cultivator makes frequent visits to the soil. How a person can have enterprise enough to plant trees and then be negligent enough to let them stand famishing and dying, with the baked crust rapidly giving out the moisture to the air, is a thing hard to comprehend.

In some places where the amount of water has been insufficient, even when conserved by careful cultivation, those who desire to save the money expended in this year's planting, and to save a year's time, also, must prepare to water the trees or cuttings. It does not need a river nor any appreciable part of one to save newly planted trees or vines. Of course where irrigation by running water can be had, it should be used moderately, and be followed by good cultivation; but even where this is not to be had, and where all the water has to be had from well and pump, it is not necessary to let the trees perish. Rig up a water-wagon in any way your ingenuity may suggest, and haul the water to the trees, giving each a couple of bucketfuls, and then surface the ground finely with the hoe. How often this must be done depends upon how leachy the soil is or how well the surface can be pulverized. When the number of trees is small, and a mulch of finely-divided manure can be had, it will pay to apply a mulch and then pour the water through it. The tree will tell when it needs water by the spirit of its foliage, and when it begins to appear dejected start out the water-wagon. This is troublesome, it is true, but it affords a way by which a few dollars expense will save a hundred in money and in satisfaction.

Extra effort should be put forth for the livestock as well as the trees. All the straw should be saved, and if there is a moist place on the ranch or a small area which can be irrigated by windmill or small steam-pump, proceed at once to put in a summer crop of forage. A small piece of wet land, which, perhaps, is useless in a wet year, can now be broken up and mellowed as much as possible, and a crop of Egyptian corn or sorghum cane, or mangelwurzel may be sown. All these, if fed with cut straw, will save great expense for purchased feed-stuffs, and will prolong the milk yield or the satisfactory growth of young stock. Great progress has been made in the last few years in the growth of the different kinds of sorghum, and cattle are not likely to suffer as they have in some of the earlier dry years of California.

Fortunately there will not be the loss and inconvenience from scanty rainfall now which were experienced a decade ago. We have now vastly more land under irrigation. The great artesian interests of the interior have developed, and the water supplies other than these have been much increased. But small crops or the total loss of returns in some cases will, nevertheless, press heavily, and it will require fortitude to meet the experience. But it is not a time for repining. The aggregate produce of the State will be great, the general activity and increase in values and the welcome features of the outlook more than compensate for any temporary accidents of a season.

THREE steamers were sold last week at Astoria to go to Alaska in the interest of Alaska fish-packing companies.

The Beet-Sugar Enterprise at Watsonville.

We have followed the progress of the beet-sugar enterprise at Watsonville quite closely, because of the possibility of the much wider extension of the industry to other parts of the State. On Saturday last the construction had progressed so far that the corner-stone was laid and the occasion was made one of note in the community by a celebration. The directors of the Western Beet Sugar Co. went down from San Francisco and were met on arrival by a large concourse of citizens. Of course cheering and other expressions of popular interest were not wanting; the California populace may be trusted for energy in that way when the occasion suits.

From the depot the visitors were escorted to the Mansion house, and after a repast headed an immense concourse of people, who, accompanied by a band of music, marched to the site of the Western Beet Sugar factory, adjacent to the town of Watsonville, where, after the usual formalities of speeches, the corner-stone was laid. Claus Spreckels expressed himself pleased with the good-will manifested by the farmers in complying with the instructions issued in regard to planting of the beet seed, of which an extensive acreage is being carefully cultivated in the valley. Julius Lee, orator of the day, spoke very forcibly of the noticeable union existing between capital and labor, and amid vigorous cheering, predicted a successful termination of this great enterprise. The corner-stone, of Penryn granite, with the usual space for relics, was put in place by President Spreckels, after a few well-timed remarks.

The factory will be ready for operations by September 1st. Twenty-nine carloads of machinery have so far been received at the factory, and 18 more will complete that portion of the plant purchased in Germany. Besides the above there are still 48 carloads to arrive from American manufactories before the plant is complete. The 2500 acres contracted for to be put in beets are all seeded. The beets are up and look well. The capacity of the factory will be 350 tons daily, which will be doubled next year.

Now that the manufacture of beet-root sugar starts forward with renewed strength in California, it is interesting to see what Germany has done to supply herself with home-grown sweets from the beet. It is telegraphed from Washington that Consul Warner's report concerning sugar-beet culture in Germany contains facts not before printed. He says that the improvements made in the year of 1886-87 in the manufacture of beet sugar wherein the direction of simplifying the separation and purifying processes, as also in a saving of material and work, especially in the treatment of the juice with sulphuric acid, and improved methods of filtration, were more frequently adopted, while the use of bone and charcoal has been almost given up. There are now 201 factories, of which 197 extract juice by diffusion. The production during the year of 1886-87 was 198,562 tons, and there were exported 48,938 tons of raw sugar, while the imports were only 146 tons of refined and 176 tons of raw sugar.

It is exceedingly desirable that a country like the United States should not be subject to outside regions for sugar. If Germany has so far succeeded that she is an exporter instead of an importer, surely the United States, with such decided advantages in the growth of sugar-yielding plants as are found on this coast and in some other parts of the country, should not despair of success. There is great promise in the present effort, and we trust we are just upon the threshold of full realization of it.

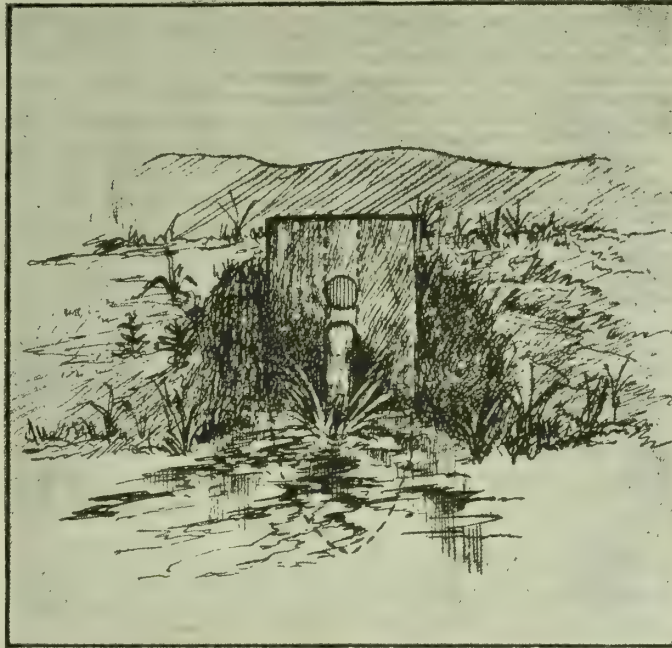
WILL LIME PREVENT BLOATING?—A dairyman who was brought up in a limestone country informs the *Eureka Standard* that cattle there never bloated from eating green feed. This has led him to believe that lime in water prevents bloating. He has followed the practice of putting from one to two gallons of lime, every week, in the water-troughs from which his cattle drink, and none of his cattle give him trouble by getting bloated.

CRANBERRIES IN WASHINGTON TERRITORY.—Three years ago, according to the *Olympia Standard*, A. J. Burr began to cultivate New Jersey cranberries at Oyster Bay. He has lately realized \$400 on a shipment of vines to Coos Bay, Oregon, and expects to ship large quantities by and by.

Irrigating Sidehills from a Ditch.

[Written for the *RURAL PRESS* by S. W. SHAFER.]

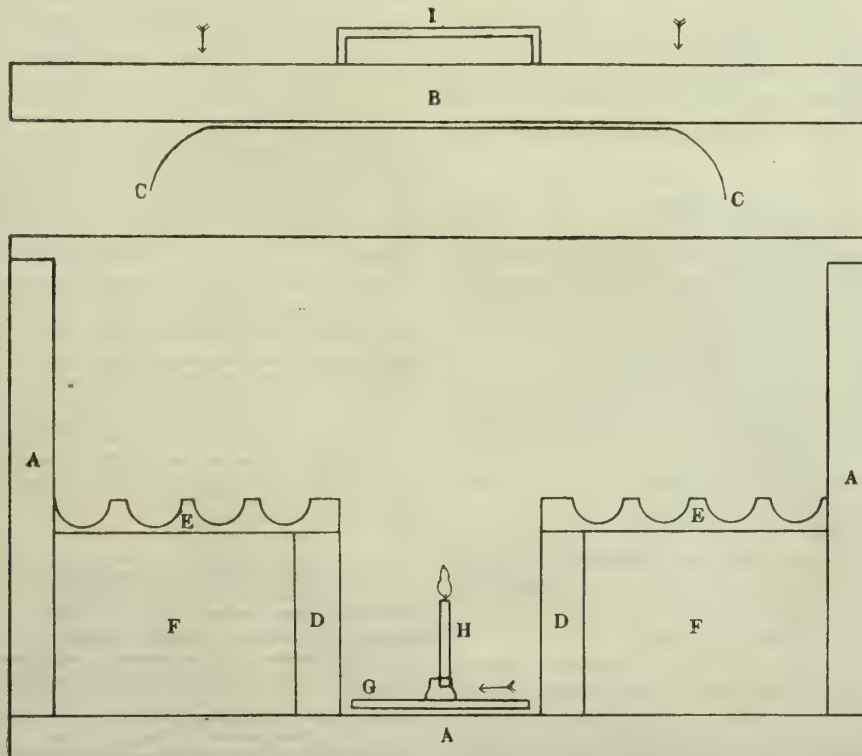
All who have tried irrigating on a hillside know how difficult it is to keep the water evenly distributed. Of course a flume is good, but it costs money and always needs patching. Here is my plan: Cut six inch-boards into 14-inch lengths. I split mine out of firewood, sharpen one end and bore two holes, as shown in the sketch. Cut the ditch-bank and drive a



SHAFER'S DEVICE FOR TAKING WATER FROM HILLSIDE DITCHES.

board at each place where you want water turned out. Regulate the supply by driving down the boards, and shut off the water by plugging one or both holes with grass or mud. By always using the same quantity of water, once regulating the depth of the boards will last a season.

stinate legs." Taking a stout string from his pocket as he talks, he proceeds to tie it tightly around the ear of the balky animal; then taking up the lines says: "Get up, Jim," and Jim "gits." It is comical to see him step off, with his head on one side, and sure enough he has forgotten all about balking and does not try it



SECTIONAL VIEW OF BOX FOR THAWING GIANT POWDER.

The trouble is, the holes plug up with trash, but that trouble applies to all ways of spreading water, and the trash is good for the land. By cutting out the boards on the dotted lines, they do not choke so badly. Drive the boards well to the inside of the ditch, or you leave a niche for mud to eddy into. On well-sodded ground the roots soon close around the boards so that they may be pulled out when much water is wanted.

I bore inch holes an inch apart in the clear, and the upper one four inches from the top. It pays me to occasionally put on gum-boots and paddle through the ditch and slum out the leaves and sticks. These boards should be made in winter, because if the boards are not made then they will not be made at all, for who ever knew of a rancher fixing up anything in the busy season?

STARTING A BALKY HORSE.—M. A. Gage writes the *Oregonian* that he and his son have a big horse which was much inclined to balk, and before they got him had been badly used in various ways in trying to break him of the exasperating habit. But now, whenever he flies back and says, "No! I won't pull this time," the young man lays down the lines and talks to him after this fashion: "Won't pull, eh? Decline to work, do you? Well, I'll give you something else to think about besides your ob-

Thawing Out Giant Powder.

In view of the fact that so many high-g explosives are being used in clearing land of stumps and timber, in construction of irrigating ditches, etc., it is proper that we should suggest a method which will obviate the many accidents which happen in some parts of the coast in thawing powder. There are proper means for doing this, but they are not always taken advantage of. Mr. Wm. O'Keefe of Helena, Montana, sends us sketches of a box intended for thawing powder, which can be made by any one. It will thaw out the powder in 20 minutes, and keep it in condition for three or four hours after the candle has gone out. The box may be placed in any convenient place and needs no watching, as the candle cannot be blown out. It is made out of a candle-box, and three short pieces of candle will work it 24 hours.

One side of the candle-box forms the top. The box A is 17 inches long, 9 inches wide and 10 inches deep, with sides extending half an inch above the ends. It is covered with paper on sides, bottom and top, and then half-inch board sheathing put over that. B is the top or lid of the box to lift off. Around the outer edge and on top of the lid is tacked a strip of old gum boot-top with the lining side down to keep the joint close. The lid should have an eight-inch play so it will come off easily, and the rubber extends over and covers up the open joint.

C is a piece of tin 6x13 inches, nailed to the bottom of the lid to reflect the heat downward on to the powder. D is a piece of board 3½ inches high to form a bin at each end of the box. E is a rack on top of the board D on which to rest the powder. F is a bin filled with oatmeal or buckwheat. It is partly covered by the rack E. This will retain the heat a long time, and if the powder should "melt" the drops cannot explode by concussion. Charcoal dust should not be used.

G is a piece of board covered with tin, and there are two pieces of hoop iron nailed upon it to grip the candle. They do not extend entirely around the candle, so the grease will drop down and cool. This is lifted in and out. H represents the candle, four inches long, and I is the handle to the lid.

Mr. O'Keefe devised this box last winter and has used two of them while he has been running some tunnel work. The boxes work to perfection, he says. The powder was not easily thawed on the bodies of the men in that cold climate, and the time lost, and danger with a stove, is well known. In this box the sticks are thawed to the center, and one may go at any time and find the powder ready.

A three-eighths hole should be put on the side near the bottom of the candle, and two should be made in the lid. If the candle will not burn, more holes may be made in the lid. Care should be taken not to make too many holes, however, as this will result in cooling the inside of the box. As Mr. O'Keefe says, carrying powder makes some men sick, and when put in a boot it is only half-thawed. Hot water cannot always be procured, but this box furnishes a good and safe means of thawing powder.

FEEDING ALFALFA.—The *Colusa Sun* rightly remarks that alfalfa should never be pastured. In the first place it will pay better to cut it and feed it to stock. There is an immense waste in having a lot of stock in on a rank growth of alfalfa. The waste is more than what is eaten! The great objection, however, is that if pastured the weeds are allowed to grow while the alfalfa is eaten down. It is evident that in this way the weeds soon take the field, but if it is cut the whole is taken down together, and when given a fair chance alfalfa will not be rooted out by any weed. If a person has even as many as 10 or 12 head of stock to feed, he will find that it will pay big wages to mow it and haul it out to them. A field will feed three times as much stock and save the grass from being killed out by weeds.

SCOTCH SPUDS FOR TEXAS.—Treasurer Hopkins of the S. P. Co. recently stated that their steamers between New York and New Orleans were carrying quantities of potatoes destined for points in Texas that had been shipped from Scotland. They were being purchased of the New York consignees of Scottish wholesale houses.

CAPT. S. S. TURNER, of Sonora, the *Democrat* says, has been appointed by the Commissioner of Agriculture an agent for the statistics of Tuolumne county in the matter of fruits, garden produce, cereal products, and for furnishing all data concerning the material wealth of the county.

CONSUL WARNER reports to the State Department from Cologne the rapid extension of beet-sugar cultivation. It has been increased over 500 per cent in 12 years.

THE Cogswell Polytechnic College on Folsom, near Twenty-sixth street, is approaching completion, and the internal fitting is now being pushed rapidly.

AGRICULTURAL NOTES.

CALIFORNIA.

Amador.

THE EXPERIMENT STATION.—Jackson *Dispatch*, April 28: We visited the Viticultural Station grounds last Sunday, and found that the work of clearing, grubbing and plowing for the present season was about completed, and the fencing will be completed in a few days. The buildings will be erected on a prominence, below which may be seen like a beautiful picture the rolling hills around Jackson, and the broad Sacramento valley still further on. There will be nothing done in the way of experimental farming this season.

Butte.

GOOD GRAIN.—Oroville *Register*, April 26: The wheat and barley crop in Butte will this year be fully up to the average, even should not another drop of rain fall. There will be some fields where nothing will be grown, and some where the crops will be very light, but these will be more than offset by the big yield on the black lands of Biggs, Nelson, Durham and other localities. These black lands will have as fine a crop from the present look as they ever yielded, and here is where the great bulk of Butte's 40,000 tons is produced. At Dayton, above Chico and in other places we also hear reports of fine grain, so it is safe to assume that the crop will be above the average.

Colusa.

EFFECTS OF IRRIGATION.—Colusa *Sun*, April 28: John Cheney has land under the Cheney slough canal which can afford water in winter. On the west side of the slough he has a field checked into five checks. The bank of the slough is high and of rich sandy loam, and the west edge of the field runs off into pure adobe. It so happened in watering that he got the two western and the two eastern or high ones watered well, but the middle one on account of the levee breaking was not watered. He sowed barley on the whole of it at the same time. To-day the crop in the middle check is a failure, while the checks on each side, the pure adobe and the high sandy land, are as fine as can be produced. In fact, a man riding over the country this year has to be blind physically not to see what irrigation will do, and blind with prejudice not to acknowledge it. The canal has cost Mr. Cheney about \$3.50 an acre, and he will pay it twice over this year with the difference between what he will have and what he would have had.

A BLESSED BREAK.—Chico *Enterprise*, April 23: Last winter there was a break in the levee opposite Princeton, which at that time was considered very unfortunate. Frank Steele, whose farm is near the break, informs us that he had about 70 acres flooded. These 70 acres are good for a big crop. The rest of his land may have half as much if we have favorable weather. P. V. Berkey, foreman of Moulton, says that about 3000 acres of that farm were flooded, and that it will have an immense crop, where there would not have been half as much without it. We estimate that the break was worth more than \$25,000 to Moulton. Everybody on the line of the overflow—all of whom cursed it—fared as well. Berkey says he never worked so hard in his life as he did to stop that break! What a lesson is here for irrigation!

SUMMER FALLOWING.—Willows *Journal*, April 27: Summer-fallowing is being pushed considerably in this vicinity. On the Rideout ranch near Germantown 22 eight-horse teams are at work, and on the Zumwalt place 10 eight-horse teams. These ranchers are firm believers in the summer-fallow system.

Fresno.

RABBIT DRIVE.—Fresno *Republican*: Although the record of deceased rabbits was not so large as on some former occasions, the drive given for the entertainment of the visiting members of the N. S. G. W. Grand Parlor was a splendid success, so far as the enjoyment of the affair is concerned. It was estimated that the line was eight miles in length. Fires were built in the dry weeds near the outside of the line, and many rabbits were smoked out of their hiding-places. Some of the boys had failed to procure clubs, and these armed themselves with empty bottles which were thrown at the rabbits with great force. The marshals did their duty in fine style, preserving the best of order as long as order was necessary. After the rabbits were all in the corral the boys waited for a few minutes till photographs could be taken, of which Mr. Foster and Mr. Butler each secured several. Then the killing began, and the work was short, sharp and decisive. The rabbits were thrown in piles and their number was estimated at from 2000 to 3000.

Humboldt.

SHEEP INTEREST.—Eureka *Standard*, April 26: George Kneeland, whose sheep range is at Blocksburg, says he has more old sheep now than he had last spring, notwithstanding he sold off 600 head for mutton last fall. His loss this year is not greater than the average. Last year he marked 1200 lambs and this spring he marked 1000. Cattle did better last winter than usual and are in fine condition. Mr. Kneeland has evidently been exceptionally fortunate with his flock. Most of the sheepmen in this county estimate a loss of at least one-third of the old stock and comparatively few lambs raised. Robert Porter of Hydes-

ville says he does not think the loss of sheep on their Fort Baker range has been very large, but at Laqua they have lost heavily of their fine Spanish merino flock. At the last-named place they had among the flock about 2000 yearling Spanish merinos, nearly full blood, and as these sheep are very tender and the winter was severe, he apprehends a very heavy percentage of loss. He agrees with other sheepmen that the increase by lambs this season will not make the loss of old stock good.

Lassen.

RECLAIMING THE WASTE PLACES.—Susanville *Mail*, April 25: O. A. Anderson informed us one day last week that the Lassen Land and Live-Stock Association is vigorously pushing their irrigation scheme along, and at the present time has on a force of 13 men and 12 horses. Work was commenced on the 12th instant, and it is expected the ditches will be finished in about six weeks. Two ditches eight feet wide at the top, four feet at the bottom and two feet deep, will receive the water from the reservoir in Round valley, through 24-inch pipes, and be carried down upon the lands to be reclaimed. They have a good supply of water, as the reservoir has an area of about 125 acres now under water which ranges in depth from 8 to 12 feet. This grand scheme will utilize many acres of land that have heretofore been useless.

Mendocino.

HE SHOT THE BRUTE.—Ukiah *Dispatch*: Jno. Mewhinney's fine Holstein bull, which killed his keeper two weeks ago, knocked Mr. Mewhinney down last Friday afternoon, and would have killed him had not Jess Pickle been there and fought the bull off with a pitchfork. Mr. Mewhinney, on getting up, deliberately walked to the house, secured his rifle, returned and killed the vicious animal.

Modoc.

A LIVE-STOCK FARM.—Alturas *New Era*: The ranch of Flournoy Brothers, ten miles east of town, is used exclusively for raising cattle and horses. The residence is surrounded by a large meadow from which is cut 300 tons of hay per year. The surrounding hills furnish range for the firm's cattle—several hundred head. The firm are the owners of seven or eight fine-blooded stallions and one jack, the latter valued at \$1500. The celebrated horse St. Lawrence is owned by the firm. He was sired by Canadian Wonder, whose tail dragged upon the ground three feet, and his mane reached the ground. St. Lawrence is a blood bay with black points, weighs 1500 pounds and is the largest-boned horse for his size we have ever seen. At the State Fair in Sacramento in 1884 he walked a mile in 11 minutes and 26 seconds, and pulled a ton. The boys also own another fine stallion, called Dave, grandson of Rysdyk's Hambletonian. He is the sire of 55 colts, all bays and browns. He will be six years old in June. The donkey is three years old and is 14½ hands high. He took the first premium at Susanville last year. He was sired by a fine California jack out of an imported jennet.

Napa.

PROPAGATING THE OLIVE.—Napa *Register*, April 27: J. A. Canfield, lately from the East, having purchased five acres of nicely-situated land in Hartson's Addition to Napa, west of the Court House, has built thereon a glass-covered building 15x36 feet in size, for propagating the olive. The interior shows a line of boxing down the sides and one end, the height of which when filled with sand is that of an ordinary table. The boxing is 12 inches deep, perforated at the bottom with holes and filled with fine San Joaquin sand, in which a number of hands were busy yesterday planting 30,000 cuttings just received from the nursery of W. A. Hayne, Jr., in Santa Barbara county. As soon as these are ready for transplanting they will be set out in nursery on ground prepared for them. Mr. Canfield has taken pains to secure the very choicest cuttings and is confident that the olive industry will prove one of the most popular and lucrative known to California. He will build a home for himself and family on the tract, which is also to serve as a nursery.

AMBITIOUS ALFALFA.—Colistogian, April 25: The 64 inch stem of alfalfa mentioned in this paper last week is exceeded in length nine inches by another found in Lake county, a paper there boasting of the fact. During the past week there have been brought to this office three stems of alfalfa which measure respectively 74, 79 and 85½ inches. Later in the season measurements will very likely exceed 100 inches.

Placer.

A CHOICE FARM.—Newcastle *News*, April 25: The Elliott farm, lately sold to Mr. Wm. Byers of Ontario, is within three-quarters of a mile of town. It is said to be one of the best sheltered, most productive, and most profitable fruit farms in the Newcastle fruit district, which has already gained a national reputation for the excellence of its fruits. To give an idea of the productiveness of the soil, there are now growing in and bearing upon the place raspberries, blackberries, cherries, apricots, nectarines, prunes, figs, plums, grapes, peaches, apples, pears, Japanese persimmons, Japanese plums, oranges, butternuts, English and black walnuts, and English filberts. There are also Monterey cypress, palm, umbrella tree, and other ornamental trees and shrubbery.

RANK RYE.—On Monday of last week L. B. Thurman brought to the *Republican* office a remarkable specimen of rye from his ranch between Auburn and Lincoln. The sample con-

sists of about 35 stalks growing from one root, and many of them are fully six feet high.

Santa Barbara.

NATURE'S WAY OF THINNING.—Santa Maria *Times*, April 21: Isaac Miller, proprietor of the large apricot orchard adjoining town on the north, tells us that at least one-third of his newly formed apricots are decaying. A stranger looking at them would at once say that the orchard had suffered from a severe frost, but such is not the case. Mr. Miller states that the decay is caused by dead blossoms remaining on the trees and adhering to the fruit when forming. Where the fruit is clear of these dead blossoms it presents no sign of decay whatever. How the working of nature has produced such a result he does not understand. His trees are too full by a third, and perhaps nature has adopted this peculiar plan to rid the trees of their heavy burden.

AGRICULTURAL ASSOCIATION.—Lompoc *Record*: The articles of incorporation of the Lompoc Agricultural Association are prepared and are being quite generally subscribed to by the farmers throughout the valley. The capital stock is to be \$25,000, divided into 2500 shares of \$10 each. The object of the association, as stated in the articles, is to buy, sell, and improve land for fair and stock purposes and for buying and selling stock. In a very few years Lompoc and vicinity could arrange a most interesting fair, embracing all manner of fruits, vegetables and cereals with displays of as finely bred horses, cattle and hogs as can be found in any portion of the State.

GRAIN FLOURISHING.—Mr. Burton's ranch, the Jesus Maria, is covered with the finest crop of barley and wheat ever produced on those lands. The grain is four feet high over thousands of acres and cannot fail of a most profitable yield.

Santa Cruz.

IMPORTED OLIVE TREES.—Watsonville *Pajaronian*, April 26: James Waters received from France, this week, 50 rooted olive trees of different varieties. They will average about three feet in height, and arrived in good condition. They cost him 55 cents apiece in France and custom duties and freight charges made their cost over \$1 per tree. Owing to the great demand for olive trees and the scarcity of stock, the price in California for these trees has been considered high, but from the experience of Mr. Waters it would appear that the olive tree has a pretty high value in Europe. In comparison with European prices, the California figures for olive trees are very reasonable. Mr. Waters will keep this importation of trees for the propagation of olive stock.

HAND CULTIVATOR.—*Pajaronian*: Preparing the land for beets and planting the seed are branches of agriculture in which our farmers are well informed; but the problem of cultivating the beets after they make their appearance, at the smallest possible expense and with the minimum of labor, is a matter of deep interest to the farmers of this valley. A few days since we saw a hand cultivator in use at R. W. Eaton's, which might be studied with profit by some of the parties who are working to bring out a labor-saving beet cultivator. The machine we saw is in common use among the Chinese in the berry fields. By whom it was made we do not know. It has a handle like a rake or hoe, and at the end, lengthwise with the handle, are two hoe blades about two inches apart; extending from each blade at right angles is a sharp bar of iron, about an inch wide and nine inches long. The cultivator is placed over the row of carrots or beets—with an upright blade on each side acting as guide—the iron bars are forced into the soil to the depth of one or more inches, and the cultivator is forced along by hand. It loosens the soil and cuts the weeds, and for work among vegetables is just the thing.

Sonoma.

POTATO LAND.—Petaluma *Argus*, April 28: Any one familiar with potato-growing knows that it requires a moist, loamy soil for their profitable production. Sonoma county has always been famous for this valuable food supply. Just now our farmers are plowing their ground preparatory to putting in their crop. The best time for planting potatoes here is from the first to the middle of May. It has been found that they do better when planted after the rains are entirely over. We are independent of irrigation; the natural moisture is ample to mature the potatoes planted any time in May.

FINE BARLEY.—Santa Rosa *Republican*, April 26: S. Street brought to this office a bunch of barley grown on Alex. Skaggs' ranch at Skaggs Springs which is, finely headed out and measures five feet six inches in length. It is a second volunteer crop, last year the same piece of land raising 20 sacks to the acre. It will yield more this year.

FRUIT PLANTING.—Reports from various portions of the county confirm the predictions made in the beginning of the season that the fruit crop will be unprecedented. The yield of all varieties will be especially large and on account of the early warm weather the markets will be filled before the usual time.

Stanislaus.

ANOTHER WATER PROJECT.—Stockton *Independent*, April 27: Articles of incorporation of the Oakdale Irrigation Co. have been filed in the County Clerk's office at Modesto. The capital stock of the corporation is \$100,000 and \$17,690 has been actually subscribed. The

company contemplate diverting water from the Stanislaus river at or near Knight's Ferry. One of the officers of the Oakdale company has written to Mr. Shippee to ask for a copy of the by-laws of the Stockton corporation, with the assurance that the Oakdale corporation will have no conflict with the Stockton organization, as there will be water enough in the river for both enterprises.

Sutter.

CANNERY CONVENIENCES.—*Sutter Farmer*, April 27: The new addition to the cannery is almost completed, and the plan of receiving and taking care of the fruit will now be considerably more advantageous than formerly, as each department will be separate from the others and more room will be given to each. The fruit will be received at the east end of the new building and trucked into a 40x40-foot room, where it is weighed and sorted, then into the large cutting-room, 40x120 feet, where the cutters and corers prepare it for the cans. It is then carried into the canning department—40x60 feet—in the old building, where the canning, syrupeing and capping process is gone through; thence into a 40x40-foot cooking-room, where tanks of boiling water await it. After being taken out it is trucked to the east end of the building, near where it entered, and there stored preparatory to shipping. Besides these roomy departments the company has a large cloak-room for the accommodation of employees, situated in the old building near the office.

Tulare.

A REMINDER OF THE CARP CRAZE.—Visalia *Times*: Bravo lake, 12 miles east of this city, is said to be alive with the much-talked-of German fish—carp. Parties formerly engaged in raising these fish in ponds along the upper Kaweah have allowed them to escape into the river, and from there they have gone into the Wutchumna ditch and thence into Bravo lake. They are not caught with hook and line, and it is said will not nibble at bait, but as they feed on the grass along the shore they can be killed with a club. Fifty of them were thus killed in one day recently. They are not a desirable fish for the table and their propagation has been abandoned in this section.

Yolo.

RECLAIMING THE TULE.—Woodland *Mail*: The efforts of some of the enterprising farmers of Yolo county who have hazarded a great deal of money and labor in trying to utilize some of the tule lands along the river for farming purposes promise to be rewarded this season by a large crop. The water has not been high enough this season to even test the resisting power of the levees that have been constructed. The grain on these lands is said by parties who have been over that district to be looking exceedingly good. Teams are at work summer-fallowing a large area of the tule lands for next season. Near Knight's Landing, Hon. E. N. Hershey is building a levee some eight miles in length, which will protect a very large body of land. C. F. Reed's levee system above Knight's Landing is being improved every year, and it is eminently probable that within a very few years these overflowed tule lands, which are exceedingly productive, will be farmed quite successfully.

Yuba.

LAYS GOLDEN EGGS.—The Marysville *Appeal* has the following, from Charles Raish, about an orange tree which that old citizen prizes highly: "The tree was the first seedling planted in Marysville. It was planted by a man named Cass, in Cortez Square, 30 years ago, and was bought by me when three years old for \$1, orange trees then having but little value attached to them. If I remember rightly, a number of orange trees had been imported here by Ramirez and others a short time before, and of that lot only three live to-day. One at Dougall's, one at Kimball's in this city, and another at Bidwell's Bar. From the time my tree began bearing, it has always yielded a good crop annually, and one season I positively sold \$400 worth of fruit from it. William Couglan budded from it, and many of the trees which he now sells spring from that seedling." Mr. Raish says that the tree has been known to bear over 4000 oranges in one season; and in the years of 1871-2-3 it yielded from 3000 to 4000 each season, and the fruit was shipped to various parts of the United States. At one time he sold 50 dozen of the best ones in Virginia City to a dealer for \$100. A yield of 2000 oranges from this tree is an uncommonly small one, and is the crop of what he terms an "off year."

NEVADA.

CROPS IN PARADISE VALLEY.—Silver State, April 27: James Byrne, who for years has been farming in Paradise Valley, says grass and grain look as well as he ever saw them at this season in the upper end of the valley. In the lower part of the valley, however, water is scarce, and the prospects very unfavorable for the hay crop.

IS IT WILD RICE?—Last fall Fish Commissioner Carey sent a lot of wild rice here, in accordance with an Act of the Legislature, to be sown along the Humboldt. The rice was distributed from Lovelocks to Golconda, but as no one in this part of the country ever saw the plant growing, there is no certainty yet that the seed germinated and grew. A strange grass has made its appearance, however, in the sloughs on Stauffer & Sweetser's ranch, where some of the seed was planted, and the supposition is that it is wild rice.

PALM VALLEY! THE LOUISIANA TRACT!

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DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land? DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

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DO YOU WANT a portion of the tropical valley of the State? DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10-acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

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TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

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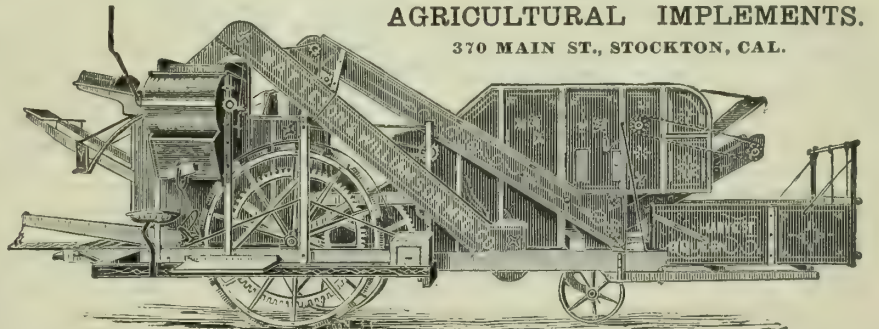
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In 2-foot lengths, per foot.....7 Cents

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ENTOMOLOGICAL.

Insect Killing by Fumigation.

[An essay read at the Santa Barbara Convention of Fruit-Growers by D. W. CONQUEST, Los Angeles.]

I have been requested to prepare a paper on the process of fumigating trees for the destruction of scale insects, and my apology for not producing a better one is that its preparation was delayed until the last moment with the hope that I might be enabled to give some definite facts in regard to the practicability of transmitting the gas from one tent to the other after the first tent had been allowed to remain upon the tree a sufficient length of time to prove fatal to the insects; but the necessary apparatus for making tests of this kind is not yet completed, so I am unable at present to give any facts in relation to the transmission of the gas.

The process of fumigating trees for the destruction of insects consists briefly in inclosing the tree in an air-tight tent and afterward filling the tent with a poisonous gas that will destroy the insects without at the same time injuring any part of the inclosed tree. The earliest account I possess of any attempt of this kind is a copy of the specifications for a patent granted to Mr. James Hatch of Lynn, Mass., on the 14th of May, 1867. Mr. Hatch's method consisted in inclosing the tree in an inverted sack, and then filling the latter with the fumes of tobacco, pepper, and other noxious substances by the aid of a furnace and connecting pipe; but this method does not appear to have been very widely adopted. Dr. A. S. Packard, who for several years held the position of entomologist to the Massachusetts State Board of Agriculture, writes me that he is not aware that this method has ever been used in any of the New England States, and I can find no reference to its having been used in any of the States east of the Rocky mountains from the date of the Hatch patent up to the present time. It appears, therefore, that all the attempts at perfecting this method have been made here in Southern California.

Forms of Tents or Hoods.

In the earlier experiments the tent used in inclosing the tree was constructed in the usual round or circular form, with a rounded or dome-shaped roof, and was lowered down over the tree from above. It was found, however, that the apparatus necessary for this work, when operating on tall trees, was altogether too awkward or cumbersome to come into general use. To obviate this difficulty an opening or doorway was made in one side of the tent, extending from the roof to the ground, and when this doorway was opened wide, the tent could be put upon the tree without being elevated very much. After the tent is on the tree, the doorway is closed by bringing the opposite edges together and wrapping them one around the other, and to facilitate this, a piece of gas-pipe is fastened to the tent on each side of the doorway, and extending from the roof nearly to the bottom of the tent.

Mr. H. K. Snow of Tustin proposes using a tent of this kind, only having two doorways instead of one, so that after the tree has been fumigated sufficiently the tent can be passed forward off of the fumigated tree and upon the one next to be treated. He proposes operating the tent by means of an apparatus consisting of four posts fastened together at their upper ends, from which the tent is to be suspended, while the lower ends of these posts are attached to two runners, like those of a sled, so that the apparatus can be drawn forward astride of a row of trees. This is a very simple arrangement, and one that almost any fruit-grower can construct with his own hands, and at very little expense.

Mr. John P. Culver of Los Angeles, a civil engineer and a very practical man, has recently constructed a tent for inclosing the tree which, for simplicity of construction and ease of operating, is a great improvement upon anything of the kind ever produced heretofore. It is in the form of two half-tents which inclose the tree from one side, and consists briefly of two inverted U shaped arches fastened at one side with hinges to an upright mast mounted upon runners; the tent proper is in two sections, and is stretched upon these arches, so that when the tree is inclosed the sides of the tent will rest upon the ends of the branches. The inner surfaces of the two wooden arches which are to meet each other when the tent is inclosed are covered with a thick layer of felt, and the two arches are fastened together by means of a rope and pulleys. This apparatus is a great improvement upon the old way of letting down the tent over the tree from above, and I see no reason why it cannot be used upon the largest orange and lemon trees.

The Most Effective Gas.

After experimenting with a great many different kinds of gases, I have found nothing superior to hydrocyanic acid gas, produced by acting upon a solution of potassium cyanide with sulphuric acid. Much will depend upon the comparative purity of the cyanide used, and while it is not necessary that this should be chemically pure, still it should not contain any visible impurities. One of the best tests of its purity is to pour a small quantity of sulphuric acid upon some of the dry cyanide, and if it evolves the gas in the form of a whitish vapor, the cyanide is sufficiently pure; but if it simply effervesces without producing a visible gas, the cyanide will not answer the purpose. The dry cyanide should be kept in air-tight packages,

otherwise it will lose much of its strength. It is commonly sold in sealed tin cans containing one and two pounds each, and should be allowed to remain in these cans until ready to begin operations.

For rendering the gas harmless to the tree I know of no method superior to that of passing it through sulphuric acid. For this purpose the gas is generated in a closed leaden generator furnished with a leaden pipe leading into the top of a second leaden vessel containing sulphuric acid. The pipe from the generator should pass nearly to the bottom of this second vessel, and the gas will then be allowed to pass upward through the acid and by a second pipe will enter the tent which incloses the tree. After this the air and gas in the tent should be thoroughly stirred and the tent be allowed to remain upon the tree about half an hour. The acid through which the gas had passed can be used for generating the gas the next time, and fresh acid should be poured into the second vessel for the gas to pass through.

Objections to the Gas.

I will here briefly notice some of the objections that have been raised against the universal use of this method for the destruction of insect pests. Firstly, as to the poisonous nature of the gas and of the chemicals used in producing it. While due care in handling these poisons should always be exercised, yet with only reasonable care in this direction no evil results will follow. When Prof. Riley first advocated the use of Paris green for the destruction of the potato beetle, people in every direction loudly protested against the use of this poison, saying that its use would certainly result in the wholesale poisoning of children, farm animals, and by being carried by the plant to the tubers themselves, would thereby cause the death of every person who ate potatoes that had been treated with this poison; and yet at the present day no substance is more universally and successfully used against mandibulate insects than Paris green. Moreover, if the process of transmitting the gas from one tent to the other should succeed, as I believe it will, this will greatly lessen the danger of being poisoned by the gas, as compared with the present method of allowing the gas to escape into the air as soon as the inclosed tree has been sufficiently fumigated.

It is also claimed that only a trained chemist can manipulate the production of the gas, but this is not true, since any person of ordinary intelligence can accomplish this quite as well as a trained chemist could. Of course this part of the work should not be intrusted to any and every person, but this is equally true in regard to the other methods for destroying insect pests, and I am sure that your secretary will agree with me when I make the assertion that even the best washes that have ever been produced for the destruction of scale insects will, in the hands of careless and inexperienced persons, give only indifferent or unsatisfactory results. In the matter of fumigating orchards, it would doubtless be desirable for certain persons to purchase the necessary apparatus and then go from orchard to orchard, fumigating the trees at so much per tree, just as at the present-time hay-balers go from field to field baling hay at so much per ton.

Already the cost of the apparatus for operating the tent has been very materially reduced; thus, while those first produced, which let down the tent over the tree from above, cost all the way from \$150 to \$300, I am informed that the cost of the Culver Fumigator will not much exceed \$100, while the apparatus suggested by Mr. Snow should not cost over \$50.

The only real obstacle to the universal adoption of this method is the present high price of the potassium cyanide. For this I am obliged to pay in Los Angeles from 80 to 90 cents per pound, which puts the cost of fumigating an orange tree 20 feet tall by 14 feet in diameter, something over \$1.75 per tree. It has been the rule with every manufactured commodity, that when it came to be very extensively used its price diminished in the same ratio, and we may confidently expect the same thing to happen in regard to the cyanide. But this is a phase of the question which I must leave to the fruit-growers for their consideration.

Before closing I would like to give a little experience which I had in fumigating with tobacco. I had an upright earthenware furnace constructed, the interior of which measured about three feet high by eight or ten inches in diameter. This was constructed in such a manner that a Cumins blower could be attached to it for the purpose of firing up the charcoal, and it was furnished with a pipe for conducting the fumes into the tent. I filled this furnace about half-full of charcoal, and when this had been heated red-hot, I threw upon the hot charcoal about four pounds of refuse tobacco stems, connected the pipe, and allowed the fumes to pass into the tent previously placed over a small orange tree. The tent was removed from the tree at the expiration of one hour, and it was found that all the leerys were dead, as were also the black scales (*Lecanium oleæ*) and the soft scale (*Lecanium hesperidum*); but only a small percentage of the red scales (*Aspidiotus aurantii*) were killed, while the tree was uninjured. Whether or not this method could ever be used against the leerys on a large scale, I leave it to the fruit-growers to decide. It is certainly much cheaper than fumigating with the hydrocyanic acid gas, and almost every fruit-grower could raise all the tobacco necessary for fumigating his trees, and at very little expense.

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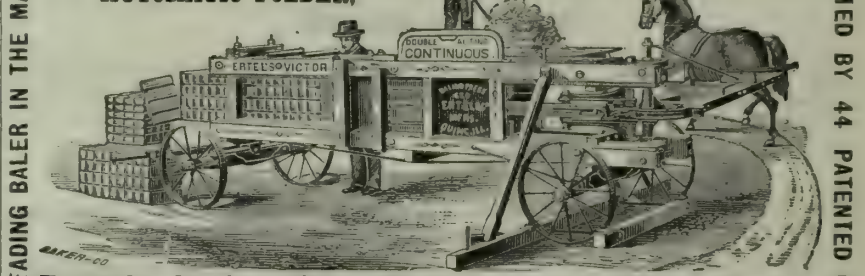
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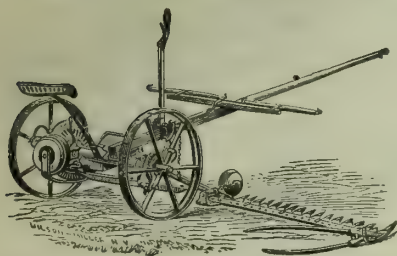
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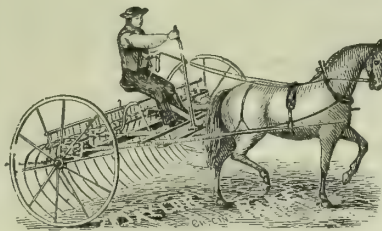
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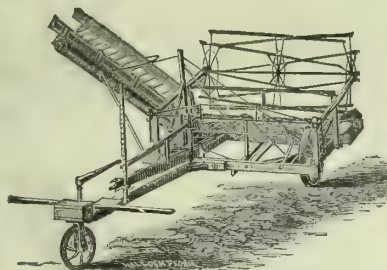


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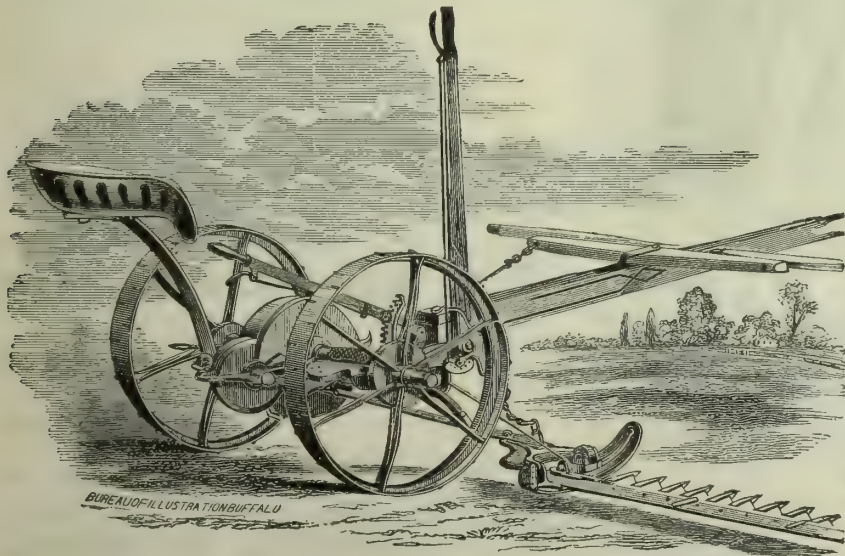
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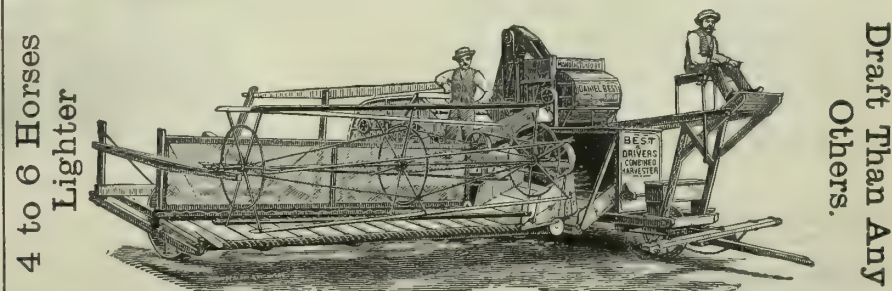
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DANIEL BEST,
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THE FIELD.

How to Stack Hay for Convenience in Baling.

EDITORS PRESS:—Will you kindly permit me the use of your columns to offer your readers who raise hay for market a few suggestions as to how hay should be stacked so that it may be easily baled.

Briefly, then, I would say: Put it up in long, narrow, high stacks made up of sections each not more than 40 feet long. In no case should the stack be over 20 feet wide—18 or even 16 is better. The stack may be any length (providing it is built in sections as above advised), and the higher the better. The stack should be built across the wind—that is to say, if the prevailing wind is from the west the stack should run north and south.

The reason for this method is obvious. With such a stack the press is set on the east side, out of the wind, opposite the first section. The stack being narrow and the sections short, the hay can be easily and rapidly got across the stack to the press (the wind assisting), none of it requiring to be moved much more than 20 feet. As soon as one section is finished, the press is moved to the next and the process is repeated. It costs no more to put hay into a long, narrow stack of a given height than it does into a short, broad one (40 or 50 feet square perhaps), and the amount of labor saved to the baler is something enormous. I have seen stacks built so broad that it was necessary for the baler to cut them in two parts with a knife, or even use a derrick-fork, all of which is a needless waste of time and labor.

This matter was not so important once as it now is since the operation of presses has become so rapid.

I found this the greatest drawback to fast work with my Junior Monarch and Hurricane presses.

They sometimes demand over 30 tons of hay in a day to keep them going, and if one of them happens to get placed alongside of a stack that is 30 or 40 feet broad there is a constant shout for "more hay," and the machine cannot be worked to its full capacity. When the stack is narrow, however, the table is kept full without undue effort, and the work goes on rapidly.

San Leandro, Cal.

The Linnet and His Pard.

EDITORS PRESS:—In the RURAL of last week I notice some remarks about birds of the finch, or linnet, variety cutting cherry blooms off the trees. I've known of that trick of the linnet for years. He will do it. But I rather think he has a partner in the business in a bird the name of which I know not. This latter bird is much larger than the linnet, has a slim, long bill, and while the linnet male is rather red on the breast, this bird is rather red on the end opposite the breast. He associates with the linnet in business, but not socially, and is about the shape, bulk and build of the catbird of the Middle States; but he does not stop at blossom nipping, as you will see by some cherry leaves (nipped off by him, perhaps assisted by the linnet) which I herewith inclose. These birds seem to work, in Pajaro valley at least, mostly on Gov. Wood cherries. A cheap way to kill both birds is to coat flaxseed, hempseed or canary-seed with a coating of beaten egg and poison—say strychnine—and be sure to put such seed in a shallow box, old milkpan, or such like, up in the tree away from the reach of domestic fowls or other seed-eaters. I find the latter course cheaper than powder, shot and time. But the birds will not be found dead at the cherry trees, or at least I do not find them there.

Watsonville.

J. W. GALLY.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING APRIL 24, 1888.

- 381,521.—SIPHON—G. W. Arper, Oakland, Cal.
 381,671.—PROTECTING FILES—Geo. Brown, S. F.
 381,673.—COUNTER SCALE—J. B. Butenschon, Portland, Ogn.
 381,676.—SWITCH AND FROG FOR RAILWAYS—Cromer & Gavin, Eureka, Nev.
 381,624.—TROUSERS—J. Hetherington, Jr., Hayward, Cal.
 381,695.—RUNNING GEAR—E. Hickman, Red Bluff, Cal.
 381,549.—HEATER FOR MUFFS, ETC.—F. Hiller, Jr., S. F.
 381,629.—ORE-ROASTING FURNACE—J. L. Lovell, Austin, Nev.
 381,638.—BOTTLE-WASHING MACHINE—Henry Palmer, S. F.
 381,723.—COMBINED HEADER AND THRASHER—Reynolds, Paterson & Paterson, Stockton, Cal.
 381,727.—TRUSS—H. C. Stickney, Portland, Ogn.
 381,861.—STUMP EXTRACTOR—G. M. Stroup, Philomath, Ogn.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Spring Fashions.

Misses' Costume.

The admirable manner in which la Mode preserves the youthful appearance so essential in the costuming of Misses is well exemplified in this costume. In this instance a triple combination of fabrics is developed, plain and spotted surah and velvet being the choice. The kilted skirt is laid in deep plaits that all turn in the same direction, and is built upon a four-gored foundation to insure its perfect hanging. The lower edge of the kilt is hemmed, and above the hem a band of the spotted goods is neatly blind-stitched to place, a lining of thin crinoline being added to the band to make it lie perfectly smooth. Upon the front, in lieu of drapery are two scarfs of different lengths. One end of each scarf is plaited and inserted in the corresponding side-back seam near the belt, while the other end is frayed to

justment, and the center-backs fall in a pretty, square position upon the tournure. A close standing collar of velvet is at the neck, and a pointed belt-section of velvet is added just over the shirrings at the front. Coat-shaped sleeves finished with cuff facings of spotted surah are sewed into the arms' eyes.

Though the present choice of materials is exclusively adapted to dressy wear, the fashion is equally desirable for inexpensive fabrics, as is well illustrated by a costume of navy-blue and white twilled flannel. The skirt and body are of the dark goods, and the sash and trimming of white. Blue and cardinal, blue and brown, mode and brown, and green and gray are fashionable combinations and may be developed in any preferred grade of suiting.

THE GOVERNMENT BEATEN.—The trial of W. Humphries and M. J. Donohue, charged with illegally cutting timber in Fresno county, has been decided in favor of defendants. The Government demanded \$15,000 and \$1000 damages. This having been made a test case, several



MISSSES' COSTUME.

form a fringe. The scarfs are knotted tastefully at the left side, and their fringed ends fall low upon the skirt. Upon the back hangs a handsome butterfly-drapery, whose points descend almost to the lower edge. It is draped by gathers at the top and at the center and by plaits at the side edges.

The jauntyness of the basque body is enhanced by the closing, which is made at the back with button-holes and buttons. The front of the basque has a plain under and an ornamental outside portion, the latter uniting the two materials in its construction and being slashed through the center from the top nearly to the bust. Two rows of shirring are made in each shoulder of the outside-front for a short distance below the neck, and a cluster of shirrings, made between the darts that are taken up in both fronts, extends from the waist-line to the lower edge, the latter defining a point at the center. The under-front is exposed in V outline between the slashed edges and is faced with velvet, while the full portion of the outside-front is made of spotted surah. Narrow under-arm and side-back gores, together with the curved closing edges of the back, provide the remainder of the ad-

other similar cases have since been decided against the Government.

A Rare Chance.

The Gabilan Rancho, situated in Monterey county, containing 7665 acres, is offered at \$38.50 an acre, for 30 days, on long time and easy terms. Address, J. C. HOAG, 312 Van Ness avenue, San Francisco.

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A portion of this Rancho, suitable for mixed farming or dairying, containing 1672 acres, will be offered for 30 days at \$35 an acre, one-third cash, balance in three years. Address J. C. HOAG, 312 Van Ness Avenue, San Francisco, or TYLER BEACH, San Jose.

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To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption, if they will send me their Express and P. O. address. Respectfully,
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- 100 Celluloid Toilet Sets (Plush Case).
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We will also present to the consumers of our Le Roi des Savons TWO THOUSAND DOLLARS, to be distributed as follows: The 3655 persons sending us the largest number of our NUMBERED KING WRAPPERS between Feb. 1 and 15, 1888, will receive presents as follows:

- First—Five per cent of \$5 each.....\$ 25 00
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Total.....\$2,000 00

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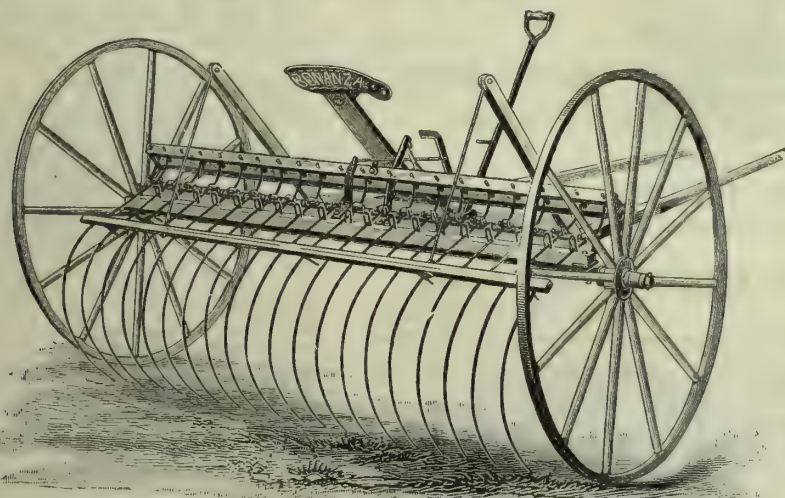
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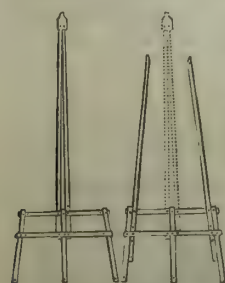
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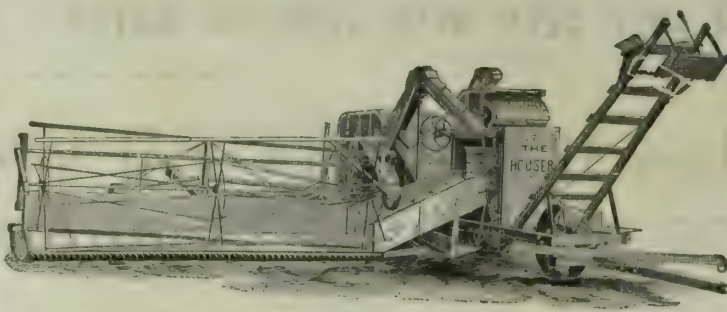
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400 IN FIELD USE.



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They Have a Larger Sale than all Other Harvesters Combined.

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Is adapted for Small Farms—few animals; rolling or foothill land. In weight, one-half of the Large Houser. Both the Large and Small Houser have our

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Which received the Premium over all competitors at both State and County Fairs and Field Contests in 1887.

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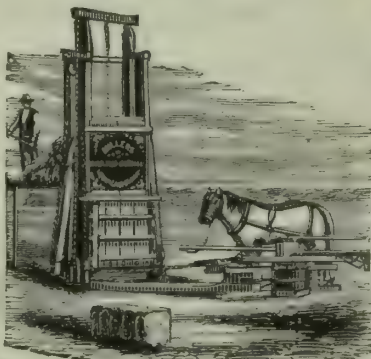
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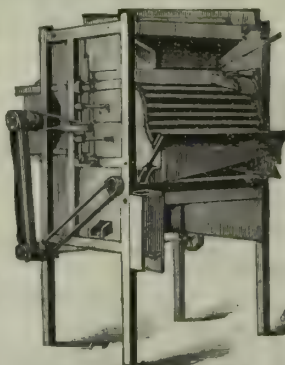
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Will Clean 1600 Bags of Wheat in a day.

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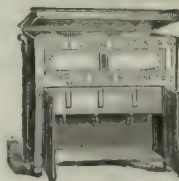
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LEON LEMOS, Proprietor.

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\$15, \$16, \$17, \$18, \$20; Imported
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California is a Paradise, but the people would object to go in Paradise toilet. Leon Lemos has contracts with several leading Woolen Mills to buy all their REMNANTS, and can make a fine fitting, well-trimmed suit from \$15 upward.

Farmers will save money by calling on him, as he makes suits to order for the same price as ready made. Samples and prices by mail. Don't forget.

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THE H. H. H. Horse Liniment puts new life into the Antiquated Horse! For the last 14 years the H. H. H. Horse Liniment has been the leading remedy among Farmers and Stockmen for the cure of Sprains, Bruises, Stiff Joints, Spavins, Windgalls, Sore Shoulders, etc. and for Family Use is without an equal for Rheumatism, Neuralgia, Aches, Pains, Bruises, Cuts and Sprains of all characters. The H. H. H. Liniment has many imitations, and we caution the Public to see that the Trade Mark "H. H. H." is on every Bottle before purchasing. For sale everywhere for 50 cents and \$1.00 per Bottle.

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Free Coach to and from the Hotel.
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Order a trial, address for circular and location of Western and Southern Storehouses and Agents,
P. K. DEDERICK & CO., Albany, N. Y.

THE STOCK YARD.

Shorthorns in Southern California.

The question is often asked: Will Shorthorns do well in California, where they will be required to care for themselves without being fed or sheltered? I answer yes, indeed. They have been put to the test, and the point settled beyond question of doubt that Shorthorns seem to be suited to the climate, and further, that they have a sure tendency to run out other breeds where they have equal advantages. Their vigor and stamina should be better understood than it seems to be after so many years of practical experience breeders have had with them. Baker & Rhodes have a herd of Shorthorns on their ranch near Puente that has passed through the various ordeals incident upon change of season, feed, storms, etc., and they have established the fact that they are hardy and prolific and a perfect success where they are compelled to rustle entirely for themselves. No man who may contemplate establishing a herd of Shorthorns in California need have any fear as to the perfect success of such an enterprise. Charles Thomas, near Strawberry, in the San Jacinto valley, has a herd of Shorthorns which has been on that ranch for several years, and although it snows there some in the winter, and at such times the feed is short, yet this herd has never had a feed of any kind from the hand of man. Yet if any breeder of cattle visits that ranch and sees those cattle he will be filled with astonishment, as well as admiration, at the princely appearance of the herd under the circumstances. I think every good judge of this variety of cattle will at once admit that as a family of Shorthorns they are not surpassed anywhere under the most favorable circumstances for milking qualities. Every cow seems to have a symmetrical and finely-developed udder, giving evidence of extreme uniformity in this respect throughout the entire herd, and yet they retain their individuality in reference to the Shorthorn characteristics of form, color, etc. The only advantage by way of developing milch qualities which this herd has ever had consists in separating their calves from their mothers, except at milking time, when the cows are partly milked and then the calves allowed to finish, and thus an interval of ten or twelve hours for the filling and distending of the udder, which serves to promote the development of the milking qualities. And without this proper interval between milking hours no cow will ever have that perfect formation which she otherwise would in regard to milking apparatus.

I have visited the breeding farms of many prominent breeders and raisers of Shorthorns in New England and the Middle, as well as the Western States, but have never seen as fine a herd of milkers of the Shorthorn family as that of Charles Thomas; and yet Mr. Thomas is not making any effort with his herd, is not selling or offering to sell, or trying to excel others, or to improve, or even in any way to popularize his herd. It is true, in my opinion, that he has in this herd the sure foundation for a certain, easy and princely fortune, and yet he does not seem to be aware of the fact. He has a number of switched tailed running horses, on which he lavishes all his spare change, while the cows take care of themselves and the family and pay the losses of the turf. Any live Yankee who has experience could, with this herd, amass a sure fortune in a short time. I think well of the Jerseys as milch cows, and well of the Holsteins for their many excellencies; but the record of 100 years of pre-eminence of the Shorthorn family over all varieties should settle at once and forever their superiority. It is true that they have in a general way been better cared for than any other cattle; but it was not because they required such exceedingly good care, but because of their value and the return they have always given owners. There is no other breed of cattle on earth that has been of such value to their owners as Shorthorns, and there seems to be but one question of doubt concerning them as a success any and everywhere in the United States; and that question is, can they take care of themselves equally with the hardy natives? I say yes, and evidence is every day accumulating to abundantly prove the fact. The introduction of Polled Angus or any inferior variety of cattle on the ground that they can rustle is an error which must in the near future vanish like fog before the sunlight.

Further, the statistics from State Departments will show conclusively that Shorthorns are not more liable to epidemics or contagious diseases than any other breed, and in regard to pleuro-pneumonia not so much.—*Los Angeles Tribune.*

POTATOES FOR THE EAST.—Chairman Leeds of the Transcontinental Association has notified all lines of a new rate of 85 cents a hundred on potatoes in car lots from San Francisco to the Missouri river and Chicago. This is a 15-cent reduction, the former rate being \$1. Potatoes are being sent East in large quantities, and there is a likelihood of this season's shipments far exceeding those of last year. California new potatoes reach the Chicago market from three to five weeks earlier than those grown in the East, and with this advantage over the local producer, the California potato-grower can command high prices for his product and make a

respectable profit above the cost of freightage. Potato trains will be run soon on quick time. The experiment of running these trains was thoroughly successful last year, and many persons will embark in the business of shipping potatoes who at first deemed the plan inexpedient.—*Chronicle, May 2d.*

QUERIES AND REPLIES.

Painting Wagons.

EDITORS PRESS:—As it is spring of the year and farmers are (or should be) painting their wagons and other articles, would it be asking too much of you to give us directions how to do the work right? Very few farmers know how to do the work as it should be done. I have a spring wagon nearly ready for the paint and would be glad to learn how to put it on and have a decent job when it is done. I find it costs but little more to put in the best of timber and the best of Norway iron and steel for ironing a wagon up right than to put in poor material. Ten dollars thus expended will increase the value of a wagon more than one-half.—R. H. SMALL, *Bitter Water.*

We should like to hear from readers on this subject.

Pigeon-Raising.

EDITORS PRESS:—Please inform a subscriber, by inserting an article in your paper on the subject, what is the best way for making pigeon-raising profitable.—S. MOORE.

Who will give us a letter on this subject?

Killing the Bee Moth.

EDITORS PRESS:—Will some correspondent, familiar with the care of bees, inform me in the columns of the RURAL PRESS how to destroy the moths that infest the hives and ruin the honey and bees; and what time is best to fight them?—MRS. W. D. ASHLEY, *Stockton.*

State Horticultural Society.

The regular April meeting was held on the 27th at the office of the State Board of Horticulture, Vice-President Hatch in the chair.

P. R. Schmidt, A. A. Hibbard, T. W. Cain, and D. B. Wier were unanimously declared elected members of the society.

A reward of \$20 for the best paper on crystallized fruits and \$10 for the second best paper was offered by B. M. Lelong, secretary of the State Board of Horticulture; the paper to contain 1500 words at least, and to give in full the manner of crystallization. Premiums to be awarded at the July meeting of the State Board of Horticulture.

Mr. Lelong also submitted a letter calling attention to the fact that the State Labor Commissioner in an interview in one of the city dailies had said that fruit-growers treated their help like brutes or tramps, and suggested that the commissioner be invited to come before the society with the proof of his assertion. The matter was discussed at some length and the statement pronounced untrue and libelous, but from the fact that it was merely published in a newspaper interview, was thought not worthy the attention of the society. After the discussion it was decided to take up as the subject for the next meeting: "The Labor Supply and Labor Saving Appliances for Fruit Handling."

L. W. Buck on invitation gave some facts concerning the Fruit Union, as to amount of shipments last year, adoption of the auction plan, etc. In reference to freight rates this year he said that it was not likely that rates would be definitely decided upon until the meeting of railway managers in this city, May 15th.

Decision on Threshers' Wages.

The Supreme Court has given a decision in a labor-lien case, sustaining the constitutionality of the bill introduced in the last Legislature by Hon. Allen Henry of Butte. The suit brought was for labor performed by the hands on a threshing machine, the employer refusing to pay for labor performed, and the laborers filed a lien upon the machine to secure their pay. The case originated in Fresno, and the Judge of the Superior Court there rendered a decision in favor of the lien. George W. Garrison and William Falla were the defendants, and to assist them Hawley Bros., a hardware company, appear as intervenors and appellants, claiming the machine as their property, and that they had not employed the laborers to perform any work upon the machine, so that a lien should not hold as against their property.

The Henry bill is quoted in full in the decision by the Court in bank. The concluding remarks of the decision are plain and distinct, sustaining the Act and the lien, as follows:

The language of the Act is sufficiently comprehensive to include a case like this. We could not exclude such a case from its operation without a material modification of its provisions. This case is clearly within the letter of the law, and we see no reason to doubt that it is just as clearly within the spirit of it. The statute gives the lien, and a court of equity undoubtedly has jurisdiction of an action to foreclose it. We think the court properly sustained the demurrer to the complaint of intervention, and that the judgment should be affirmed. Judgment affirmed.

There has hardly been a year that this matter has not been up in Butte and Colusa counties, the reputed owners of threshing-machines fail-

ing to pay their hands, and outside parties stepping in and claiming the machine. At the present time the John L. St. John machinery has been tied up and is now in the hands of a receiver awaiting this decision, and now we think the laborer will get what is coming to him. The bill is a good one for the laborer, and Major Henry knew what was needed for the laborer, and we are pleased to see the constitutionality of the bill sustained by the Supreme Court in bank.—*Chico Enterprise.*

Inducements to Subscribers.

To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, IF REQUESTED the following articles (while this notice continues), at the very greatly reduced figures named at the right:

- 1.—The Agricultural Features of California, by Prof. Hilgard, 138 large pages, illustrated, cloth, with colored maps (full price \$1).....\$0.25
- 2.—World's Cyclopedia, 794 pages, 1250 illustrations; (exceedingly valuable)......50
- 3.—Dewey's Patent Elastic Binder (cloth cover), name of this paper stamped in gilt......50
- 4.—Niles' Stock and Poultry Book for Pacific Coast, pamphlet, 120 pages, illustrated......25
- 5.—Kendall's Treatise on the Horse and Diseases, 89 pages, instructive illustrations......05
- 6.—To New Subscribers, 12 select back Nos. of the RURAL PRESS, "good as new"..... Free
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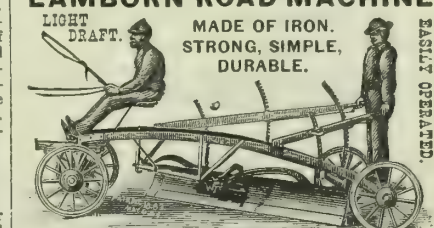
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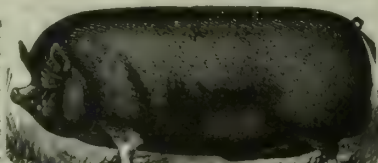
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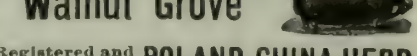
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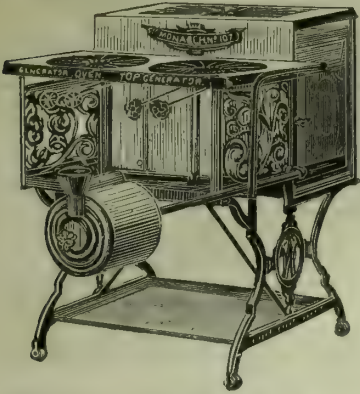
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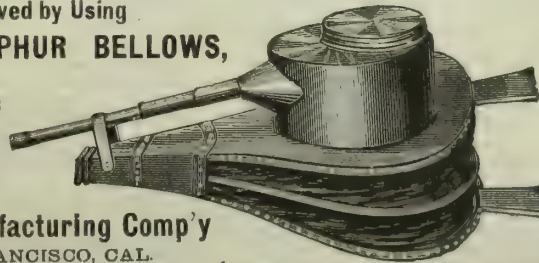
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S. H. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, May 2, 1888.

Dry weather, the past week does no little in creating and promoting uneasy feelings even in sections where crops are doing well. In many localities summer-fallowing is going on, on an enlarged scale; large numbers of farms that promised good crops sometime since, are being plowed up for fall seeding. Fruits, as a rule, are not so promising, but garden truck and root vegetables promise large crops. Trading the past week was fairly active in farm products. In Europe and also at the East wheat has strengthened. To-day's cable is as follows:

LIVERPOOL, May 2.—Wheat—Quiet but steady. California spot lots, 6s 7d to 6s 10d; off coast, 34s; just shipped, 34s; nearly due, 34s; cargoes off coast, firm; on passage, quiet but firm; Mark Lane wheat, steady; English and French country markets, generally dearer; wheat and flour in Paris, quiet; wheat on passage to Continent, 35s, 000 qrs; wheat and flour on passage to U. K., 2, 132, 000 qrs.

Foreign Review.

LONDON, April 30.—The *Mark Lane Express*, in its weekly review of the British grain trade, says: Country markets are quiet, but wheat values are against buyers. From sixpence to one shilling advance is quoted in the country, while the recent London advance of sixpence is maintained. Sales of English wheat during the past week were 47,619 qrs, at 30s 9d, against 53,453 qrs, at 32s 8d during the corresponding week last year. Barley is firm. Prices of oats, beans and peas are against buyers. Foreign wheats are firm. Corn is scarce and quoted in London at 26s ex-ship, and at Liverpool at 2d per cwt advance. Linseed on the spot has risen 6d. One wheat cargo arrived. There were five sales. Five cargoes were withdrawn and two remain. At today's market the tone for wheat was less firm. Flour was quiet. Corn remains scarce, and the advance was fully maintained. Barleys were dull, oats, beans and peas quiet, and linseed 6d dearer.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Date.	Cash.	April.	May.	June.	July.
26.....	99 1/2	99 1/2	99 1/2	99 1/2	99 1/2
27.....	99 1/2	99 1/2	99 1/2	99 1/2	99 1/2
28.....	99 1/2	99 1/2	99 1/2	99 1/2	99 1/2
29.....	99 1/2	99 1/2	99 1/2	99 1/2	99 1/2
30.....	99 1/2	99 1/2	99 1/2	99 1/2	99 1/2
1.....	99 1/2	99 1/2	99 1/2	99 1/2	99 1/2

The closing prices for wheat have been as follows, at Chicago.

Date.	Cash.	April.	May.	June.	July.
26.....	81	81	81	81	81
27.....	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2
28.....	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2
29.....	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2
30.....	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2
1.....	80 1/2	80 1/2	80 1/2	80 1/2	80 1/2

CHICAGO, May 2.—Wheat—81 1/2¢ for cash, 81 1/2¢ for May, 82 1/2¢ for June, 83 1/2¢ for July and 83 1/2¢ for August. Corn—55 1/2¢ @ 55 1/2¢ for June.

NEW YORK, May 2.—Wheat—97 1/2¢ @ 97 1/2¢ for cash, 94 1/2¢ for May, 93 1/2¢ for June, 93 1/2¢ for July, 93 1/2¢ for August and 92 1/2¢ for September.

Visible Supply of Grain.

NEW YORK, April 30.—The visible supply of grain on April 28 was as follows: Wheat, 3,247,000 bu.; corn, 8,530,000 bu.; oats, 3,739,000 bu.; rye, 306,000 bu.; barley, 927,000 bu.

Chicago Fruit Market.

CHICAGO, April 29.—Oranges are in fair request. Choice fruit of desirable sizes sells fairly and prices are steady. At present they are not moving very freely. Dealers say berries interfere with this trade somewhat. There is a good supply of California oranges here. Of foreign fruit the supply is only moderate, and dealers do not care to have much to do with it, as it frequently arrives in rather bad order. Prices rule as follows: California Riverside oranges, Nos. 128 and 226, \$3.25 @ 3.50. California Riverside oranges, other sizes, \$2.75 @ 3; California, other oranges, seedlings, \$2.50 @ 3; California Navel, Riverside, \$4.50 @ 5; California Navel, others, \$3.50 @ 4.25.

Crop Prospects.

MINNEAPOLIS, April 27.—The *Northwestern Miller's* report of the crop condition says: Instead of an improvement there has been a steady decline in the general conditions of the winter wheat crop for the last six weeks. The insects have already appeared in Kansas. Illinois to-day makes the poorest showing for a crop of winter wheat of any State in the belt, and the indications are that the State will prove a failure as far as the yield is concerned, unless the present extreme conditions are mitigated. Indiana and Ohio show no improvement. The prospects in Missouri and Michigan are not flattering. The survey of spring wheat shows that Minnesota and Dakota seeding is about 12 to 14 days late, but the condition of the ground is thought to be an offset for the lateness of the season. Seeding has practically commenced this week. The reports show a decrease of acreage in Iowa and Nebraska.

WASHINGTON, April 29.—The weather and crop bulletin for the past week says: Owing to a general deficiency of rain, the weather of the week has affected growing crops unfavorably. Rain is especially needed in the winter wheat sections and in the northern portions of the Gulf States. Frosts occurred in Kentucky, Eastern Tennessee, North Carolina, South Carolina and the Middle Atlantic States during the week, which probably injured vegetables and fruit. Reports from Kansas, Minnesota and Western Missouri indicate that the weather has been favorable in those sections, and that farm work is well advanced. The weather is reported as favorable for farm work in New England, where plowing and planting are in progress.

Wool.

NEW YORK, April 30.—Wool continues quiet in all markets; the tendency of prices is decidedly in favor of buyers. The general range of selling values

appears to be at least one cent per pound lower than a fortnight ago. Whatever activity prevails at any point is due to the cheapness of the staple rather than to any change in the outlook for goods. Buyers are holding off as far as possible, partly on account of the uncertainties involved in the tariff discussion, partly because there is no pressing need of large supplies, and partly also because the new clip is just at hand. Dealers for the moment, moreover, are now inclined to bull the market, having in mind the desirability of buying the spring clip in this country at the lowest possible rates. Texas advices continue to report that the condition of new wool is excellent. Some irregularity has characterized the business at London, but the attendance at sales continues large and competition is generally active. Prices are held firm.

The Boston market is dull, with sales of 2,378,000 lbs. for the week of foreign and domestic, including 237,000 lbs. California. The best price of the latter was 26c.

Philadelphia reports a light trade, with sales of 466,000 lbs., with prices somewhat at buyers' dictation.

Miscellaneous.

NEW YORK, May 1.—Foreign and Pacific raisins are higher. California two crown are quoted at \$1.50 @ 1.55; three crown, \$1.90 @ 2.05; London layers, \$2.40 @ 2.50. There are but few of the latter here.

Unpeeled evaporated peaches have sold freely at 14c.

The trade in hops is very flat, though there is no anxiety shown on the part of holders to sell. Choice State are quotable at 13c; best Pacific, 12c.

Local Markets.

BAGS—The market is dull and heavy, owing to poor crop prospects. The market is quotable nominally at 7 1/2 @ 7 3/4 c.

BARLEY—The sample market has moved up quite rapidly the past week. Options on Call advanced since last Wednesday about 15c per cental, sending several bears to the wall, besides causing others to lose heavily. To-day's sales on Call are as follows:

Morning Session: Buyer season—200 tons, \$1.02 1/2; 100, \$1.02; 100, \$1.01 1/2; 500, \$1.00 1/2; 200, \$1.01. Buyer 1888—100 tons, \$1.19; 100, \$1.19 1/2; 100, \$1.19 1/2; 800, \$1.19; 100, \$1.18; 100, \$1.17 1/2; 1700, \$1.17; 500, \$1.17 1/2; 100, \$1.17 1/2; 300, \$1.16 1/2; 300, \$1.16 1/2. Seller 1888, new—100 tons, \$1.06. Afternoon Session: Buyer season—500 tons, 99 1/2; 200, 99c; 200, 97 1/2 c. Seller 1888—100 tons, 98c. Seller 1888, new—300 tons, \$1.02. Buyer 1888—400 tons, \$1.15; 100, \$1.17; 100, \$1.16; 400, \$1.15 1/2; 100, \$1.14 1/2; 100, \$1.15 1/2 cwt.

BUTTER—The market holds very strong under a good demand to fill orders and also for packing. There is a strong competitive buying. The consumptive demand is good, but prices are too low yet for the East to ship freely to us.

CHEESE—The market is weak at quotations. The demand is only fair. Stocks are large while receipts are free. Dealers appear to think that the bottom has been reached.

EGGS—The market continues weak and irregular, although Eastern are not being forced on the market so freely. Stocks here are large, and as the weather is warm, free selling is a necessity.

FLOUR—The market has been advanced to 15c per bbl. A still higher range is looked for, unless wheat goes down, which is quite unlikely.

WHEAT—The market is strong at higher prices—particulars given in another column. On Call, futures advanced since last Wednesday about 15c per cental under strong buying and active trading. To-day's sales are as follows:

Morning Session: Buyer season—100 tons, \$1.46; 100, \$1.46 1/2; 700, \$1.46; 100, \$1.45 1/2. Buyer 1888—100 tons, \$1.62 1/2; 200, \$1.63; 200, \$1.62 1/2; 200, \$1.61 1/2; 300, \$1.61 1/2. Afternoon Session: Buyer season—100 tons, \$1.44. Buyer 1888—100 tons, \$1.59 1/2; 2000, \$1.59 1/2; 300, \$1.59 1/2; 100, \$1.59 1/2; 800, \$1.59; 200, \$1.58 1/2; 200, \$1.58 1/2; 700, \$1.58 1/2; 100, \$1.58 1/2; 100, \$1.58 1/2; 200, \$1.58 1/2 cwt.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to April 30, '87.	July 1, '87 to April 28, '88.
Flour, qr. sks.....	3,775,151	3,139,895
Wheat, cts.....	11,506,060	7,812,445
Barley, cts.....	2,049,831	2,014,854
Oats, cts.....	125,120	146,915
Potatoes, sks.....	729,871	988,876
Corn, sks.....	90,109	207,061
Rye, sks.....	22,163	16,053
Buckwheat, sks.....	5,865	3,054
Beans, sks.....	413,878	379,919
Bran, sks.....	394,694	435,169
Hay, tons.....	89,646	101,898
Salt, tons.....	20,248	14,110
Wool, bls.....	59,300	55,277
Hides, No.....	93,478	91,409
Raisins, 20-lb boxes.....	137,252	110,995
Quicksilver, flasks.....	15,451	26,129
Hops, bls.....	12,999	15,445

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to April 30, '87.	July 1, '87 to April 28, '88.
Flour, sks.....	164,583	308,128
Wheat, cts.....	781,682	1,030,429
Barley, cts.....	5,473	75
Oats, cts.....	311,711	246,150
Corn, cts.....	117,249	12,590
Wool, bales.....	9,273	7,515
Bran, sks.....	27,918	55,263
Hops, bales.....	764	508
Hides, No.....	29,142	24,500
Rye, cts.....	5,289	5,289
Potatoes, sks.....	133,840	80,100

Cereals.

The *Mark Lane Gazette* reports as follows, on wheat: Winter still drags its slow length along.

The week just passed has been characterized by strong, cold north-easterly winds, with daily snowstorms and regular night frosts. So late as April 8, blinding snowstorms occurred in the southern counties, and the weather remains unsettled, with no outward and visible sign of improvement. The intervals of sunshine have assisted the drying effects of the winds, and consequently seeding operations have made considerable progress, the land working admirably in all but the colder districts at high altitudes. The clays in the eastern and south-eastern counties crumble to pieces like ashes when the tackle is put upon them, and the snowstorms merely damp the surface—no disadvantage in many cases, for the drying has been very rapid. The autumn-sown crops are not growing at all, and we take it that herein lies their safety in such a remarkable season. At the same time there has been a very fair start made with seeding operations. Beyond this there is nothing to say, excepting that farmers look as blue as their winter tears to see snow and frost so late in April, with so much work yet undone.

The same journal reports as follows, on barley: With regard to the probable acreage of the 1888 barley crop, it is too early to form an opinion. The season is very late, but the land is in splendid order as a rule, and a great deal of work will be done in a very short space of time if the weather will permit, and it is not improbable that a portion of the unsown area intended for other crops may—if temptation is afforded by favorable seed-beds—be sown with barley; on the other hand, if unfavorable weather should characterize the remainder of this month, the barley crop of 1888 may prove a disastrous failure. All that can be said now, in this connection, is that the position is becoming a very critical one, and that every day of prolonged winter thus late in the season is materially reducing the chances in its favor.

The Ohio wheat crop report, according to the State Board of Agriculture, is as follows: Acreage, compared with full average, is 90 per cent; condition of plant, compared with full average, 68 per cent; barley, compared with full average acreage, 77 per cent—condition, 71 per cent; rye, compared with full average, 86 per cent—condition, 82 per cent. The area of wheat shows a decline of 1 per cent compared with the last November report. In some fields, where wheat has been greatly injured, oats have been sown. It is too early to determine the full extent of the injury to the wheat plant.

The April report of the Missouri Department of Agriculture makes the condition of wheat April 1, 1888, 82 1/2 per cent. The quantity of wheat remaining in the State of 1887 crop on April 1, 1888, 16 per cent of the 27,744,000 bu. grown in 1887, or 4,439,040 bu. The wheat area for the crop of 1887 was, in the State of Missouri, 1,712,603 acres, and is, in 1888, 913,100 per cent of it, or 1,558,983 acres. The area of corn in Missouri, for the crop of 1887, was 6,406,785 acres, producing 140,949,000 bu. of corn. The quantity of the 1887 corn crop in that State was, on April 1, 1888, 20.9 to 10 per cent, or 39,458,341 bu. The Washington report makes the quantity of corn left in the State April 1, 1888, 39,405,720 bu.

Oregon advices report the wheat crop doing fairly well in that State and Washington. The outlook will hardly be an average. Last year the crop was above an average. The advance in the English markets, and higher prices in California, caused holders to ask more money, and consequently trading is restricted.

In this State, the writer's advices continue discouraging. The hot winds of about a fortnight ago did a great deal of damage, and continued dry weather has parched up many localities. In many places farmers are cutting their grain for hay. In the coast counties the crop is doing fairly well; even in these, rains would do great good. It now looks as if the wheat crop, notwithstanding the increased acreage, will be fully 10 per cent less than last year, while barley will be all of 40 per cent less, owing to decreased acreage, cutting for hay and an entire failure of the crop in many localities and a poor outlook in others.

In the local market wheat has been excited throughout the week, under stronger buying and firmer holding. Many contract sales were made against which the grain has been bought or else sent to tidewater in case of a demand by the buyer. There is no doubt but that there is quite a line of short sales out, to fill which the sellers will have to bid well up. Many have already filled at a heavy loss. Quite a number of interior operators bought long and have made money. Shippers are buying wheat in only a small way to meet actual requirements, as the high prices asked are against their engaging in new business. Millers were not stocked up and consequently have to pay well to have their wants met.

Barley has ruled strong and high throughout the week. There was a steady advance up to Saturday, when a failure on Call was announced that caused heavy selling that day and Monday morning; but the party after the banks opened on Monday paid dollar for dollar and resumed business, when the bulls commenced to buy heavily, sending prices up several cents by Tuesday morning. Many bears filled at the high prices, but the big ones put out more. The consumptive demand was quite good throughout the week. Brewers entered the market but withdrew again owing to the high prices. It now looks as if brewing grades will be scarcer than ever.

Oats, in sympathy with barley, are held higher. Trading is more free. Receipts are only fair, while stocks have been reduced.

Corn is stiffer and fairly active. The better grades continue scarce and high.

Rye holds strong at full prices, under firm holding and only moderate supplies.

Fruits.

Seasonable fruits make a better showing, with cherries working down to lower prices. The canners clean up the market on strawberries when prices get down to about \$4 per chest.

For future delivery, the writer hears of sales made on the ground at 2 1/2¢ to 3 1/2¢ for apricots; Silver prunes, 2 1/2¢. Peaches and French prunes are held higher than a week ago, but actual sales are hard to get. Orchardists will confer a great favor by writing to the writer particulars about sales and also crop prospects. No name will be used when there are objections. It is only by mutual information that growers can act knowingly. Address J. R. Farish, P. O. box 2325, S. F. It is best to keep the address for future reference, for patrons of this paper may desire information on the different markets,

which the writer will cheerfully answer by letter or telegraph, as desired.

Fruit prospects are not quite so good. The hot winds of about two weeks ago did much more damage in many localities than heretofore claimed. This is shown by the almost bare condition of the trees on the north side, in a large number of orchards. The apricot crop will be considerably short of last year, owing to the almost total failure of the Moorpark. Last year the Moorpark apricot crop aggregated for the State about 20,000 tons, but this year it will not go over 6000 tons. The Royals and Blenheims are a large crop. Mr. Wakefield at Los Gatos has the latter variety, and he tells the writer that his trees are bearing well. The plum crop will be large, as will the Hungarian prune, but the French prune, Silver prune and cherries will be short. Other fruits it is too early to speak intelligently on.

In dried fruits, the stock is light, as is the demand. It now looks as if all holdings will be cleaned up before the new crop.

In raisins, the supply is light. The market is in strong position and higher prices looked for. The grape crop prospects are encouraging.

Feedstuff.

Bran, middlings and ground barley are strong and higher. The demand is increasing. The advance in wheat will probably lessen the output of bran and middlings. Feed corn is strong, with a disposition to advance prices.

Hay is well under way in many localities. Farmers in many places have been forced to cut their grain for hay. From all information at hand the crop this year falls considerably below that of 1887, while the stock of old is very little. The consumption this year will be larger than that of last season. The market is very strong, with an advance obtainable for good to choice.

Live-Stock.

Owing to liberal supplies at lower prices of fruits and vegetables the demand for meats is light, and as there is a free offering of both bullocks and mutton sheep the market is easy, with some shading in prices reported. Lambs and calves are steady. Hogs are wanted, with those suitable for the block selling as high as 6 1/2¢. Milch cows are in fair demand, but the dearth of feed is against their fetching high prices. In horses, former reports are still applicable, except for work horses, which are slow, particularly for the medium size.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed and one-half from the price of grass-fed, that is, animals running at large).

HOGS—On foot, grain-fed, 6 1/2 @ 6 3/4 ¢ lb.; dressed, 9 1/2 @ 10 ¢ lb.; soft, 6 @ 6 1/2 ¢ lb.; dressed, 8 1/2 @ 9 1/2 ¢ lb. Stock hogs, 3 1/2 @ 5 ¢ lb.

BEEF—Stall-fed, 8 @ 8 1/2 ¢ lb.; grass-fed, extra, 7 1/2 @ 8 ¢ lb.; first quality, 7 @ 7 1/2 ¢ lb.; second quality, 6 1/2 @ 7 ¢ lb.; third quality, 5 @ 6 ¢ lb.

VEAL—Choice, 9 @ 11 ¢ lb.; fair to good, 7 @ 8 ¢ lb.

MUTTON—Wethers, 6 1/2 @ 7 ¢ lb.; ewes, 6 @ 6 1/2 ¢ lb.; lamb-spring, 9 @ 10 ¢ lb.

Vegetables.

Garden truck is coming in more freely, causing lower prices and greater variety to draw from.

Asparagus continues to be taken by canners, when prices recede under heavy receipts.

Peas fluctuated some the past week. Canners only buy when there is a glut. There are three canneries running on them.

Cabbages are lower, under freer receipts of new and a falling off in the call for old for shipping.

Quotations for old potatoes are withdrawn, prices being too irregular and unsatisfactory. New are in liberal receipt. The larger and more matured find ready buyers and full figures, but small and unripe are slow. Shipping to the East is continued.

Onions are strong at full figures, under light receipts and a fair demand. Crop prospects continue good.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way.....	400,305	224,792
In port, disengaged.....	53,960	122,835
In port, engaged.....	12,271	3,862

Totals..... 466,536 351,489

To obtain the carrying capacity, add 60 per cent to the tonnage.

Tonnage on the way to Oregon, 15,077; tonnage at Portland, Oregon, loading and to load, 19,114. Total tonnage, 34,191.

In poultry, geese and ducks are lower, but turkeys, roosters and hens are higher. The demand is free.

In wool there is nothing new to report; the general feeling is that the bottom has been reached and any change will be for the better.

In hops there is a continued good call for choice straight parcels, but of which the market appears to be bare.

Beans are steady at full prices.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JOHN G. H. LAMPADUS—San Luis Obispo Co.
G. W. INGALLS—Arizona Territory.
A. F. JEWETT—Tulare Co.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
R. G. HUSTON—Montana Territory.
E. H. SCHARFEL—Butte Co.
S. J. LITTLEFIELD—San Diego Co.

Notice.

The engagement of M. C. Brown as agent for this paper has been discontinued.

S. F., March 15, 1888.

THE PUBLISHERS.

FREE TRADE.—We have received a copy of a pamphlet by Hon. Abbot Kinney of Los Angeles county, entitled "The Tariff: Free Trade vs. Protection," which is published by W. Doxey, 631 Market street, S. F., at 35 cents per copy. It is an able presentation of the wrong side of an important question.

Domestic Produce.

Table with multiple columns listing various domestic produce items such as Beans and Peas, Broom Corn, Dairy Produce, Eggs, Flour, Grain, Hides, Hops, Onions, Nuts, Apples, Apricots, Bananas, Blackberries, Cantaloupes, Cherries, Citrus, Cranberries, Currants, Dehesa Olives, Figs, Grapes, Lemons, Limes, Melons, Nectarines, Oranges, Peaches, Pears, Plums, Potatoes, Raisins, Strawberries, and various fruits and vegetables. Prices are listed in dollars and cents.

PACIFIC COAST WEATHER FOR THE WEEK. (Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.		Eureka.		Red Bluff.		Sacramento.		S. Francisco.		Fresno.		S. L. Obispo.		Los Angeles.		San Diego.	
	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.	Rain.	Temp.
April 25-May 2.																		
Thursday	19	54 S	00	52 Nw	00	68 N	00	66 Nw	00	59 W	00	66 SE	00	60 W	00	74 SW	00	64 SW
Friday	12	62 N	00	58 W	00	76 N	00	72 Nw	00	63 W	00	70 N	00	71 W	00	76 SW	00	64 W
Saturday	1	68 SE	00	54 Nw	00	82 N	00	78 N	00	69 SW	00	81 E	00	80 N	00	82 SW	00	68 Nw
Sunday	24	62 N	00	52 N	00	82 S	00	76 SW	00	62 W	00	68 SE	00	67 Nw	00	84 W	00	70 W
Monday	02	54 S	00	56 Nw	00	72 S	00	60 S	00	58 W	00	82 W	00	50 Nw	00	72 S	00	60 SW
Tuesday	04	58 W	00	54 Nw	00	66 N	00	64 N	00	60 W	00	68 SW	00	6 W	00	62 S	00	66 SW
Wednesday	06	58 SE	00	54 Nw	00	70 N	00	70 Nw	00	60 W	00	72 W	00	62 W	00	70 SE	00	64 SW
Total	1.38		16		00		00		00		00		00		02		T	

EXPLANATION.—1. for clear; Cy, cloudy; Fr, fair; Fy, foggy; — indicates small to measure. Temperature, wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

COWBOYS AT DISTRICT FAIRS.—The Nevada State Fair directors have had a hint which the Inyo Independent thinks might well be acted upon by the directors of district fairs in California. It is proposed to have vaqueros show, by practical examples, how range cattle are rounded up and range horses are ridden. It would be done by cutting out one animal at a time, and the instant it left the band, the horseman on deck would take after it. The time it took him to lasso it, throw it down and tie it, would be the score for others to beat, as they in turn have a trial. The "bronco bursting," as the boys call it, could be done on the speed-ring, although the other trials would need the large ground in the center. A few wild horses could be provided, and there are dozens of boys in this State ready, on the shortest notice, to ride anything that has four legs. There would be no way to try the degrees of skill, perhaps, so it would have to be arranged to pay so much apiece. The horses would be blinded, saddled and bridled as part of the exhibition, and it would be exciting enough for any one. The cattle and horse ranges of the West are distinctively American institutions, original and inimitable. The crack riders of other countries would be as much at sea on a bucking bronco as a sailor would be in a balloon, and not one person in a hundred has ever seen any range riding.

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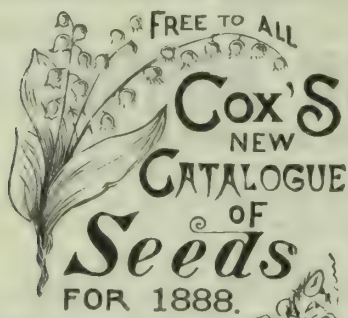
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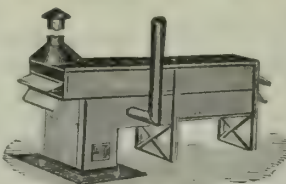
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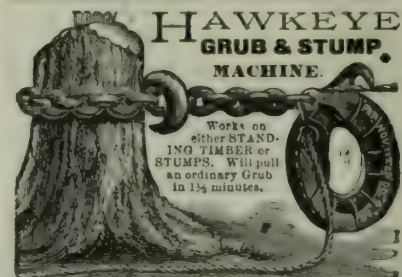
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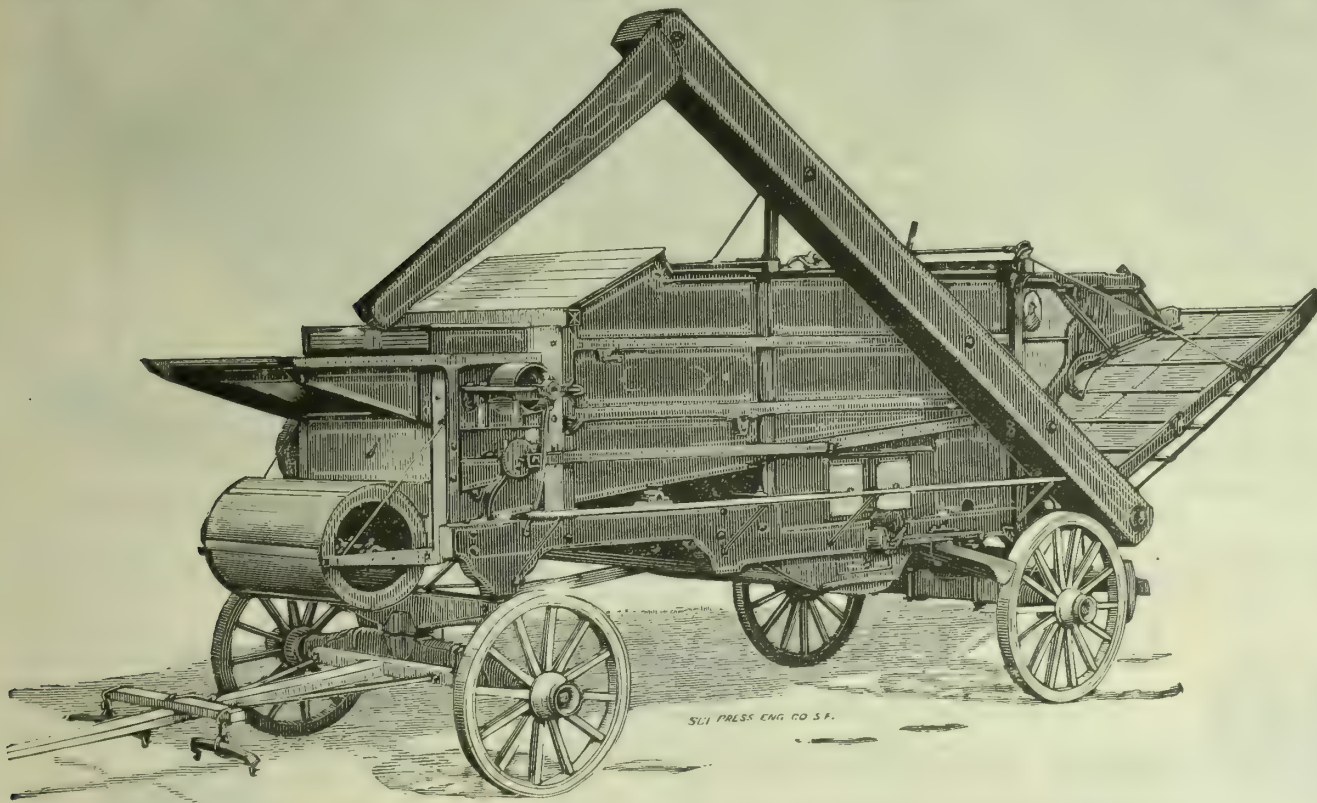
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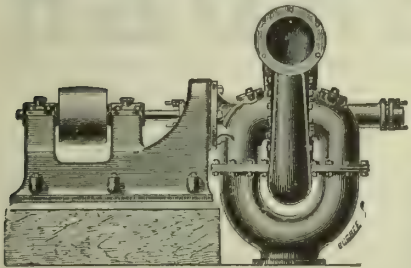
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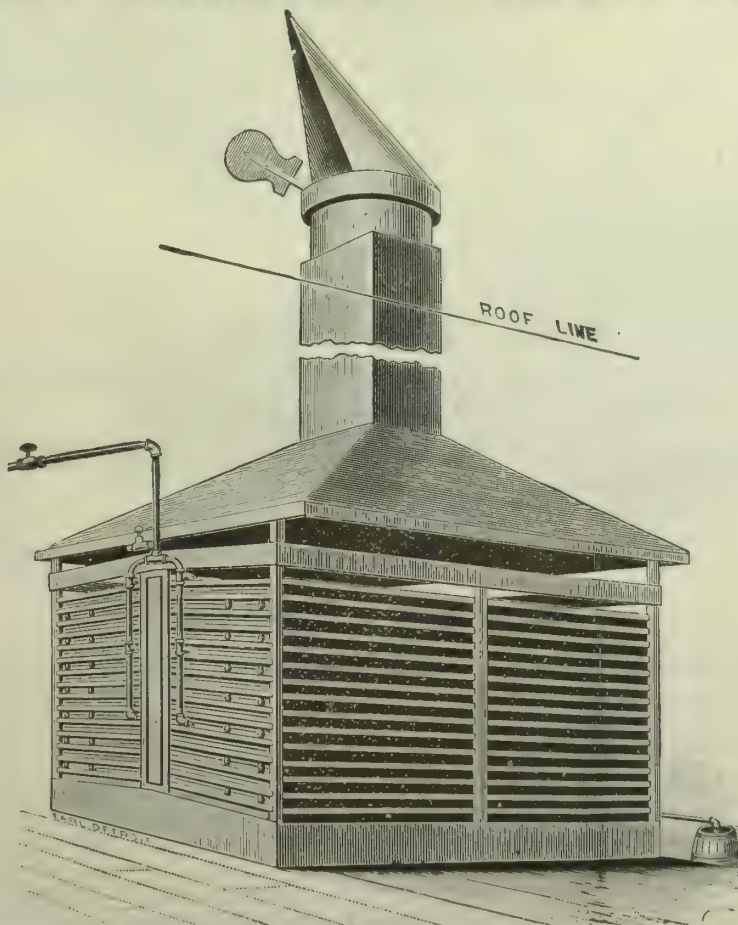
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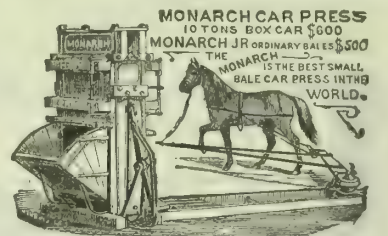
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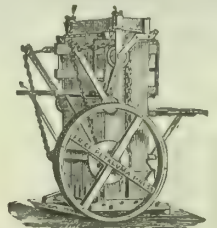
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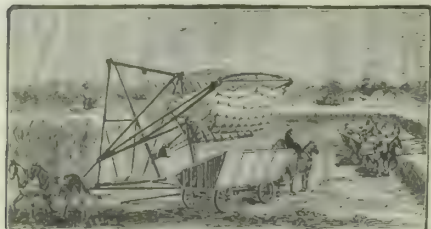
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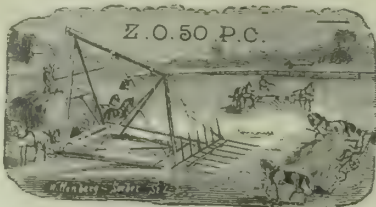
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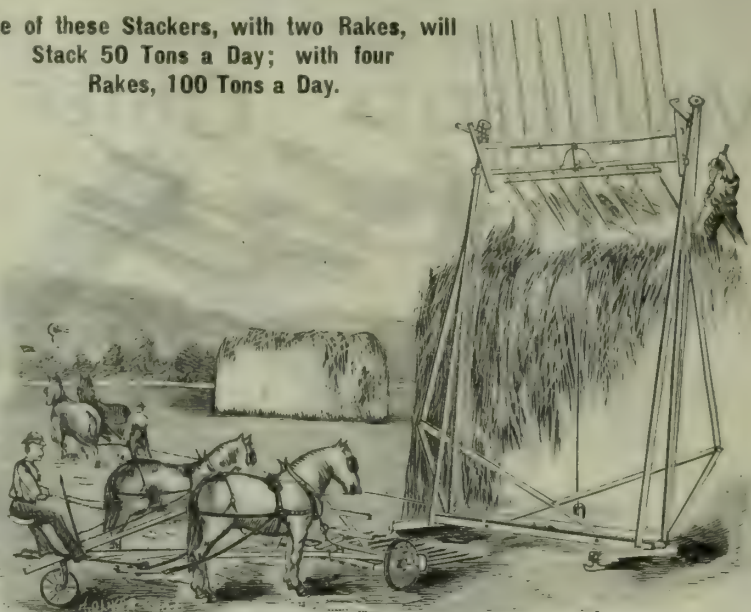
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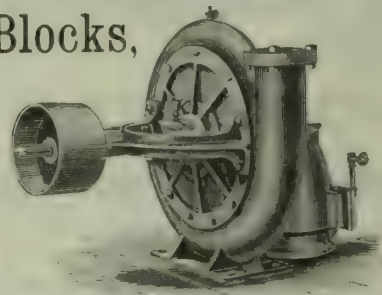
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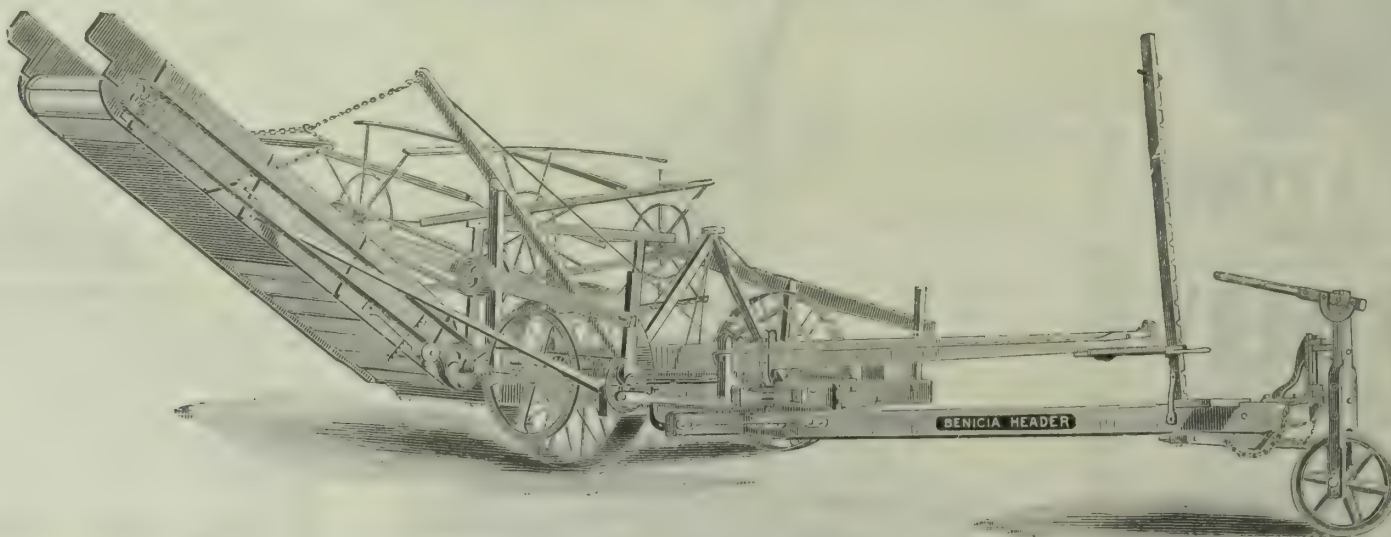
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The Ramie Plant.

There is so much talk about the ramie plant and the possibility of profit from its growth and the preparation of its fiber, that we give herewith an engraving showing a portion of the stem of the plant with leaves and blossoms. There are several species of the plant, which are claimed to have more or less value as a source of fiber, but the engraving, which is of the *Boehmeria utilis*, sufficiently illustrates the plant. We are indebted to the *South Illustrated* of New Orleans for the engraving of the plant, and the editor of that journal gives the following notes descriptive of the species:

Ramie is indigenous to Java, though it has been long confounded with China grass. It is now recognized, however, that the two are essentially distinct. China grass comes from the *Boehmeria nivea*, while ramie is furnished by the *Boehmeria utilis*. Both plants are of the nettle order, and of considerable size, especially when they are improved by culture, but their leaves differ in color. Those of the *Boehmeria nivea* have a silver-white top, while the *Boehmeria utilis* has leaves grayish-green on both sides. The fiber obtained from each plant is very similar in many respects, but that from the former always retains a certain harshness, as well as a greenish tint; ramie, the fiber obtained from the latter, is very soft and beautifully white, and does not break so easily when subjected to tension.

A large quantity of plants believed to be of the superior species were grown by Trumbull at San Rafael last year and were quite widely distributed over the State. The University has for several years been growing a plat of *nivea* or *candidissima* in the economic garden at Berkeley, and has furnished large quantities of stems to inventors of extraction machines and processes, and has distributed seeds and plants to those who desired to experiment with them. We have given notes from time to time in the *RURAL* of efforts at the preparation of the fiber. Good fiber has been produced, and a company was organized here to prosecute the ramie industry. We have not heard much of the progress of the enterprise of late. No doubt as soon as some individual or company is ready to contract for the fiber at a certain price per ton as it comes from the field, there will be a disposition to grow it, and there is practically no limit to the amount which can be grown here if the effort can be shown to be profitable.

At the East and South, ramie comes up periodically as some new machine comes forward with a claim to success in preparation of the fiber. We have during the last few years mentioned several of these machines. The one which is now being brought forward is called the "Kaufman Decorticating Machine," which is said to work "continuously, without reversing the fiber, delivering the same clean, straight and untangled, without waste or the use of water. It decorticates either green or dry stalks, without being retarded by gum, and can

be easily operated by two boys or girls. The capacity of the machine is one ton of stalks per hour, yielding 100 pounds of dry fiber." We do not know anything more of this machine than we read in New Orleans papers, and allude to it merely as an item of interest to those

to the scores which have gone before. It seems beyond doubt that from the many trials there will come forth a practicable and profitable process. It cannot come too soon.

APRICOTS.—According to telegrams received,



THE RAMIE PLANT IN LEAF AND BLOOM.

who are considering the possibility of a great fiber industry for California.

Another institution which is operating in the South and it about to establish one of its machines at Tallahassee, Florida, is the "International Fiber Co. of New York," which claims that its decorticating machine and "de-gumming" process will be to ramie culture what the cotton gin has been to cotton-growing, has one of its machines on exhibition at the Sub-Tropical Exposition. It is said to decorticate from 1000 to 1500 pounds per day. This company offers to furnish these machines at a low figure and to purchase the product at \$80 per ton, to be afterward de-gummed by a process of their own. Such are two new things in ramie to add

the first apricots left the Briggs orchard, Marysville, for San Francisco on May 4th, and on the same day apricots appeared in Phoenix, Arizona, from the adjoining valley orchards.

VERY encouraging reports are received from all sections of Western, Southern and Eastern Oregon and Eastern Washington Territory regarding the crops. The recent rains have been of incalculable benefit to grass, grain, berry and fruit crops.

FRUIT SOLD.—It is telegraphed from Newcastle that the peach, plum, prune, grape and other fruit crops will be heavy, and the entire crop of the Newcastle fruit district is already engaged by actual purchasers.

Poultry Products.

Eggs and market fowls are sympathizing to some extent at least with the appreciation in value of other fresh-food supplies, which is believed to be owing to the increased consuming population of the State. It seems likely that the local production of all these food materials will increase, as is usual whenever an elevation in the range of market values occurs. In poultry products we are always living under the stimulus of high values as compared with those prevailing in other parts of the country, so that this spring's experience is in the same line, but in a more remarkable degree. The gathering up of fowls for shipment to Southern California to meet the demand to feed tourists with a good appetite for "yellow legs," is said to have so reduced supplies for the San Francisco market that chicken buyers are complaining at the prices they have to pay. The conclusion to draw from these facts is that more attention should be paid to fowls. It has been shown that there are serious objections to large scale operations with poultry in this State, and that success is not so easy with incubation and rearing of large numbers in California as it is in France. If this be true, and if large ventures which figure out so well on paper do not make anticipated returns in practice, the lesson should be that we should have more small flocks which are conceded to be very profitable if well handled.

This suggestion should have force with the many who are starting in on small fruit farms or who are clearing up Government lands and making homes thereon. A flock of fowls with plenty of range, plenty of water and proper food, which is easily produced on the place, give a steady income, which is of much aid to one who is waiting for his trees and vines to come into bearing. We can very well get along without the great breeding and feeding establishments if small producers will each do something to meet the market demand.

It does not cost very much to begin, though a little effort and outlay to get good stock will be a good investment. It is getting too late to start in now with setting hens and well-bred eggs, for summer-born birds do not usually turn out well. One can often see a chance to buy a few dozen young broilers which can be used to advantage and which will begin

laying this fall and hatching during the winter. Then, if the stock does not suit, better eggs can be bought and the new flock brought forward.

It takes some watchfulness and trouble to bring along even a small flock of hens, but there is no investment which can be made which will pay so well, considering the small outlay required. We ought to stop the great importation of eggs to this State from the great Western States. We ought to be able to supply the demand and reap the benefit of the excellent prices which prevail in our markets.

RASPBERRIES were shipped to San Francisco from the farm of Luis Ames, Newcastle, Placer county, on May 5th.

HORTICULTURE.

Santa Clara Fruit-Growers and the Tariff.

For several weeks past, says the San Jose Mercury, the fruit-growers in the Willows, desiring to form an association of some form or other, have been meeting at the houses of various orchardists in that section and discussing plans for accomplishing it. Saturday, April 20th, another meeting was held in the drier of Mrs. S. T. Ingalls, attended by a large representation of the orchardists of the neighborhood, and the Hon. C. N. Felton was present. A. S. McWilliams presided and W. N. Plummer acted as secretary.

Congressman Felton, as being direct from the capitol at Washington, and familiar with the legislation which is at present attracting so much interest there and which is of so vital importance to Santa Clara valley, was called on for remarks concerning the situation. Prefacing what he had to say by the statement that although an old Californian, and therefore, acquainted with its industries as well as somewhat personally interested in them, he would, nevertheless, be greatly pleased to receive any suggestions from those present respecting these questions. The present legislation, which is before Congress, inspired by the annual message of President Cleveland and by a bill passed by a majority of the Ways and Means Committee, which has attacked the industries of this coast, eight or nine in number, by putting their products on the free list, will interest you. What will be the result of that style of legislation, whether it will pass the two Houses of Congress and be made tentative on the people, thereby inflicting incalculable damage on the people of this coast, we cannot tell at present. I hardly think that it will meet the approval of the Lower House. The next two or three weeks will see a general debate on Mr. Mills' bill; then in Committee of the Whole each item in the bill will be considered and passed upon; then will come further discussion, after which we may be able to form some correct estimate as to what will be the outcome of the present legislation in this Congress. Should it be passed, the result will be disastrous to Santa Clara county, and in particular to the prune industry, which, I am told, will assume colossal proportions in your county this season, the output being estimated at twenty to twenty-five million pounds, whereas last year it was only a million and a half to three-quarters pounds. In the State last year the production of prunes was about 2,500,000 pounds, while this year it will be 30,000,000 to 35,000,000 pounds. Further, your dried and glazed fruits are also threatened. I am told that Mr. Barbour, who last year conducted a large business in this latter branch of trade, will this year suspend business, owing to the prospective passage of the Mills bill. The duty on glazed fruits, the manufacture of which in this country is in its infancy, is 25 cents. Mills would put them on the free list and allow these delicious confections to be exported from France, where the industry has been placed on so firm a basis that the production is attended with not near the expense or outlay. Now, we hope that the Mills bill will not pass, because of its manifold danger to our industries, which must be indeed great, if simply the prospect of its passage compels the suspension of a laudable business. Further, when we realize the fact of the possibilities of your production of a million gallons of wine per year; the almond and walnut flourish abundantly, both of which are put on the free list; not to speak of the olive, the development of which is only begun in your valley, in no part of which it cannot be grown to perfection and where the field of cultivation is practically without a limit, yet which is one of the articles put on the free list in this bill. You will now see the injurious effect which the passage of this bill will have on the horticultural interests of Santa Clara county. However, by saying that they have attacked the general interests of this State, I do not mean to be disrespectful, but so general are our interests that I do not think they properly understand them. Moreover, in a new State even the general legislation affects the interests more than in other and older States, where the manufacturing and other industries have been in longer operation and put on a firmer basis. A man in the East should encourage his fellow in California as a producer, for the reason that the more production of this kind, which is not brought into competition with their manufactures, is that the greater the prosperity here, the greater call there is for Eastern goods which cannot be produced in this State. The limit of our demand, as we are not a manufacturing country, is gauged by our ability to purchase, and vice versa.

The fruit industries of this coast are only developing. We have spent time and millions of dollars in learning the business; and just as we are on the eve of reaping the benefit of years of time, we are being attacked by the very persons who should aid us. In some cases the limit has not even been attained. We are only now finding out the capabilities of the soil, and a few years ago we did not know what its possibilities of cultivation were. We are all pronounced on the maintenance of our infant industries, so called in one sense, properly.

Mr. Felton closed his interesting remarks by stating that he was always glad to receive any suggestions from any person or association, and that when properly drawn and pertinent, they might be of assistance to him at Washington.

Chairman McWilliams referred to the fact that the fruit-growers had been grafting and regrafting their trees, and had seen the business develop from its infancy in 30 years, but now it appeared that as soon as they were about to get on the right track, injustice was being done them. He contended that the fruit crop was the poor man's crop; the wives and daughters could participate in the canning, thus aiding in saving expenses. He mentioned the fact that there were three ladies present who represented 80 acres of self-sustaining orchard, who managed the farms themselves and were successful.

John Britton stated that oranges, lemons, prunes, etc., could be shipped from the Mediterranean into New York for between three-quarters to three-eighths cents per pound, whereas the grower here had to pay about 1½ to 1¢. Should the tariff be taken off, the foreign grower would have that advantage over the Californian. The fruit-growers of this county, however, would prefer to see all the industries of the country protected. A division of strength would be disastrous to the country. They would prefer to see the wool, iron and manufactured articles all encouraged. They would stand shoulder to shoulder with all. Protection to American labor and protection to American capital are both needed. Break down one and you injure all. We favor a protection all along the line.

Henry Sears said that the question of taking the tariff off prunes was a serious matter and one which should interest all on the coast. Undoubtedly a blow struck at this industry would be detrimental to all.

E. T. Pettit was pleased to hear that the representatives on this coast were interesting themselves in the matter, and were going to stand by us in the matter of legislation.

William Gardner said he thought we ought to be at least reasonably protected as regards the difference in freights between this country and France. As it stands now the growers in France can ship their fruit here by water at a less cost than we can by freight. I should think that none of the Congressional representatives would object to at least giving us this concession, which would place us on an equality with them, thus preserving our home market. In 60,000,000 of people we could probably get along on that condition, and perhaps sometime extend it abroad. A little protection would make a better market than otherwise.

Organization.

In the absence of W. H. Baugh and Thos. Osborn, members of a committee on constitution, of which O. F. Alley was the other member, G. W. Worthen and Charles Kipp were appointed on the committee. They retired and after consultation reported as follows: Believing that organized effort is better than individual exertion, and that co-operation will be a mutual benefit to the small prune-grower as well as the large, and that by uniting our interests we will be enabled to find a better market and sale for our products. Therefore, for the better carrying out of our ideas and the facilitating of business, we adopt the following constitution and by-laws.

The constitution and by-laws provides that the society shall be known as the Santa Clara Valley Fruit League, that its officers shall be Chairman, Secretary, Treasurer and an Advisory Committee of five members to be elected annually; that meetings shall be held at least once a month; the members shall be all fruit-growers who wish to affiliate with the society and subscribe to the conditions; that the Advisory Committee shall inform themselves from time to time upon the state of the market in regard to supply, demand and ruling prices and such other and further information of benefit to the League; that a general debate on subjects pertaining to and for the good of the League shall be part of the order of business each regular meeting.

Apple Culture.

EDITORS PRESS:—I have just been reading with much satisfaction the essay delivered by O. N. Cadwell, before the Santa Barbara Convention, on "Apple Culture." His views on planting and pruning are especially worthy of notice. Were I to set out an orchard with a view of having it hardy and lasting, I would either plant seeds where I wanted the trees to grow or set out seedlings and graft with choice fruit from healthy-bearing trees. The best orchard I ever saw in Michigan was one where the owner planted the seeds right where the trees were to stand, and when they began to bear, he had all, except some choice varieties grafted, and there was not a sign of a diseased tree in his 20 acre orchard, notwithstanding the trees had been standing over 40 years.

Right here let me say, in reference to natural fruit; some of the finest flavored apples I ever ate were from natural trees, and they were invariably hardy and great bearers. It is a well-known fact that natural fruit makes much better cider than grafted fruit. Sixty years ago my father set out 100 natural trees on one acre in Michigan. After the trees began to bear they were all grafted except a few which bore choice fruit. These were superior in quality and in productiveness to any that were grafted, and to-day are healthy and bear every year large crops, while most of the grafted ones are dead in the top. Standing in front of the old

house where I lived for nearly half a century is a pear tree, which grew from a graft inserted in a thorn root over 40 years ago. This tree is hardy, healthy and bears annual crops of 30 or 40 bushels of pears, while most of the pear trees in the vicinity are dead or nearly so from the blight.

Mr. Cadwell's ideas about pruning, starting the top low down; cutting back the rampant limbs so as to keep the fruit close to the ground, causing the limbs to grow stalky and thus do away with the necessity of propping up the limbs, is sound. I would further recommend that the inside limbs be cut out so as to form a top goblet shape, and I would keep the tree low so as to have the fruit easy of access and away from the birds and the scalding sun. Many trees are ruined by forcing the top to ascend to the high branches where it becomes scalded and unfit to nourish either fruit or limb. J. S. TIBBITS.

Santa Rita.

THE FRUIT UNION.—President P. E. Platt, in an interview in the Record-Union, said: The Union is on a sound basis, and hopes this year to do a very largely increased amount of shipping over any previous year. Agents are now being appointed in all important markets throughout the East. The auction plan has been adopted for the disposal of the fruit in Boston, New York, Philadelphia, Chicago, and may likely be chosen as the proper course in other cities. The Eastern manager will go East in a short time to personally superintend the work of the agents and aid in proper distribution. It is expected that many new markets will be opened. Nothing new can yet be stated with regard to freight rates, but it is hoped that liberal and reasonable concessions will be made by the transportation companies, and that the time required to reach the Atlantic seaboard may be shortened considerably. This latter is a very important matter, and all possible pressure is being brought to bear to bring it about.

THE FIELD.

The First Attempt at Beet-Sugar Making in California.

In his "California Pastoral" Hubert Howe Bancroft gives an amusing account of what was probably the first attempt to cultivate beets for sugar in California. In 1838, one Octavio Custot, who subsequently was known by the surname of El Azucarero, the sugar-maker, came to Monterey on board a vessel. He thought that it would be easy enough to live by his wits among the simple-minded Californians, and accordingly deserted his ship. He traveled to Sonoma, in the course of time, and revealed to Gen. Vallejo, the autocrat of the frontier, the startling intelligence that he could make sugar from beets.

Vallejo was a man of progress, although he had passed all his life in this far-away wilderness. He had heard so many remarkable tales from strangers visiting him, bringing new ideas of things he had never heard of before, that he was ready to believe almost anything. He reasoned, indeed, that there was no reason why sugar should not be made from beets, and perhaps tea from oak leaves, and coffee from manzanita berries.

"Doubtless, all is as you say," remarked Vallejo, "but where are the beets?"

"Grow them," replied Custot.

"I have no seed," said Vallejo.

"Send for some," answered Custot.

Indeed, the cunning Octavio had counted on the lack of facilities all along, and on the easy days of waiting in store for him in a fat country with a beautiful climate and fair women. Vallejo finally sent the fellow to his major domo at Petaluma, giving instructions that four yoke of oxen, eight Indians and a dwelling and provisions should be placed at his disposal. So Octavio stretched himself at ease with his pipe, while the slow-moving oxen plowed 40 acres. Seed was found at Mazatlan, which was pronounced to be of excellent quality when it came to hand. "But," said Octavio, "nothing can be done now; it is too late to plant this season. So nothing remained to be done but to extend to El Azucarero his free and easy living at Petaluma during the summer. When at length the rains came again, the seed was planted and grew thriftily, producing very large red beets. Vallejo came frequently from Sonoma to see how the crop came on, and was much encouraged by the prospective enormous yield of sugar. He felt that his fondest hopes had been realized when, in July, a fine box of sugar arrived at Sonoma, consigned to his wife by Custot. The sugar was pronounced to be of excellent quality, and equal to the best loaf-sugar brought from Peru. Visions of a great industry passed before Vallejo's mind, and he felt that it would be easy enough to have thousands of acres sowed to beets, and to export sugar by the shipload. But presently his hopes were checked; his wife came in from the store-room with the declaration that a dozen loaves of her Peruvian sugar had been stolen. Then the truth flashed upon them—Octavio was the thief. Vallejo hurried to Petaluma and demanded that the process of manufacture be shown to him, but was told that the method would not bear too much light. "True, nor will yourself," replied Vallejo, as he ordered the impostor to be taken to Yerba Buena.

THE STOCK YARD.

The Meat Pool.

In the U. S. Senate, on the 3d instant, the bill for the establishment of a Bureau of Animal Industry and to facilitate the exportation of live stock and their product, was taken up, and Palmer addressed the Senate in favor of the measure, reading various communications to show the animus of the opposition to the bill, which was, he said, "machine work right through." The idea conveyed was that the opposition came from the existing Bureau of Animal Industry.

Vest said if half of that which was stated in the correspondence was true, the Commissioner of Agriculture should be hurled out of official life, disgraced and dishonored, but he (Vest) did not believe the statements. He could not support the bill. He proceeded to speak of what he called the "cattle syndicate," and said the people were helpless and in its power. There were five men and firms in the city of Chicago which regulated the price of cattle every day by their manipulation of market prices. These men owned the cattle-raiser's property and confiscated it as if they possessed the right to take it from his farm without paying him one cent. "Talk," said Vest, "about trusts, talk about pools; the cattle pool of Chicago is the most infamous tyranny that ever existed in the United States."

Plumb had also something to say on the same subject. In his opinion the worst combination in the country was that of the beef and pork packers, having its headquarters in Chicago. There was no trust or combination that had so powerful or baneful an influence as that combination. For years the prices of cattle to producers had been going down. They had gone down, he thought, 50 per cent. In the same time the price of meat to consumers had gone up, and every single dollar of the difference had gone into the pockets of that combination. Under the operations of this trust prices had declined unnecessarily and destructively. It was safe to say that on every steer of three years old and upward raised west of the Mississippi river during the past five years the market value had been by this combination reduced not less than \$10 per head. The damage to the State of Kansas alone during that period had been more than \$40,000,000. This and the wealth of the syndicate had grown proportionately. They had committees here now, having in their pockets money of this stock-ring to get Congress to give them control of the question of cattle in quarantine. This "combine" had allies in the railroad managers. Step by step they had come to a condition where they actually fixed the prices of cattle just as if they were the men who raised them. He believed in giving the Commissioner of Agriculture all the powers proposed to be given to the commission, and would not vote for any measure that would detract from the power and dignity of that department.

Blair spoke briefly in favor of the bill, which then went over.

Range Interests.

A plain question of much discussion is answered to the range cattlemen to-day. The great problem of "how to better the range industry" has been a Gordian knot which the leading brains and best men of the business have been trying to straighten out for more than three years, or ever since the great frolic, the cattlemen's convention of 1884. The Southwest, New Mexico and Arizona have felt the decline in cattle values fully as much as any other section, and in New Mexico much thought has been applied for a remedy.

The thinking cowman of to-day looks over the events of the past two years, puts two and two together, and says: "It is North vs. South," not in the old rebellion spirit, but as a living fact of the cattle business as it now is."

To the north, in Colorado and the maturing range, is seen (to use a stock market expression) the bear element, composed of those who would buy the steers from the breeding section, and the big, or little, brokerage concerns, whose money is made from the commissions received for selling the steers of New Mexico, Arizona and Texas to the aforementioned owners of maturing ranges. All of these people, looking over the record of the transactions (sales of southwest steers to Colorado buyers) have helped in a great measure to reduce the price of range cattle. Their constant cry has been "too high, knock off \$3 a head." These buyers of young steers have had things pretty much their own way for the past three years and have helped the dressed beef men to impoverish the range breeder of the Southwest. Some of the brokers have stood in with the play and have helped to squeeze down the prices paid for steers, even while posing as the wood-be saviors of the southwestern range-men.

Look at the record of the southwest. The California boom developed a heavy demand for beef on the coast, and half a dozen cowmen have stepped into the slaughtering business, and not only opened a market for the product of their own ranges, but have branched out and are now disposing of a large portion of the beef stock of the southwest at good prices. These men do not screw down prices and then charge their fellow-cattlemen a dollar a head for "not

breaking up a trade." These men say, "Sell us your cattle and we will pay you what they are worth." And they are paying from two to three cents a pound on the cars for steers.

An ounce of practice is worth a ton of theory, and the development of the California market has already been worth more money to the cattlemen of New Mexico and Arizona than all the trusts, secret schemes and other locoed, wind-pudding, self-blowing side-shows ever thought of.

The thing has solved itself and the value of cattle enhanced, not by any scheme emanating of brilliant minds, but by the natural course of events. It came by itself and shows the cattlemen that if they stick to the old cow and let time fix up things all will be well. Drop, like a hot iron, the men who say that cattle are too high, and that the better time will get here in three or four years. Don't sacrifice your steers to the men who make \$20 a head for running them a year and a half on Colorado free grass. Try the California trade and the northern market will improve all the sooner.—*New Mexico Stock Grower*.

THE DAIRY.

A Shasta County Butter-Maker's Method.

I have learned by long experience about making what I call good butter, and preserving it nice and sweet after it is made. To keep butter good that is made in the fall is one thing, but to keep that good that is made in summer is quite another. Our best and richest butter is made in May, June and July, when the cows milk strong. The best of butter may easily be kept good till April of the following year, and here is the way I do it: First, it must be good butter when made, all the buttermilk must be worked out. My practice for years has been to thoroughly wash the butter before it is taken out of the churn, and I am confident that the plan is a good one. Salt to suit the taste of those who are to eat it—half an ounce of salt to a pound of butter is about right. Keep out all your saltpeetre, sugar, or other ingredients—it will keep better without them, and, perhaps, too, without salt, but would not be so palatable. Do up the butter each week, on churning, in neat, round rolls of two or three pounds each, just what you have to put down; cover each roll with a clean muslin cloth, large enough to round it twice or more, that it will be completely enveloped, and sink it in a strong brine, as strong as the best salt will make it. Stone vessels are the best. When the rolls are in they may be kept sunk down by means of clean flat stones. When the vessel is full enough and the butter completely covered with the brine, add more salt to insure the strength of the brine. Keep it in your cellar or in your spring-house, and see if it is not worth in winter and spring 100 per cent more than any winter-made butter. In this way I have kept all my winter supply of butter for many years, and have never yet failed. But mark, the butter must be good, well worked, and should, by all means, be wrapped up and sunk under the brine the same day it is churned, not kept lying about for two or three days after churning.—*Cor. Shasta Courier*.

Butter Yield per Cow.

The *Journal* has often talked with its butter-making readers on the subject of culling the dairy herd, and perpetuating the fittest. We believe this is one of the most important things to attend to on a dairy ranch. And not a few of our dairymen are giving their best thought to it. The surest way to proceed in culling a herd is no doubt that practiced by a dairyman in an Eastern State, who recently gave his method and its results to a convention of butter-makers. He said he had been dairying with 40 cows for 20 years, and his cows had averaged 150 pounds of butter per year, and with that he was satisfied. His returns was about \$37.50 per year from each cow. One day he read in the *New York Tribune* the experience of a man who tested his cows separately, and was greatly surprised at the difference he discovered in the amount of butter produce derived. He was so much impressed with the figures given that he resolved to take the trouble to test his own herd. Accordingly he arranged to keep the milk of each cow separate, and churn the product of each by itself, until he could determine the exact results, and see whether it would be best to segregate the cows, and confine himself in future to the offspring of the best. The result of his experiment was astonishing from the first. He found the milk product of his herd varied all the way from 18 to 40 pounds per cow. But this was not all. Some of the lightest milkers produced the most butter. He then commenced raising only the heifers of the best butter-producers for his own use and selling off all the others. And in a short time he found he had increased the average yield of his herd from 150 to 266 pounds a year per cow. An increase of 116 pounds per cow each year, or a money produce of \$62.50 instead of \$37.50. And the improved herd ate no more and took no more care than the old one. There are many dairies in Marin county on which equally startling improvements could be made by culling the herd. Some of our dairymen are already alive to the importance of this point, but by no means all. Many cows are kept in the herd and milked

year after year, which are good for nothing but beef. Others are large milkers, valuable for a city milkman, but not worth their feed on the ranch as butter producers. An expert can almost unerringly pick out the best cows for butter by their marks and appearance, but the surer way is to test their produce, and insist on the Darwinian law, the survival of the fittest.—*Marin County Journal*.

THE IRRIGATOR.

Another Riparian Rights Decision.

The recent decision by the Supreme Court seems to make more certain that it is only riparian law and precedents which our judges can accept. The *Tulare Times* reviews the decision and comments upon its effects as follows:

The decision of the Supreme Court of the State in the case of Hielbron et als. vs. the Fowler Switch Canal Co., strikes us as being most disastrous to the appropriators. Instead of being, as we had hoped, more liberal toward irrigation than former decisions, it is more ultra riparian than the famous decisions of Lux vs. Haggin, rendered four years ago.

The Fowler Switch Canal Co. several years ago appropriated 1500 feet of water from Kings river, built a canal having a capacity of 1500 feet, at a cost of \$110,000, and have, usually, diverted less than 300 feet, but none of the canal-owners, nor the lands watered, are riparian, and no part of the water can get back into the river again. The issue is, therefore, squarely defined between riparian owners and the appropriators who are not riparian owners. The canal company did not and could not plead the statute of limitations so that was eliminated from the case.

The defense the canal company sought to make was, that it does not propose to divert and has not diverted water from Kings river when such diversion would materially injure the riparian owners below, or when it would cause an appreciable diminution of the volume of water flowing in the river, thus relying upon the doctrine that when enough water was left in the river to supply the reasonable wants of all the riparian proprietors, the appropriators might have the rest.

Surely it was not too much to expect of the Supreme Court that it would accord the appropriators the right to use water that the riparian owners did not need, but not so. According to this decision, the only time when an appropriator, who is not a riparian owner also, can take water from a stream is when such a flood exists as would actually damage the riparian owner were the water not taken out. The appropriator can not divert the water even when the river is bank full, nor yet when it overflows its banks, if the riparian owner prefers to have it overflow. He may venture to take water only when he sees the riparian owner's cattle drowning and his buildings floating away. Upon this the court said: "But the rights of the riparian proprietor do not depend upon the quantity of water flowing in the stream, nor can that flow be said to be an extraordinary flood which can be counted upon as certain to occur annually and to continue for months." Further on the court plainly implies that the only water an appropriator may take is that of "casual and unusual freshets." The opinion in this case was written by Jackson Temple and signed by McKinstry, McFarland, Thornton and Sharpstein.

Now, appropriator, look this matter squarely in the face, and where do you stand? The fact of the business is you can have no standing at all in any court in this State. The statute of limitations is your only hope. If you have diverted water for five years, uninterruptedly and adversely, and not a single riparian owner below you has objected during that period, and no one of the riparian owners below you has been under any legal disability during that time that would prevent his objecting, you are safe in your right to divert water, otherwise you have not a shadow of right, and can not acquire it by appropriation. The riparian owners of California have the right to the full flow of the streams of California, "undiminished in quantity and unpolluted in quality by any appropriator, who is not also a riparian owner," to everything except "casual and unusual freshets."

For five years the *Register* has fought this doctrine, believing that it was unsuited to California, unjust and bad law. We are of the same opinion still, but we throw up the sponge. We relied solely upon the principle that "when the reason for the application of a law of judicial decision failed, the law failed," and we had hoped that the accession to the supreme bench of such men as McFarland, Temple and Patterson would result in the overthrow of the ultra riparian law by the application of that principle; but our hopes have been blasted and we give it up. Whatever water is taken out of any stream hereafter by any one not a riparian owner has got to be taken by condemnation and payment, and the problem of the application of the statute of eminent domain has got to be solved.

Still Hopeful.

The *Hanford Sentinel* encourages the writer of the foregoing as follows: "Hold on to your sponge; don't throw it up. You have done heroic work in the past. Let us never give up the ship." There is justice in the background, and this decision will help bring that justice to the front."

THE GARDEN.

An Excellent Lesson on the Gopher-Snake.

EDITORS PRESS:—Will you kindly allow me space in the columns of your widely-circulated periodical to enter my protest against the cruel and wanton destruction of one of the very best friends of the horticulturist and general farmer?

I refer to the killing of gopher-snakes and other varieties of harmless serpents. It is an act of insane folly to destroy them, for they are the most active and efficient allies of the nurseryman, farmer and fruit-raiser in the destruction of those most pernicious pests, the gopher and the squirrel.

They destroy more gophers than all the appliances that man can bring to bear on them in the shape of traps, poisons and gasses. Their whole work is beneficial to man without a single drawback. They do not eat his grain, his alfalfa, his fruit or his fruit-trees, but are most active and persistent foes of those that do. They are his truest allies, as they wage a relentless war upon his enemies, the gophers and the squirrels, whose whole lives are spent in destroying the fruit of man's industry, and that have not a solitary redeeming quality to recommend them.

As school-children are generally very active in killing snakes and have not the slightest idea that there is anything wrong in so doing, I would recommend teachers and others interested in the management of our public schools, to give them some instruction on this subject.

My attention was directed to this topic a few days since by the killing of two gopher-snakes by the boys attending our public school. The teacher took occasion to kindly reprove the boys for their act of wanton cruelty to a most inoffensive reptile, and to point out the folly of destroying that which killed more gophers in a week than they could hope to accomplish in a year. He said:

"None but a friend of the gopher will kill a gopher-snake." He asked them: "What kills so much of our alfalfa?" "Gophers," was the response. "What kills so many trees in our nurseries and orchards?" "Gophers," replied the scholars. "What harm do our gopher-snakes, garter-snakes and red-racers do?" "None at all," was the unanimous answer. "Well now boys, tell me what good they do." "They kill gophers!" shouted the whole school. "Then is it a wise or a foolish thing to kill these most useful and innocent friends of ours?" "A very foolish thing," was the unanimous vote. "Now boys," he said in conclusion, "I want to know how many friends the gopher has in this school. All friends of the gopher will raise their hands." Not a hand went up. "Well then let me see how many friends the gopher-snake has." Every one raised his hand.

He then told them that in future they must be friends of either the gopher or of the gopher-snake, and to remember which side they were on.

I believe much good can be done by the teachers throughout the State, by pursuing a course somewhat similar to the above, contrasting the benefits conferred by the reptiles with the damage done by the rodents, and then enlisting the scholars on the side of the reptiles under the motto: "None but a friend of a gopher will kill a gopher-snake." R. B. W.

Poway, San Diego.

Asparagus-Growing.

EDITORS PRESS:—In your issue of April 14th you allude to Mr. E. Leedham's method of growing asparagus. My experience proves to the contrary.

In Massachusetts, where it is grown with great success for the Boston market, two-year-old plants are put in rows three feet apart, and one foot apart in each row, and from 12 to 18 inches deep, the ridges leveled by hoeing during the season. The ground is fertilized heavily annually, and the third year it is generally cut. As the grass gets older the roots work toward the top, and by setting deep cultivation is easier. If the gentleman had many acres set two inches below the surface, I think he would find it difficult in cultivating or plowing the fertilizer in. I have a small patch set shallow, and every spring or winter I am obliged to spade the manure in, and even then some of the roots are chafed.

To prove to my mind that deep setting is the better plan, a few years ago I put out several rows, as before described, and I can plow it readily; grass grows just as early, and produces equally as much. On February 14th I began cutting on both beds.

In regard to the cutting, the bleached is tender and is good flavor. If one permits it to grow several inches high it is not as tender as when cut just above ground. Many prefer that part, from the fact that the bleached has not been tried. It is my opinion, if it is set deep the expense of cultivation is reduced, the land holds the moisture better and longer, and will produce annually more with proper care than if set two inches below the surface. A few years

ago in Massachusetts acres were planted shallow, as they felt it would start earlier in the spring, and it proved a failure, causing extra expense in cultivation, etc. They were plowed up and deep setting adopted, and it has proved a success. The same result will apply to California soil. N. B. SMITH.

San Buena Ventura.

PISCICULTURE.

The German Carp.

EDITORS PRESS:—The little note in last week's *RURAL*—"A Reminder of the Carp Craze"—recalls to our mind many other such crazes and speculations.

If the parties who labored so hard to introduce this really most valuable food-fish to American waters had been careful to inform every one that the carp is a fish that would not be relished by scarcely any one when cooked and served as we in this country usually cook fish it would have a different standing to-day. Scarcely any one would care to eat it when so cooked. It is not a "pan fish," or, in other words, it is not acceptable fried or broiled, or baked or roasted, as we usually bake or roast fish; but it is a most palatable and nutritious food when cooked and served as it is in Europe. I cannot here give the right formulas for cooking carp, but have read them and eaten carp so cooked and know that it tasted good even to one not familiar with the dishes.

The peoples of Europe have many dishes in common use that are nutritious and wholesome that we cannot eat at all on the first trial, prominent among which may be named sauer kraut, Limburger cheese, etc. Even lager beer, now in such common use all over this country, is relished by but very few on its first acquaintance. Even the costly and high-priced and highly prized "dry" Rhine wines are not highly prized by the American people for their delicious taste, smell or flavor on first acquaintance.

The German carp is simply the base, the foundation for many well-liked dishes. These dishes are highly flavored with many condiments, herbs, and vegetables. And by these means the rank, muddy taste of the fish is covered up, to a great extent, and being so covered up the strong flavor of the fish adds to the high flavor of the mass, in the same way that the rank musk, which all know is highly offensive when pure and fresh, but when largely diluted and mixed with other and more delicate perfumes, is very acceptable, and adds body and lasting qualities to the whole. Then the point is, when you have grown your carp learn how to cook him and you will not be disappointed.

It has been often remarked that "he was a very brave man who ate the first oyster." Yes, he must have been very hungry indeed. The oyster is one of the lowest forms of life, and one in all its forms really disgusting to sight, and there are very few persons who would relish them in any form at the first trial. Yet how soon nearly every one learns to be very fond of them. The same is true of many other things that we and the European and other peoples habitually use, and some of these things are among the most nutritious and valuable of foods. Again, we find that several things that are most delicious and captivating to our tastes are not proper foods, and decidedly unwholesome.

We also reject many food elements that are highly nutritious and wholesome, and easily obtainable from no good reason, only simply because it is the habit or fashion to reject them, and no other good reason whatever. Millions of tons of good, palatable, nutritious, wholesome food is so wasted every year. We eat the most filthy hog and chicken, but reject the cleanly horse, mule and ass. We reject the clean, vegetable-feeding snails, the succulent angle worm, and eat oysters, clams and carion-feeding lobsters, crabs and shrimps, etc. The streams of the Prairie States East were in early days swarming with fish, and two-thirds of the species caught were thrown away or unfit for food. Now most of these, since the people have learned how to cook them, sell readily, and one of them, that used to be considered utterly worthless, is now sought for by many people before any other fish, and one of the only two, now always thrown away in Northern waters, is considered in Southern waters among the very best of fresh-water fishes.

Here in California, where all peoples and races meet, all wholesome foods should find a market. Here we have French to eat horse meat, frogs and snails, etc.; Spaniards and Italians for squids (cuttle fish), garlic, etc.; Germans to eat sauer kraut, Limberger and Switzer cheese, carp, blood puddings and liverwort, etc.; Chinese to eat birds' nests, dried ducks and geese, and many other things disreputable to mention, and hoosiers, suckers, etc., to eat fried hog, mush and milk. Negroes to eat hoe-cake, possum and "coon." In fact, the San Francisco market should furnish all these delicacies of the world's people. Besides we have here old retired whalers who have learned to appreciate steaks from the true or Greenland whale, seals and walruses, and Indians to glean the plains and mountains for seeds, roots and nuts. There is little flesh in water, earth or air but what could be made acceptable, wholesome and nutritious food for man, if properly served, and many vegetables that would help to sustain life, that we never use.

San Francisco.

D. B. WIER.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

San Joaquin County Picnic.

EDITORS PRESS:—The second annual basket picnic of the Patrons of Husbandry of San Joaquin county will be held under the auspices of Lodi Grange at Wardrobe's Grove in Lodi, May 18th. Officers of the day—President, J. D. Huffman; Marshal, S. W. Sollars; speakers of the day—Hon. J. J. Woodman of Michigan, Hon. J. V. Webster of San Luis Obispo county, B. Pilkington of Santa Cruz, Hon. A. L. Chandler of Sutter county, and others. Procession will form in Lodi Grange hall at 10 A. M., and leave the hall at 10:30 A. M. promptly. Larson's tent and floor will be placed in position at the Grove for dancing. Various amusements will be provided and different prizes will be contested for. At 12 M. the Linden and Lodi clubs cross bats for a purse of \$20. Grand ball will be given at Park hall in the evening. J. D. HUFFMAN.

Grange Entertainment.

Elk Grove Grange gave a very pleasant entertainment on the evening of April 24th, which consisted of an address from Hon. Gillis Doty, vocal and instrumental music and recitations, which were highly enjoyed by all present. Elk Grove has some fine musical talent. The recitations listened to were very interesting and creditable to those who took part in the exercises. Occasions of this kind are productive of great good, as they help to develop the young mind, and those who listen go away feeling better and happier for the sweet music and good lessons from the children. If all Granges would occasionally give an entertainment of this kind it would add interest and valuable members to the Grange.

Contra Costa G and B. Association.

The annual meeting of the Contra Costa County Grangers' and Business Association was held at their hall on Wednesday, May 2d, 1888.

The meeting was called to order by the President. Present, J. Strentzel, President; Geo. P. Loucks, Secretary; F. M. Warmcastle, John Larkey, J. W. Jones, A. Boss, Directors. A majority of the stock was represented.

The minutes of the last meeting were read and approved.

The President presented his report as required by the by-laws, and on motion of D. N. Sherburne it was unanimously accepted.

On motion of D. N. Sherburne, seconded by C. S. Whitcomb, it was ordered that the Secretary cast the vote for the present Board of Directors, excepting H. M. Hollenbeck, who is out of the county, and in his place James Kelly be elected.

Whereupon the Secretary cast the vote of the stock represented, to wit: 32 shares, for J. Strentzel, F. M. Warmcastle, G. P. Loucks, John Larkey, J. M. Jones, J. M. Stone, R. O. Baldwin, A. Boss, J. Kelly, who were declared duly elected directors for the ensuing year.

On motion of C. E. Howard, seconded by D. N. Sherburne, a vote of thanks was tendered the Board of Directors for their services during the past year.

There being no further business meeting adjourned *sine die*. G. P. LOUCKS, Sec'y.

The Board of Directors subsequently met and organized by the election of J. Strentzel as President and F. M. Warmcastle as Vice-President; Geo. P. Loucks, Secretary; John Larkey, Treasurer; J. W. Jones, A. Boss and James Kelly, Auditing Committee.—*Contra Costa Gazette*.

The Half-Interest Swindlers.

Simon Hamberg, who so cruelly swindled Parker, the Oregon farmer, out of all he had some time since, had his second trial on the 3d inst. Hamberg made an elaborate defence, asserting that he had acted in good faith, and that Parker was aware of the fact that he was purchasing only a disputed title to the property. This defense was completely shattered by the testimony in rebuttal of his partner, Pilcher, who had pleaded guilty to all the charges against him and now awaits sentence in the county Jail. His testimony was to the effect that the gang had deliberately intended to swindle Parker. The quit-claim deed of the so-called Ellis title which was sold to Parker, Hamberg knew to be worthless. The scheme was to purchase the deeds from Mary Ellis for \$50 a piece and dispose of them to unsuspecting Grangers for thousands. Pilcher concealed nothing in his exposition of the

methods of the unholy partnership. He said that the lots claimed under the Ellis title were the best to deal with, for they cost so little. As his companion in crime told his tale, Hamberg moved restlessly in his seat and whispered excitedly in his counsel's ear. The latter was also somewhat perturbed. On cross-examination Pilcher denied that any inducement had been held out to him to testify. A verdict of guilty as charged was returned within 20 minutes.

List of Grange Picnics.

Sebastopol Grange, at Morris' Grove.....	May 12
Yuba City Grange, at Hock Farm.....	May 15
Magnolia and Grass Valley, at Indian Springs.....	May 25
Bennett Valley Grange.....	May 26
San Joaquin County Granges, at Lodi.....	May 18
Sacramento County Granges, at Beach's Grove.....	May 22
Pescadero, San Mateo County.....	May 25

Secretaries are requested to send in dates of picnics yet to be held as soon as possible.

ARBOR DAY was more generally celebrated by members of the Granges in many States than ever before. In several States the Masters of the State Granges issued an official proclamation offering suggestions for the observance of the day. Thus through organized effort many thousands of trees have been planted along the roadsides, around schoolhouses and about the homes of farmers. A spirit of improvement has been stimulated, a love of the beautiful and ornamental cultivated, and the great work the Grange has in view of upbuilding and improving the condition of the American farmer, in every way been advanced. Outside farmers, noticing these practical applications of Grange teachings, these actions that speak louder than words, are coming more and more to see in it one of their greatest helps toward success.—*Mortimer Whitehead*.

GRANGE DECORATION DAY.—On Saturday, April 28th, North Butte Grange observed what has been established as Decoration Day by the National Grange. Says the Marysville Appeal: "This was the first observance of the day by a Northern California Grange. Rev J. E. Anderson of this city delivered the oration, after which the graves of deceased Patrons of Husbandry were literally strewn with flowers."

PICNICS.—As will be noticed by our list of picnics, there are several good times in store for Patrons and their farming friends within the next two weeks. We hope to hear from picnics that were held during last week. These occasions are always so enjoyable that we trust no one will miss attending them who can.

SACRAMENTO COUNTY GRANGE PICNIC, which was to have taken place at Beach's Grove, on the 3d inst, has been postponed until the 22d. The inclemency of the weather was the cause of postponement.

POSTAL TELEGRAPHY.—It will be remembered that in January and again in March Dr. Norvin Green, President of Western Union Telegraph Co., appeared before the United States Senate Committee in the interest of that great corporation. Dispatches from Washington state he has now been addressing the House Committee on Postoffices and Post Roads as to the Hopkins bill to establish a postal telegraph. Such an enactment would, he said, be a monstrous wrong. If the Government contemplated doing a telegraph business, was there any proper way to do but take the existing property and pay for it? The remarks, he said, were not made with a view to selling the W. U. to the Government. The Government did not need a telegraph. It would not benefit the Government. The W. U. did not want to sell, but its purchase was the only proper basis on which the Government could go into the telegraph business. It should take all the existing property and do the business exclusively.

THE CONTRA COSTA GRANGERS' JOINT PICNIC, which came off, as per program, the 5th inst., proved highly successful and delightful. The weather at Danville was lovely. Prominent persons from various quarters were present. Hon. Nathaniel Jones presided, and addresses were made by Hon. Chas. Wood, W. L. Daniel Flint, President E. B. Smith of the Contra Costa Board of Trade, W. M. Overhiser and Sen. Chandler of Sutter county. Social conversation and an enlivening dance in the Grange hall enhanced the pleasures of the occasion.

A FARMERS' TRUST FORMED IN KANSAS.—Two hundred delegates, most of them from Kansas, met at Topeka on the 1st of May, to discuss plans for organizing an association to regulate prices and dispose of farm products. Ex-Gov. David Butler of Nebraska was elected president; Cleveland Moulton, vice president and J. B. Ferguson of Kansas, secretary. On the 3d—supposedly as the result of this convention—the charter was filed for the Farmers' Federation of the Mississippi Valley. The capital stock is \$20,000,000 of 200,000 shares at \$10 each. The charter is signed by citizens of 14 states and three Territories.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

GOOD RETURN FROM STRAWBERRIES.—*Gridley Herald*, May 3: As evidence of the value of little things we cite our readers to the strawberry patch of Mrs. Levi Smith, one mile north of town. She has been selling an average of \$4 worth a day for nearly three weeks past, and the supply on the vines is sufficient to keep up that rate for at least two weeks longer. There is scarcely one-sixth of an acre planted to vines. Owners of small tracts of land should visit the place and see how easily it is done.

Contra Costa.

A FOWL TURNCOAT.—*Martinez Item*: A woman in town has a chicken that is a curiosity. Until moulting last fall it was jet black, with the exception of a few white feathers about the head. After moulting the feathers grew out white, and it is now as white as snow.

Lake.

TURKEYS ON THE RANGE.—*West Lake Cor. Avalanche*: The poultry business is an important industry in these parts. It must be evident to any one who sees the flocks of fine, large bronze turkeys disporting over the hillsides that it is a paying business. Some ranchers do not feed their fowls the year round, but let them range the hills the same as sheep. In summer, when the vegetation looks dry and dead, their sharp eyes spy the seeds of the early spring flowers, and they may be seen picking busily all day long. As the season advances, the ground is thickly spread with a low plant with long branches covered by whitish, velvety leaves. It is a mystery that dust, so free from moisture, can yield such a luxuriant herb. (Your correspondent has never heard its botanical name; the ranchers call it turkey mullein.) By the time the dry seeds of the spring are gone, it has, hidden away beneath its flat leaves, black, oily seeds as large as hempseed, on which the fowls fatten.... Frank Knox has nearly 50 hen turkeys sitting. There are over 20 eggs under each. Just think what a number of Thanksgiving dinners these represent!.... For over a year a certain gray eagle, as large as "Old Abe" of war fame, has conceived the idea that this range belongs to him, and many a turkey dinner has he enjoyed. Mr. Knox, with some of his neighbors, offers a reward of \$5 for his head.

AGRICULTURAL ASSOCIATION.—*Lakeport Democrat*: By an oversight we neglected to note last week the meeting of the Directors of the 12th Agricultural district. L. G. Simmons was elected president, Jno. R. Cook, secretary; Q. V. P. Day, treasurer. Simmons, Boggs, Burger and Keatinge of Lake, and F. L. Townsend of Mendocino were appointed an Executive Committee to make all necessary arrangements for the next annual fair. No date for the fair has been set as yet, but it is probable that it will be held the last week in September. This will give our farmers, mechanics, and others, ample time to prepare something for exhibition, and it is to be hoped no one will let the opportunity slip without doing something for the credit of the county.

Los Angeles.

SUPERB ROSE TREE.—*Pasadena Union*, April 27: By the side of H. J. Baker's barn, on Orange place, there is a rose tree which Mr. Baker calls the "Pride of Pasadena." At the base the trunk is 10 inches in diameter; a short distance above it branches out into numerous runners, which have grown upward and spread out over an arbor covering a space of nearly 400 square feet. The magnificent plant is in full bloom and bearing three kinds of roses. The Safrano, a beautiful cream-colored rose with a faint tinge of pink; the Marechal Niel, a yellowish rose which is equally beautiful; and the famous La Marque, whose flowers of snowy whiteness are much admired. There must have been on the tree at the time of our visit upward of 2000 roses of the several varieties, and a large number of buds of various sizes. Mrs. Baker said it was in bloom constantly. The tree is 12 years old and was budded by P. M. Green, president of the First National Bank. The runners would have been much longer and covered more ground had it not been unfortunately broken once or twice. At one time the arbor which supports the upper runners gave way, and the whole thing came down with a crash, breaking several of the larger branches. It certainly is a magnificent plant and is highly prized by Mr. and Mrs. Baker.

ABOUT ANAHEIM.—*Gazette*, May 3: J. F. Thacker of the well-known Chicago house of wholesale fruit-packers, is authority for the statement that his firm will build a packing-house at Anaheim.... R. J. Northam has sold his beautiful Vineridge tract of 107 acres near Fullerton to A. F. Batsford of Port Huron, Michigan, Daniel McFarland, Dr. Calcius and Jaro Von Schmidt for \$35,000. Mr. Northam, having disposed of Vineridge, will give his attention to establishing a large walnut orchard near town.... Bees have become a terrible nuisance. In every house, barn or outbuilding where they can find entrance and protection they have quartered themselves. The work of extermination has been going on for some time but with little success. As soon as one swarm is dislodged another takes its place.

Marin.

FLORAL FAIR TO COME.—*San Rafael Journal*: The second annual flower festival for the bene-

fit of the free reading room and circulating library, will take place in Gordon's opera house, May 16th. Although the lady who shouldered so much responsibility last year has moved to the city, she will come back and assist her friends with all her well-known interest and enthusiasm to make the affair one of the most enjoyable ever known in San Rafael. There will be a grand promenade concert and bazaar combined with the flower festival.

A HANDSOME HAWTHORN.—Probably the most elegant flowering tree—you cannot call it a shrub—to be seen in this valley is a hawthorn in Mrs. Barbara Sims' yard on Fifth street. It is about 20 feet high, of lordly proportions, and every branch is a mass of flower clusters. If it could be exhibited in San Francisco, it would draw thousands of floral worshippers.

Modoc.

IMPORTING ASSES.—*Adin Argus*, April 26: Wm. Dodson of Cedarville is now on his return trip from Tennessee, with a carload of the best jacks and jennies he could find in that State. The raising of mules is without doubt the best and most profitable business to be engaged in our county, and this move of Mr. Dodson will strengthen that business wonderfully.

Monterey.

THE CROP PROSPECT in the Salinas Valley, from Soledad to Moss Landing, is as good as it has been for many years. While there is perhaps not as large a growth of straw as in past seasons, yet it all stands erect and will be in splendid condition to harvest. People who have traveled extensively over the State say that the grain looks better in the Salinas Valley than in any other place they have seen. The prevailing cool weather is very favorable to the crops.

Napa.

FAIR ASSOCIATION.—*Napa Register*, May 4: A meeting of those interested in a County Fair was held in the Court House Saturday afternoon. Hon. M. M. Estee was elected Chairman and A. H. Conkling Secretary. The Committee on Subscriptions reported \$10,675 subscribed, and \$750 more promised. A resolution was unanimously adopted to the effect that a committee of three be appointed to look up a suitable place for holding the fair; and that they be authorized to hire a surveyor, at a cost not to exceed \$50. F. L. Coombs, A. J. Raney and F. Brughelli were appointed that committee. The following gentlemen were chosen to act as Directors for a term of two months, when an election will take place: H. W. Crabb, F. W. Loeber, Nathan Coombs, L. L. James, W. J. McCollum, John Even, A. J. Raney, G. M. Francis, M. M. Estee.

Nevada.

FRUIT VERY PROMISING.—*Grass Valley Union*, May 2: The prospect in Nevada county was never more encouraging, and the season is so well advanced that there is little reason to fear damaging frosts. The principal fruit crop will be apples and pears, though all are doing well. Mr. A. B. Driesbach of Indian Springs informs us that he has never seen so fine a showing as the grapevines are making. He has an orchard of several hundred young peach trees, set out two years ago, and these are so loaded with fruit that a large part of it will have to be picked to save the trees from breaking down. Nearly all of the growing peaches are double, and many of them of triple growth. These trees are all remarkably thrifty and have been raised entirely without irrigation. All the orchards of the western part of the county are showing finely, as well as those about Grass Valley and Nevada City.

Placer.

BEES BESET BOSSIE.—*Newcastle News*: The other day Mr. A. G. Abbott's calf was tied with a rope to a post about 100 yards from a beehive. The bees took a notion to swarm, and selected the calf's head on which to settle! The calf protested and the bees immediately declared war. Mrs. Abbott, seeing the unhappy position of the calf, hastened to its assistance. The calf was nearly stung to death.

San Benito.

ALMONDS AND PRUNES.—*Hollister Free Lance*: G. A. Moore drove into town this week with a load of almonds. He was asked about the profits accruing from his 3500 trees, and replied that on an average they netted him \$75 an acre. His prune trees have netted him an average of \$200 an acre. Still there are some men who say there is no money in fruit trees.

San Diego.

NAVEL ORANGES SHIPPED EAST.—*National City Record*, May 3: Yesterday Frank A. Kimball shipped the first carload of Navel oranges ever sent East out of National City. There were 362 boxes of the finest Navels ever wrapped in soft paper, all carefully packed and protected against bruises. S. I. Fox, of Fox Bros., San Diego, accompanied the shipment, principally for the purpose of showing what the fruit is and telling where it came from. He will stop at Kansas City and thence go to Chicago. Another carload of the same fine fruit goes East to-morrow.

San Bernardino.

NAVEL ON SOUR STOCK.—*Valley Echo*: We must acknowledge that a sample of the Navel oranges grown on sour stock, which we tasted at Twogood's warehouse lately, was extra good. How it could be any juicier, sweeter or tenderer, we cannot conceive.

CANNERY COMPANY.—*Riverside Press*, May 5: San Bernardino has been having a canning

fever for some time, but with no practical results until this week, when Evans, Linville & Evans took hold of the matter and organized a company with a capital stock of \$50,000 divided into shares of \$25 each. They had \$10,000 subscribed the first day and \$5000 the second, and consider it assured. The name of the company is to be the San Bernardino Canning, Packing and Cold Storage Co., called for short, the S. B. C. P. and C. S. Co. It is their intention to handle all kinds of fruit and prepare it for market in all the different styles.

San Joaquin.

FINE BARLEY.—Stockton Independent, May 2: Yesterday afternoon Putnam Visser brought to town a sample of barley grown on his ranch, near Waverly, in this county. The barley stood five feet and two inches high, and was well developed. Mr. Visser estimates that the tract of 60 acres from which the sample was taken will yield 60 bushels to the acre. "This sample," said he, "shows what can be done by careful cultivation. The land was summer-fallowed and plowed twice, and the barley is as fine and clean as any you ever saw." Mr. Visser is justly proud of his barley field.

Santa Barbara.

FAIR DATE FIXED.—Santa Barbara Press: The directors of the Nineteenth District Agricultural Society have fixed upon the 11th of September, 1888, for the opening of their annual fair at Agricultural Park, to continue four days.

Santa Cruz.

ACCOMMODATING THE BERRY-GROWERS.—Pajaronian, May 3: Yesterday the berry-growers commenced shipping strawberries from Watsonville depot and made up a carload for San Francisco. When the Railroad Commission made its decision in the case of Edward White vs. S. P. Co., it was to the effect that strawberries must be received for shipment at Watsonville station and at the same rate as from Pajaro. Owing to the hours of freight trains on the Santa Cruz R. R. the decision was of no benefit last season; but the recent change in time has given an evening freight from Watsonville to Pajaro in season to make connection with the north-bound freight at the latter point. As this additional train mainly benefits Watsonville, and as it is a great accommodation to berry-growers, it looks as if the S. P. Co. intends to respect the order of the Railroad Commission. By shipping from Watsonville berry-growers have more time for picking and save the long and rough haul to Pajaro. In opening the depot, in handling freight at Watsonville, in putting on an evening freight train, and in shipping berries from the local depot, the railroad company has righted much of the injustice done our town.

RASPBERRIES.—Last week Capelli & Dondero shipped the first raspberries received in the S. F. market. They brought 80 cents per pound.

Shasta.

COUNTY FAIR.—Redding Democrat, May 2: The Shasta County Agricultural and Mineral Association have decided to hold a fair next September. The exact date will hereafter be advertised. The Association makes the announcement now, so that farmers, stockmen, and all interested; may have plenty of time to prepare a good exhibit of the products, resources, etc., of the county. September is the best month in which to hold the fair, because it gives the farmer and horticulturist the best opportunity to make a fine display of our products, on which mainly rests the success of the exhibition.

Sonoma.

THE ITALIAN COLONY.—An account of a visit to the Italian Swiss colony at Aati, near Cloverdale, appears in the Chronicle of May 7th, from which we make the following extracts: The land is mostly a succession of rolling hills of red land. From the 1500 acres purchased by the colony seven years ago the growth of oak has been nearly all cleared away, and now 700 acres are set out in vines, and 100 or so in fruit trees. The latter comprise cherry, apricot, Crawford peach, Bartlett pear, French and German prune and Italian olive trees. They range in age from one to five years, and are mostly in the rich bottom-land near the Russian river. All show evidence of careful treatment, and are wonderfully thrifty and vigorous. The olives, which are between two and three years old, have been planted along the county road on an elevation, comprising about 18 acres near the railroad station, and which bears the poetic designation of the Mount of Olives. As a rule the fruit trees are just coming into bearing, and the intention is to purchase drying machinery in order to properly market their product. The vineyards are about the same age as the orchards, the vines ranging from one to five years. In their cultivation about 50 men are usually employed. That the work has been well done is apparent from the total absence of all foreign growth, such as weeds, grass, etc., the thrifty appearance of the vines and the strong growth of young fruit upon them. In fact, in all the 700 acres of vineyard it would be difficult to find 50 sickly vines. They are mostly of the Zinfandel and Riesling varieties, though within the last two years several species of grapes from Northern Italy have been set out and appear to be doing all that was expected of them. The work is all done by Italians, who are paid so much a month. The superintendent, Mr. Vecchi, is an experienced and capable vineyardist and horticulturist. The idea of the colony originated with Mr. Sbarboro, who consulted with some friends, by whom the purchase

of the tract was made for \$25,000 seven years ago. The colony notion was, however, soon abandoned, and while the name was retained, a company composed of the purchasers of the property and some of their friends took its place. Since then \$175,000 has been expended in improvements, which, added to the interest on the money at the rate of seven per cent a year, would bring the total of the investment close up to \$300,000. That those who undertook the scheme are satisfied with its results and prospects is evidenced by the fact that they still remain its directors.

SANTA ROSA NURSERIES.—Democrat, April 28: R. W. Bell, well and favorably known in Sonoma and adjoining counties, has purchased the fruit and shade-tree department of the extensive and widely-known Santa Rosa nurseries; consideration, \$13,000. Mr. Bell's purchase embraces 263,000 fruit and 5000 ornamental trees. Luther Burbank, the founder of the nurseries, retains the olive and nut departments, and will attend to the management of his extensive horticultural experiment grounds situated in Santa Rosa and Sebastopol. The foreman and several employees will remain with the new firm; the others will be retained by the old one.

Tulare.

ALFILERILLA.—Delta, April 26: From Sunflower valley, in the southwestern corner of Tulare county, we received this week a sample of alfilerilla, two feet in length, grown wild on the ranch of D. F. Hughes. This wild feed is now being cut for hay, and cattle prefer it to any grown. It will be a surprise to know that feed of this kind is to be found anywhere in the foothills of the Coast Range in a year like this.

Ventura.

SANTA PAULA ITEMS.—Golden State: The new fruit-drier is in course of erection, near Main street, nearly opposite Mr. Easley's residence. It is to have a capacity of 20 tons per day.... Mr. Blanchard is shipping a carload of oranges and lemons each week. We are glad that his large orchard is beginning to yield returns for the large outlay of the past decade.... Certificate of incorporation of the Santa Paula Fruit Packing Co. has been received from the Secretary of State. Capital stock, \$30,000. Directors—C. H. McKevitt, W. H. Bradley, John G. Corey, George W. Faulkner, S. B. Sealey, M. H. Anderson and O. C. Carle.

Yolo.

BEARDLESS BARLEY.—Woodland Mail: This variety was introduced into this State from Mexico about four years ago and should not be confounded with "Bald" or "Nonpareil" barley, which it resembles only in the appearance of the head. It is claimed that this variety is superior to the bearded for several reasons: 1st. The straw is stiff and does not crinkle down when dead-ripe. 2d. It is hard to thresh, therefore will withstand the north wind better. 3d. Stock of all kinds devour the stubble readily after harvest. 4th. The absence of beards makes it the best hay grown. A sample of this grain in the head has been sent to this office by C. V. Burke of Yolo. He has a fine stand of 160 acres of this barley on his place a few miles from Cacheville, grown from seed imported directly from Mexico, the seed costing him over \$800 for the 160 acres.

SPECIMEN VEGETABLE GARDEN.—Capay Cor. Democrat: We have two vegetable gardens, the largest, known as the Aldrich garden, leased to Chinese, contains ten acres, and is now supplying the town and surrounding country with all kinds of vegetables, such as onions, lettuce, peas, carrots, radishes, beets, cauliflower, turnips, potatoes and strawberries. This garden has had new potatoes since March 20th, peas since March 18th, strawberries since March 24th, and the other named vegetables nearly all winter. While our friends on the other side of Rocky mountains were shivering with cold, we were eating green peas, fresh from the vine. They will have string beans in this garden by May 8th. This garden has many more kinds of vegetables which look nice and thrifty, and will begin to yield their crops in due time, such as tomatoes, watermelons, cucumbers, sweet potatoes, various kinds of beans, muskmelons, cabbage, etc. The smaller garden (run by the same parties) known as the Launer garden, is on the west side of town, contains about seven acres, and is planted principally in potatoes, cabbage, corn, sweet potatoes, squash and the like.

Yuba.

IRRIGATED GRAIN.—Appeal, May 4: Frank Lane has turned water from the Excelsior ditches running through the Brady place, at the edge of the foothills, on the road to Smartsville. He has irrigated that portion which he has planted in wheat, which is some 500 acres. When in this city recently Mr. Lane informed some friends that the grain was growing rapidly and looks well since being irrigated.

NEVADA.

STALLION SHOW.—Winnemucca Silver State, May 1: The third annual exhibition of the Paradise Valley Horse Association took place last Friday. The weather was all that could be desired, and the display of stallions was conceded by those who are competent to express an opinion to be the largest and best ever seen in Nevada. Among the most notable animals were E. W. Crutcher's thoroughbred horse "Charlie Laird" and Wm. Weighel's "Cleveland." Among the roadsters O. P. Crawford's "Gov. Irwin" and E. M. Samples' "Star of the West" attracted especial attention. In the

class "Horses of all work," the most noticeable were E. M. Samples' "Prince Charlie," H. C. Stewart's "Crown Prince" and W. Stock's "Bismarck" and "Black Prince." Stock's draft-horse "Paradise Prince" was also awarded the first premium in that class. Harvey Bros' "Dom Pedro" and "Lindsey," and Morey Bros' "Bealee," were among the finest horses on the ground, and John Reid's horse "Edward H" also attracted the attention of connoisseurs. All the above mentioned were awarded premiums. The sweepstakes for horses of all work was awarded to E. M. Samples' "Roan Charlie." The fine horses belonging to F. J. Button, H. J. Pratt, Rezonzone & Forgnone, Ed. Lyng, Mrs. Carrel, Ed. Stock, D. M. Coleman and J. V. McCurdy did not compete for prizes. The one, two and three-year-old colts exhibited were all remarkably fine animals, and excited much favorable comment.

Vacaville Melange.

EDITORS PRESS:—A nice shower, about half an inch, fell Thursday; it was much needed. Haying was commenced by many on the 2d, but had to be postponed on account of rain. The hay crop will be pretty good here, but a little short because of the hot weather in April. One lot of barley hay of 40 tons has been engaged at \$7 per ton, loose in the field.

It is reported that F. Buck has sold 200 tons of peaches, all clings, at 2 cents per pound and 50¢ tons of apricots at 2½ cents per pound to Manse, for the Oakland cannery.

Mr. Manse was at Vacaville a number of days, and engaged several lots of apricots at 1½ to 2½ cents per pound; but few 'cots could be bought here now for less than three cents. One gentleman near Vacaville has engaged his crop of dried 'cots at 11½ cents, he picking out the large ones to ship.

Painting Wagons.

R. H. Small wishes to know how to paint a wagon. This is an easy job if it is a common lumber-wagon. The paint can be bought ready mixed, excepting it will want thinning with oil; and directions for doing that are on the can. The price of the paint will depend on the kind used and where bought. Two coats are necessary, the first to be well dried before the second is put on. After the second, give a coat of varnish. If the wagon is to be striped, it would be well to hire a painter for half a day, as a bad job of striping is worse than none.

Soaking Wagon-wheels in Hot Oil.

A good plan to save blacksmith's bills and wagon-wheels is to soak the wheels in hot linseed oil. This can be done by making a trough or having it made at the tinners, of sheet iron, three inches wide, six inches deep and three feet long, in the shape of a half-moon. It can be made with legs to it, or set on two bricks. Fill it up with oil; set the wheel just high enough to turn clear of the bottom of the trough; build a fire under the trough, and when the oil is hot turn the wheel slowly about every five minutes for half an hour or more. If the tires be just a little loose, it will tighten them so they will run all summer, and be much better and cheaper than setting the tire.

Vacaville, May 6.

Failure of W. T. Coleman & Co.

The most startling event of the week is the assignment of W. T. Coleman & Co., which was announced on Monday evening. The following statement was furnished to the press:

Being unable to immediately realize upon our assets, and in view of the pressing engagements in New York, where the call on us for money is urgent, we have decided, in order to prevent a dissipation of our property, to assign at this end. Our assignees are Messrs. Louis Sloss and L. L. Baker. Our assets are from four to four and a half million dollars; our liabilities about two million dollars. Our indebtedness in California, with the exception of sums of no magnitude, is confined to four banks and two individuals. Until lately we have had hopes of being able to meet everything and place ourselves in excellent shape. Our assets and properties are very large, notably borax properties, in which we have heavy investments. This borax property we value at \$2,000,000, and have had until recently great hope of selling it. In fact, negotiations were in a fair way to be consummated when the Tarff bill, placing borax on the free list, tended to defeat our efforts in this direction. We are, therefore, reluctantly compelled to assign, and Mr. Coleman confidently feels that our resources are sufficient, with proper administration, to more than meet all our engagements.

Matters relating to the failure have been common talk since the above statement was prepared, but we do not see that any further information has been elicited. The failure is seriously regretted, and it is hoped that the work which the firm has pushed so energetically may be soon resumed.

FORESTRY.—The announcement is made that Thomas H. Douglas succeeds H. Rowland Lee as head forester of the State Board of Forestry. Mr. Douglas is a young man of experience, having been associated with the well-known tree-grower of Waukegan, Illinois, Robert Douglas. Mr. Douglas will find a fine field for forestry work in this State, and he has our best wishes for his success in it.

VINE PESTS.—We have received from J. H. Wheeler, Chief Executive Viticultural officer, an interesting statement giving remedies for vine pests which are just now troublesome. It will appear in our next issue.

News in Brief.

THE recent fire in San Diego caused damage to the extent of \$200,000.

ONE firm in San Jose sold over two tons of strawberries last Saturday.

THE Los Angeles Cracker Co.'s factory was burned last week; loss, \$50,000.

THE auction sale of foothill lands at Lincoln, Placer county, realized \$23,000.

INCREASING population has forced Redding to use additional power to supply water to the city.

COAL has been found in the Buttes, near Sutter City. It is a lignite much like that mined at Ione.

THE City Council of San Diego has fixed the tax levy at 89 cents on a valuation of \$18,000,000.

THE Folsom prison has sold \$89,950 worth of granite curbing and coping since sales to the public were resumed.

A NOTED baseball player was killed at Indianapolis lately by the ball from the pitcher's hand, hitting him in the temple while striking.

THE Marysville Woolen Mills are still six months behind with their orders, finding it impossible to keep pace with the demand of their goods.

THE old San Fernando mission is to be preserved. The old church is to be repaired, and the many curiosities will be taken care of properly.

IT is said that oil-fields more extensive even than those of the Caspian have been discovered in the Mackenzie River valley, close up to the Arctic circle.

THE salient point of the preface to General Boulanger's book is his advocacy of the right of the army to have a voice in the question of peace or war.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING MAY 1, 1888.

382,131.—HORSESHOE—J. E. Bingham, Walla Walla, W. T.

382,072.—NAIL OR RIVER FOR BOOTS OR SHOES—A. G. Cavalli, S. F.

382,142.—PIPE-RIVETING MACHINE—Geo. Cumming, S. F.

382,038.—PRINTER'S RULE CASE—M. C. Harris, San Jose, Cal.

382,002.—TRACE ATTACHMENT—W. J. Howard, Mariposa, Cal.

381,951.—FIRE KINDLER—Jas. Randall, S. F.

382,065.—STATION INDICATOR—Mary J. Watson, Sacramento.

18,286.—DESIGN SIDEWALK DEAD-LIGHT FRAME—P. H. Jackson, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

Cattle Sales to Come.

Readers will not forget the sale of Shorthorn cattle from the well-known breeding farms of R. M. Dunlap and J. S. Latimer & Son, which will be held on the State Fair grounds in Sacramento on Thursday, May 17th. The cattle are expected to be on the grounds a week or more before the sale. Catalogues are out and can be had by addressing Dunlap & Latimer, Sacramento. An advertisement of the sale in another column names families, etc. This sale should be largely attended.

On the day following Friday, May 18th, Kilip & Co. will hold in Sacramento a sale of high-grade Shorthorn heifers by Bill & Burnham and W. P. Higinbotham, well known Kansas breeders. A reading notice elsewhere gives fuller particulars. We are told that this is a fine lot of young stock. The breeders are certainly A1.

Horse Sales.

The fifth annual sale of J. B. Haggin's thoroughbred carriage, driving and work horses took place in this city, May 3d. The sale was most successful and showed the increased demand for this class of horses, especially coming from such a responsible breeding farm as the Rancho del Paso. Kilip & Co. auctioned off the stock at a rapid rate. The high prices the horses sold at was very encouraging to the breeders. The total amount of the sales footed up the handsome sum of \$14,975. The lower price received for any one horse was \$100, while the highest was over \$400, but the majority sold in the neighborhood of \$200 each.

The monthly horse market held in Hollister, May 5th, was a great success. Seventy-one horses were registered, of which 38 were sold. The buyers were principally from San Francisco.

DEATH OF J. B. WOOSTER.—Many of our readers who knew Mr. Wooster as a dairy commission merchant (either as associated with Mr. Shattuck, or more recently under his individual name), will be grieved to hear of his death, which occurred in this city May 7th. He was highly esteemed, and during his funeral on Thursday the Front street stores were closed out of respect to his memory.



Little Boy Blue.

The little toy dog is covered with dust,
But sturdy and staunch he stands,
And the little toy soldier is red with rust,
And his musket molds in his hands.
Time was when the little toy dog was new
And the soldier was passing fair,
And that was the time when our Little Boy Blue
Kissed them and put them there.

"Now don't you go 'till I come," he said,
"And don't you make any noise!"
So toddling off to his trundle bed
He dreamt of the pretty toys.
And as he was dreaming, an angel song
Awakened our Little Boy Blue—
Oh, the years are many, the years are long,
But the little toy friends are true.

Aye, faithful to Little Boy Blue they stand
Each in the same old place,
Awaiting the touch of a little hand,
The smile of a little face,
And they wonder, as waiting these long years
through,
In the dust of that little chair,
What has become of our Little Boy Blue
Since he kissed them and put them there.

—Eugene Field in America.

The Sarcasm of Destiny.

Farmer Jones closed the door of the small brown farmhouse with a loud bang, and hurried out into the darkness and storm, muttering to himself: "Well, I have done my duty by the Colonel's wife, at any rate; couldn't turn 'em out just now and"—but the wind whisked away his words, and just as he gained his own door the storm broke heavily upon the earth.

For an hour the tempest raged, still Farmer Jones read on, occasionally stopping to stir the fire and remark to the silver-haired old lady opposite "that such a storm he had not seen for nigh on to 40 years."

The lady dropped her knitting, and gazing into the weather-beaten face of her husband inquired timidly, "You didn't turn 'em out, John, did you?"

"Well, no; not exactly that, wife, he answered, helping himself to a large, mellow apple from a dish near by, and slowly paring it with his jack-knife, letting the long golden paring fall at his feet; "not that, wife, but it will come to that in the end; can't be helped no way, for since the Colonel is dead, there is no one to lift the mortgage, and it's all Harold can do to get on alone."

"But I gave 'em two years," he continued, as if in answer to his conscience.

"Mercy!" interrupted the little woman, as in the lull of the storm a loud knock was heard at the door, "who can be out such a wild night as this? Do hurry, John, and unlock the door."

"Who! it's Joey Reed. What is the matter, boy?" asked the astonished farmer, as the light fell full in Joey's face.

With a toss of the snowflakes on his coat, the boy answered:

"Oh, nothing, sir," seating himself by the fire, "only I overheard your talk this evening, and came over to see you. Yes, I am quite well," in answer to Mrs. Jones's inquiry, as she drew nearer the fire, and in her kind womanly way inquired if he wasn't very cold, and if he was well.

"Fingers cold?" asked the farmer, wondering what the boy was out for.

"Some," answered Joey, spreading his hands out, and going on quite rapidly: "You see, Aunt Alice is nearly broken-hearted about leaving the farm, and the girls will have to leave school; and if Harold works ever so hard he can only keep the interest up, besides getting a living, and there's nothing to save from. I heard Aunt Alice say so myself, and I just put on my coat and slipped out, and over here to see, sir, if you will give me time, and I will try and pay it up."

Grandma Jones had plied her shining needles fast and faster as the boy went on; she now let them fall into her lap, and laying her hand softly on the farmer's arm, said slowly, "You will give him a chance, father, won't you? Poor boy! he don't look much as if he was used to hard work."

"I am not," answered Joey, "but I think I can do some kinds, and I would like to try if he will let me, Mrs. Jones."

"How old are you?" asked Farmer Jones, with a quick look into the boy's face; "and what do you think you can do to lift a five-hundred-dollar mortgage?"

"Seventeen come June,"

"Seventeen, eh! You are not as strong as a boy of ten ought to be," and he knit his shaggy brows.

"But I am stronger than I look, sir, and if you will only try me I am sure I can earn the money some way in five years' time."

"Seen my woodpile; want to try your hand at that?" and he fixed his keen blue eyes on Joey, who to his surprise replied quickly:

"Yes, sir, thank you; when may I begin, and how many cords have you?"

Taken somewhat aback by Joey's ready answer, he replied: "Ten cords, and I will give you one dollar a cord. Begin when you are mind to; is it a bargain?"

"Yes, sir, and—if you please, will you give me a writing about the mortgage?"

An amused smile played for a minute about the farmer's lips, then drawing himself up:

"Oh, of course, boy, of course. I always make it a point to do as I agree, and he reached pen and ink from the table, and, after a few rapid strokes of the pen, pushed the paper toward Joey, who read it over, folded it up and put it carefully in his old wallet.

"How could you!" exclaimed his wife, as with a 'good evening,' the door closed on Joey.

"Well now, Martha, it's no use talking, I thought if he wanted to try, why, I would just let him begin on the woodpile; but I declare for't, if he does anything I am mistaken."

"But he will, though," said she; "didn't you notice the proud look in his face when I spoke of his father?"

"Well, yes, and so he was a good man, only he didn't know enough to keep his money; signed with Reed and lost the hull on it; died and left that youngster without a red cent. Tell you what, wife, I'll watch that boy, and if he is made of the stuff you think he is, why, I'll give him a lift; can't take our money along with us."

And farmer Jones resumed his paper, and his wife her knitting, inwardly wondering at the change that had suddenly come over her husband. For it was well known far and near he was a hard man, and no one was more sensible of it than his quiet, patient wife Martha.

CHAPTER II.

It was a cozy sitting-room Joey entered a few minutes later; a small table near the fire, beside which Aunt Alice, a fair-faced, brown-haired woman, was sitting, busily engaged with a basket of mending; on the opposite side was Harold, a sturdy young man of three and twenty, piling blocks for the little girl in his lap, whose ringing laugh now sounded clear and sweet, as the pile on the table toppled over and fell with a crash on the floor.

"Did you see it?" she called to Joey as he came in.

"No! but I wish I had. What was it, Rose?"

"It's the 'Tower of the Seven Knights,' sister Ellen says, and it was top heavy, Joey," shaking her curls and sliding down from Harold's lap, and going over to him.

"I have been over to see Farmer Jones," he replied to Aunt Alice's question as he lifted Rose.

"Over to see Farmer Jones!" exclaimed Ellen, throwing down her book. "Why, you never go there; thought you did not like him."

"So did I," put in Harold, "and I," echoed Aunt Alice.

"Well, you see, aunty," with a nervous glance at Harold, "I heard you speaking about the mortgage, and I thought it was high time I was helping to pay it; and the long and short of it is, Farmer Jones agreed to give five years' time and let me try to pay it. Don't laugh, Aunt Alice; you have not kept me at school so long for nothing, and besides I have a job of wood-cutting for Farmer Jones, and I mean to teach this winter. You're committee, Harold; won't you let me try?"

But Harold had to swallow something hard and dry in his throat before he could answer, while Ellen danced around the room, exclaiming:

"I will be real good and help Joey teach, if you will, Hal."

"Me, too!" chimed in Rose, patting his cheek.

"Well, girls, we will see what mother thinks of Joey's plan. I am glad you thought of it, Joey," and he took the paper from him.

"Here, mother, it's plain English enough," and he handed it to her.

"And five years' time to pay it off. How did you manage the old fellow, Joey?"

"I don't know. Guess it was his wife that did it. See here, girls, she sent you some nice apples," and emptying his pockets he left the room.

"Bless the boy," murmured Aunt Alice, as she heard him go up the old stairs.

The girls followed soon, leaving Harold and his mother to talk over Joey's success and decide about the school, which was in his favor.

"I will let him try," Harold had said, "for it is his doings, keeping the house over our heads five years longer."

"Yes," answered Aunt Alice, with a sigh, "how he is helping us. I remember how, when brother died, I did not see my way clear to bring Joey home. It seemed such a care, and now he is very willing to help. Yes, but for his doing we might have been left with small hope of paying the debt or saving our home. As it is, with his help, the way seems very much brighter."

CHAPTER III.

Morning dawned and found Joey, saw in hand, before Farmer Jones' door.

The wind had gone down. The bright sun peered over the mountain tops, lighting up hill and valley, and making all so beautiful that Joey almost forgot his work, as leaning against the long pile of wood, his eyes wandered adown the valley, resting first on the river, gleaming like silver in the morning light; then on to the snow-covered housetops, the towering mount-

ains; above all, the clear, blue sky, which gave promise of another lovely winter's day.

Farmer Jones was looking also upon the morning scene, and as from the window his eyes fell on the boy, he turned, lifted his cap, and began brushing away the snow, and very soon the noise of his saw was heard.

"He is at it already," exclaimed the farmer to his wife, as he turned away.

"Who? At what?"

"Why, the boy to cut wood, and he will get enough of it, too, I reckon; it's as hard as a rock—mean stuff for a boy like him," seating himself at the breakfast table and helping himself to a steaming roll.

"Cleared off nice," remarked Mrs. Jones.

"Yes; the sun shines. Guess I will be off over to the village for my new sleds. If you need anything, call that youngster in; and now I'm off, seeing I've eaten all the rolls myself," he remarked, thinking to himself, "that saw has spoiled Martha's breakfast. Don't see how women folks can be so soft-hearted when poor folks is around. 'Taint my way."

CHAPTER IV.

Five years have come and gone since our story began. It is summer now, everything is fresh and green. The birds sing merrily in the old elm by the small brown farm-house, from the open windows of which come the busy hum of voices, mingled with laughter, and now and then a song. The family are preparing for a visitor, who is to come on the morrow—even Joey, himself, who has been gone three years. Aunt Alice is busy in the pantry making pies, snowy bread and golden cake, for she expects a hungry boy. Ellen, now a tall, slight girl of seventeen—stands by the open window, clipping off the dried leaves from her favorite heliotrope, and humming a new air which she can hardly wait until her work is finished to practice. Still singing she leaves the window, and begins to dust and arrange the furniture to its best advantage, then opens the door just as a loaded wagon stops in front of the house. A boy jumps down, runs up the gravel walk, and with a "Good morning, miss!" asks if the Widow Reed lives here.

"Yes," answered Ellen, "will you walk in?"

"No, miss!" and he gave her a letter.

"Will you give this to the lady? I will wait here until you return," and he stepped inside the vine-covered veranda while Ellen went in search of her mother and gave her the letter.

"There must be some mistake, Ellen; I don't know this writing. Run and get my glasses, dear, and give the boy a chair."

"Yes, mamma," and off she darted.

Imagine their surprise on opening the letter to find a check for \$100, with a note running thus:

Will Widow Reed please accept this piano for her daughter Ellen, and let her begin lessons at once, and oblige

AN OLD FRIEND.

With exclamations of surprise and delight they hastened to inquire of the boy "Who sent it?" "Where he got it?" etc. But to their questions he gave no satisfactory answer, notwithstanding there was a roguish twinkle in his dark eyes, as he unloaded and helped Harold to set it up in the little parlor.

"If you could only give us some clew so we might try to thank him," Aunt Alice had said, as he drove off. "It's no use, he don't know," answered Harold, about the tenth time reading the note. "I have no idea who sent it."

"I would like to try it," said Ellen. "Sure enough, here's your music. Now give us a song," and soon the room was filled with melody. But Aunt Alice in the midst of their song, burst into a merry laugh as Rose, minus her hat and breathless almost, appeared in the doorway, dropping her basket of flowers, and looking from one to another in childish wonder. Then clapping her hands in glee, she bounded in shouting, "Hurrah! Oh, goody! goody!"

"Hush! Rose," exclaimed Aunt Alice, as Farmer Jones, hearing the music, "stopped in a minute to see what's going on," he said. For of late he had been a frequent visitor. And Ellen, with flushed cheeks and beaming eyes, showed him her present and the letter, and gave him a song. He seemed pleased, and remarked as he arose to go:

"Guess I will bring Martha over to see it, eh?"

"Yes, do," they all answered.

"When is the boy coming?" he asked.

"In the morning," answered Aunt Alice.

"Will you bring your wife over to tea tomorrow?" she asked, following him to the door.

"I must be off now, girls," said Harold, "so you may hurry and finish your work if you want a row on the river at sunset."

"Oh, dear! I can't hurry one bit," said Rose. "I am so glad, Ellen; and oh, he sent it, Ellen; he is so good."

"He! Who?" asked they both in chorus.

"Don't you know? Why, Farmer Jones, of course," answered Rose, with a toss of her yellow curls, "cause I met him as I was coming home, and he asked me if I had seen Ellen's piano." And she ran off to tell Aunt Alice.

And from that the secret came out. It was a happy group that welcomed Joey home the next morning. Even Aunt Alice could find time to spend an hour in the garden listening as he praised the neat white fence which Harold was just finishing, admiring her flowers, the new bird-house, the row of nice young trees in front; and then Ellen and Rose took him over the farm and down to the river, and back in time for dinner. Then the new piano was admired, and music followed, until later the table was spread for tea under the shade of the great

elm in the yard. And Rose hastened away, returning soon followed by Farmer Jones and wife, who greeted Joey heartily and joined them at the tea table—a bright, happy party.

"And so it's all paid, my boy," said Farmer Jones, as after tea was over Joey handed him a roll of bills. "Wife and I have kept track of you, and have seen how from cutting wood you went to teaching school, and finally into that store, working and studying all your odd time, till now the last cent is paid, and the farm free. And now, my boy, we are getting to be old folks, Martha and me, nigh on to 80; 'taint likely we will live long, and I can't say but what I have learned a lesson from you. And now Martha and I want to have you go to college as our boy, eh? Will that suit you? There, there, don't thank us, but accept our offer if you would please the whole family."

And they all laughed.

"Come Ellen, give us a song."

That evening the moon looked brightly down on Farmer Jones and his wife, as arm in arm they slowly crossed the field back to their own pleasant home. And its bright beams lingered on the sweet face of Aunt Alice, and the manly form of Joey as they sat in the doorway, listening, while from within came a soft prelude, and soon the voices of Harold and Ellen, mingled with the sweet, childish notes of little Rose, were heard.

A Prospector's Address to the Rocky Mountains.

(Written for the PRESS.)

O mighty range of peaks and glens!
Thy native muse inspires my pen;
I lay to rest the pick and pan
That I thy gorgeous scenes may scan.
The hidden vaults of glittering ore
That thou hast stood as sentinel o'er,
Since earth from out of chaos came,
Is not the spark that lights my flame;
The grandeur that mine eyes behold
Is more than all thy wealth of gold.
Though future generations may
Reveal thy trust to light of day,
And pierce thy heart for Mammon's pride,
Thy greater glories shall abide
With thee for aye, and none shall dare
Despoil thy contour high in air.
They cannot rob thee of the spell
That in thy towering crowns doth dwell,
Nor mar th' enrapturing scenes displayed
In placid pond or grassy glade,
Environed by thy cliffs and crags,
Where longing, loving memory lags.
No bard that once beheld thy grace
Could stand unawed before thy face.
The verdant vales below thee lie,
Thy snowy crowns doth pierce the sky;
Ere morning's sun has kissed the plain,
Thy crests present a golden chain.
The forests wild that gird thy sides,
The bounding game that in them hides,
The crystal waters laughing near—
All tend thy lover's heart to cheer.
When threatening clouds are hovering low,
Thy head above thy foot below,
The pealing thunders, lightning's flame,
May spend their force on thee in vain.
As some proud soul in human form,
Whose breast is bared to every storm
Of life, the sun's effulgent beam
Still shines above the mists serene.
When time was young, the earthquake's shock
That made thy very bosom rock,
And rent the granite fields in twain,
Exalted thee above the plane
And made thee all that thou hast been—
An artist's love! a poet's theme!
So may the spirit racked with care
Be come at last more sweet and fair—
Too pure to be by pen portrayed,
Too high to be on canvas laid,
O proud and peaceful monarchs, stand!
Emblem of life to mortal man!
In you a lesson each may read,
That brave and earnest men succeed;
Though tempests rave, there are heights sublime
Where scintillant suns shall ever shine.

Glendale, M. T. HENRY W. BROWN.

SUPPRESSING BRUTALITY.—Gen. Gonzalez, formerly President of the Mexican Republic, and now Governor of Guanajuato, has taken a bold and decisive step in decreeing the suppression of bull-fighting in that State. He declares that it is demoralizing, that educational interests and manufacturing enterprises suffer from the use of so much money in this barbarous sport, and that the habits of public order and economy are destroyed by it. Accordingly he orders the summary prohibition of bull-fighting in his State.

HOW FINGER NAILS GROW.—The growth of the nails is more rapid in children than in adults and slowest in the aged. It goes on more rapidly in summer than in winter, so that the same nail that is renewed in 132 days in winter requires only 116 in summer. The increase for the nails of the right hand is more rapid than for the left; it also differs for the different fingers and in order corresponding with the length of the finger. It is most rapid for the middle finger, nearly equal for two either side, slower for the little finger and slower for the thumb.

TRADES IN HIGH LIFE.—The late M. Carnot, father of the President of France, had two sons, both of whom, in view of the great uncertainty of conditions of life in that country, were taught trades, by which, in case of emergency, they might earn a living. The younger brother learned the locksmith's trade; the one now President of the French Republic is a carpenter.

YOUNG FOLKS' COLUMN.

"How the Biter was Bit."

(Written for the RURAL PRESS by I. H.)

There was going to be a festival in the Pine Hill schoolhouse, and great preparations were being made in all the houses in the neighborhood. The boys and girls were busy learning the pieces they were to speak and the songs they were to sing, while the mother and older sisters were equally busy baking pies and cakes, roasting chickens and turkeys, and making ready other good things for the supper.

Perhaps no one was more delightfully excited over the coming event than Jack Fortune and his sister Polly. Entertainments of any kind were rare in the country district where they lived, and even when a concert, or a circus, or an exhibition of magic enlivened the quiet little village, the Fortunes generally staid at home. There was little money to spare for amusements in a house where for many years there had been a constant struggle to pay off a heavy debt for the land they lived upon, and the children had early been taught lessons of self-denial. All the greater was their enjoyment of the rare occasions when they were allowed a little liberty. Of late everything had been going well with them; the last crop had been the finest known for years; hogs had brought a good price; even the ducks and hens had been doing their duty nobly, so when it was proposed to hold a festival in the schoolhouse to raise money to buy an organ, Mr. and Mrs. Fortune were very glad to do their part. And now the day had come, and Polly's new dress and Jack's new suit were ready, and each of them had a bright new half dollar to spend. Admission was free, but the supper was to cost 25 cents, and there were ice cream and candy and other extras besides.

Over Jack's happiness, however, there was one little shadow; his best friend, Tom Owens, had fallen out with him a few days before, and all on account of certain arrangements for the evening of the festival.

Just how it happened that Jack and Tom should be such firm friends it would be difficult to say; for Jack was a generous, warm-hearted little fellow, a favorite with everybody, while Tom was selfish and ill-tempered, liked by very few of his schoolmates except Jack. The trouble had arisen in this way: Their teacher, Miss Mason, was soon to be married, and as she was very much beloved by all her scholars, they had subscribed a small sum of money to make her a present. The present, half a dozen silver teaspoons, was to be given to her at the close of the literary exercises at the festival, and Jack Fortune had been chosen to make the presentation. The matter had been decided by vote, and Tom had been the other candidate. The fact that Jack had received 18 votes out of 20 had irritated and enraged Tom to such an extent that he had not spoken to Jack since, much to the grief of the boy who felt that he had done nothing wrong and did not deserve such treatment.

However, even Tom's displeasure was forgotten now in the eager anticipation of the evening's enjoyment. The family were seated at breakfast when Sallie, the oldest daughter, suddenly exclaimed:

"Jack, you're surely not going to the festival to-night with that head."

"Well," said Jack, looking up from his plate of cakes, "as I don't happen to have another, I guess I'll have to."

"Why, you look like something caught out of the woods. Mother, make him have his hair cut; it's away down over his ears!"

"Yes," said Mrs. Fortune, "it is dreadfully long. I didn't notice it before. Father, you must cut it for him before night."

"All right," said the father. "After dinner, Jack; I haven't time now." And he went away to his work. But dinner that day was a very informal meal; everybody had too much to do to care to keep regular hours. Jack was given a cold lunch about 11 o'clock and sent off on an errand, and being detained unexpectedly, he got home a little after three, to find that all the family had gone except little Polly. Mrs. Fortune and the older girls had to help to get the schoolhouse ready and set the supper-table. Mr. Fortune had driven them over in the spring-wagon and would not be back, and Jack and Polly were to do the chores, lock up the house and go over in the cart. In the hurry and confusion, no one had thought about "that head."

The first sight of Jack recalled it to Polly, who was herself exceedingly neat, and who was constantly trying to make her brother more careful of his personal appearance.

"Oh, dear," she exclaimed, "you didn't get your hair cut. What will everybody say when you go up to make your speech with that—"

"Now look here, Polly," interrupted Jack, "if you say 'that head' again, I'll take it off and throw it at you. You all talk as if a fellow had a box full of heads to wear at different places. I'm sorry my hair isn't cut, but I'm going to have a good time to-night all the same."

"Don't you think I could cut it, Jack?" asked Polly, a little uncertainly.

"You? Why you'd make me look as if the rats had got hold of me last night. No, thank you, I'll go just as I am. The only fellow that

knows how to cut hair round here is Tom Owens, and he's too mad with me now to do anything for me."

Polly thought for a little while in silence. Then she said: "Tell you what, Jack, I'll run over to the Owens' and see if Tom won't come and cut your hair. We can offer to pay him; we can give him two bits, and then I can pay for your supper and you can treat me to ice-cream."

"But that wouldn't be fair," said Jack, "it isn't your head."

"No, but it hurts me worse to have you look that way than it does you. So I'm going."

The distance to Tom's house was not so great, and in less than an hour Polly returned in high spirits. Tom would come as soon as he had finished the chores and dressed himself; she had given him the two bits to make sure. She was to get ready at once and go to the schoolhouse with Mrs. Owens and the girls, and Tom and Jack could go together later.

"I'm so glad," said Polly. "I want you to look nice; be sure to put on your new necktie. I'll get it out for you before I go."

In good season Tom made his appearance; he seemed to be in a particularly good temper, laughed and joked, and once he astonished Jack by suddenly clapping his hands on his knees and exclaiming: "By jingo! I'm in luck to-night! I'm just going to have the best fun of anybody in these diggins!"

The two boys went upstairs where Tom pinned one of Mrs. Fortune's aprons round Jack's neck, seated him in front of the glass and began his work.

"That side looks real nice, now, don't it," he said, when about half of Jack's long locks had been clipped, and he stood off at a little distance to admire the result.

"First rate," said Jack, as he looked at his reflection in the glass. "First rate."

Tom stepped to the window. "Gracious!" he exclaimed. "There's my mare trying to break loose; wait a minute!" He snatched up his coat and vest, which he had taken off, and ran down stairs.

Without a suspicion of the trick that was being played on him, Jack went to the window and opened it. He was just in time to see Tom untie the mare and jump into the saddle. "Tom! Tom! What's the matter? Where are you going?" he called in alarm.

"Ha! ha! ha! I've fixed you for to-night, I guess," shouted Tom, as he rode off with a gallop, while Jack screamed after him in vain: "Oh, Tom, don't go and leave me this way! Tom! Tom! I'll give you anything I've got, Tom!"

And then the poor boy seeing that all his entreaties were useless threw himself on the floor and burst out crying. No wonder; it was a cruel disappointment, for he knew that now it was impossible for him to go to the festival. Presently he sprang up and seized the scissors. He would cut the rest of his hair himself; but at the first glance in the looking-glass he gave way again to despair. Tom had done the work on one side of the unfortunate head so nicely that he could never make the other side look the same.

"Oh, why didn't I let it alone and go just as I was," he groaned. "Oh, Polly, Polly, what made you bring that hateful wicked boy here to serve me so!"

Meanwhile, Polly at the schoolhouse was making herself useful, and as one wagon after another drove up she began to watch for Tom and Jack; she could not be quite happy until she should see "that head" and be sure that it was all right. Presently Tom appeared alone, and she ran to him at once to inquire for her brother.

"Oh, I didn't wait for him," said Tom, carelessly; "you don't think he'll get lost on the way, do you?"

"Did you cut his hair, Tom?" asked Polly, anxiously.

"You bet!" said Tom with a loud laugh as he walked away.

Something in his manner made the little girl uneasy; but she could do nothing more. Surely Jack would soon come and then all would be well. Tom sauntered about the schoolroom where the seats were now beginning to fill up. He had refused to take any part in the exercises of the evening. His fun was to be in seeing the annoyance of other people and the disturbance of the program occasioned by Jack's absence.

Why was it that one and another of the girls to whom he spoke turned away and whispered to some one else and giggled as if very much amused? There could be nothing wrong in his appearance; he looked down at his neatly fitting suit, gave a pull to his vest, then put up his hand to smooth the ends of his necktie. His necktie! He had left it and his collar, too, on the bed in Jack's room, where he had taken them off because he felt too warm. Now, Tom, happened to have an exceedingly long and bony neck, and if there was any boy in the school who would present a ridiculous appearance dressed in his Sunday suit with neither collar nor cravat, that boy was Tom Owens.

A vivid consciousness that he was caught in his own trap came over him as he sneaked out of the schoolroom, not knowing whether to go home, or to try to find some one to lend him a silk handkerchief to tie round his neck. If he could do that, and pretend that he had a sore throat, he might still be able to get some enjoyment out of the evening. He hung about the ante-room hoping that he might chance to see some one who would help him, and there

Polly found him, half an hour later, when she came in with a very anxious face.

"Oh, Tom," she said, "what can have happened to Jack? It's almost time to begin, and he hasn't come."

"No, and he won't come to-night, you may bet your life on that," answered Tom, glad to vent his ill-temper on some one.

"Why won't he come?" Polly exclaimed in terror. "Oh, Tom, what have you done to him?" And then, with hardly a moment's pause, she sprang forward with a cry of delight, "Jack—Harry! Oh, where did you come from?"

But to explain Jack's appearance on the scene we must go back a little. Hardly had he dried his eyes, ashamed of having "cried like a baby" for any reason whatever, when he heard the sound of a horse's feet. Could Tom have relented and come back? He snatched up his hat and ran out.

"Hello!" called a merry voice, and answering, "Harry, oh, Harry!" Jack rushed down the garden-path and threw open the gate. It was his brother who was working for a blacksmith in a neighboring town, but whom no one had expected home to-night.

"Folks all gone?" asked Harry. "I had a great mind not to stop, but concluded I'd better. I'm sort of dusty; now we can go together. Sakes alive, Jack! What's the matter with your head?" and he laughed till his sides ached.

"Harry, please don't; please don't laugh at me," pleaded poor Jack, ready to cry again. "I'll tell you all about it; it was Tom Owens," and the pitiful tale was told.

"The mean, low-lived rascal," exclaimed Harry, "I'll be even with him as sure as I'm alive. But never you mind, Jack, I'll fix you alright in about ten minutes if you'll get the scissors and a comb."

"Can you? O Harry!" Jack's rapture was too great for further expression.

"Jim Jones and I have cut each other's hair for six months," said Harry, "and I guess I can make a good job of it. You go up to the girls' room and see if you can't find a bottle of hair oil or something while I put up my horse."

Harry was soon at work on the poor, unfortunate head, and whatever a city barber might have thought of his performance, it was highly satisfactory to Jack. While he clipped away he told his own story. "Mr. Benson was away this morning when a man came in with a very particular piece of work. Jim Jones thought we couldn't do it; but I wasn't going to see him carry it off to the other shop, so I said I'd try. I had just got it done when the boss came in, and he was awfully pleased, I tell you. When noontime came he told me the folks had been teasing him to come over to this festival and give something toward the organ. 'I guess you'd enjoy it more than I would,' he said, 'and see your folks besides, so you can take the horse and ride over and spend two and a half for me, and as much more as you like for yourself; so here I am, and a good job for you, too, Jack. Have you got any money?'" he added.

"Two bits," said Jack. "I gave Tom two bits to cut my hair."

"And he took it? Why, he's no better than a thief. But don't you fret, he'll give it back to you before he's much older or my name isn't Harry Fortune; and I'll get you to help me spend the boss's two and a half besides. This family can eat all the ice-cream they want, for once, free of expense."

Jack ran up to his room to finish dressing. What was that lying on the bed? He picked it up and then he laughed both loud and long. "Harry," he called out, "what do you think? Tom has gone to the festival without any collar or necktie. He left them here."

"A nice-looking bird he'll be," said Harry, "something like a crane. Served him right. I'm precious glad of it." So was Jack, for a moment. Then a battle was fought and a victory gained as noble as those you read of in your history. He took a collar-box from the table, laid Tom's collar and tie carefully in it and carried it downstairs. "I'm going to take them to him, Harry," he said. "I was so awfully miserable before you came, and I'm so glad now I can't bear to have anybody unhappy."

Harry might not have been equal to such an act himself, but he knew how to appreciate it in another, and he made no objection. So it was that when little Polly called out the names of her two brothers, and Tom Owens hastily turned round, he saw first Jack's smiling face and neatly trimmed hair, and towering above the tall, muscular figure of the young blacksmith.

For once in his life he blushed a burning crimson as Jack handed him the little box, saying simply "I'm glad I'm in time, Tom, there's your collar and your tie."

Just then a strong hand rested on his shoulder, and a voice quite pleasant and friendly to outward seeming whispered "Fork out the two-bits, sonny."

Tom fumbled in his pocket. "Take it," he said, sulkily, "I never meant to spend it."

"Oh no," said Harry, "of course not; but Jack does, so it is best to give it up. That is all I have to say to you just now. Later I may have a little bit of advice to give you." And when Jack was not by to hear, Harry found an opportunity to say to Tom, "That was a mean, rascally trick you played on a boy smaller than yourself. If he hadn't begged off for you I'd thrash you till you couldn't stand up. As it is I don't mean to forget it, and if ever you try

that kind of thing again I'll pay you out with interest, and don't you forget it."

The festival was a grand success; everybody was happy, everybody except Tom; but among all the glad young hearts there present I think there was none happier, and none that better deserved to be happy, than Jack Fortune's.

Danville, Cal.

DOMESTIC ECONOMY.

Canning Salmon, Etc.

EDITORS PRESS:—Will some of your readers please inform me through your columns as to the best way of canning salmon, also for canning corn?—A. E. B., Red Bluff.

CINNAMON ROLLS.—Take a piece of pie crust, roll it out, cut it into narrow strips, sprinkle with cinnamon, roll it up tight, put in a buttered pan and bake until brown.

CREAM PANCAKES.—Take the yolks of two eggs, mix them with half a pint of good cream and two ounces of sugar; fry as thin as possible in lard, grate sugar over them, and serve hot.

BEEF LOAF.—Two pounds of raw lean beef, one cup of rolled crackers, half teaspoon of salt, two eggs; chop all together, form into a long loaf, cover the top with small pieces of butter and bake one hour.

STEWED VEAL.—Lay a knuckle of veal in a saucepan with two blades of mace, an onion, a small whole pepper and some salt, with two quarts of water; cover it close, and let it simmer for two hours.

DOUGHNUTS.—One cup of sugar, one cup of sweet milk, two tablespoonfuls each of butter and lard, three eggs, three teaspoonfuls of baking powder, flour enough to roll wet. Cut into shape, and fry in boiling lard.

APPLE DUMPLING.—One quart of flour, one tablespoonful of lard, two teaspoonfuls of baking powder wet with milk; roll out an inch thick, and place on it eight apples sliced thin; put in pudding bag and boil one hour.

ROLY-POLY.—Roll out about two pounds of paste, cover it with any jam or marmalade you like, roll it over and tie it loosely in a cloth, well tying each end; boil one hour and serve, or cut in slices and serve with sauce over it.

SQUASH CAKES.—Sieve 2½ cups of cooked squash; add a pint of milk, two eggs, a teaspoonful of sugar, a pint of flour, two teaspoonfuls of baking powder and a little salt. Beat together until smooth and fry brown in butter.

GRAHAM BISCUIT.—Three cups of graham flour, one cup of wheat flour, two tablespoonfuls melted butter, one teaspoon of soda, two tablespoonfuls brown sugar, two teaspoons cream tartar, one-half saltspoon of salt, milk enough to mix and make into biscuit; bake in a moderate oven.

OMELET OF CHEESE.—Grate some fine cheese and beat it up in a dish with some eggs and a cup of thick cream or sweet milk, season it with pepper and salt, according to the saltiness of the cheese; have ready a frying-pan of hot butter, into which pour the above mixture and fry as an omelet.

TO SERVE COLD MEAT.—Cut or chop any kind of meat, season with salt and pepper and place in a mold. Boil the bones and bits of meat with an onion or two cut fine. When boiled enough, strain, dissolve one spoonful of gelatine, and add to it. Pour over the meat, and set away until the next day.

ALWAYS RELIABLE PIE CRUST.—Weigh five ounces of fresh lard, half a pound of flour, take a pinch of salt, and not quite half a teaspoonful of very cold water. Put the salt into the flour, rub the lard thoroughly into it, and mix it quickly with the cold water into a dough, and roll out. This quantity makes upper and under crust for one large pie.

RAISED GRIDDLE CAKES.—Take a quart of sweet milk, warm it enough to melt a large tablespoonful of butter, add two teaspoonfuls of salt and flour to make a pretty stiff batter. Dissolve one-third of a cake of compressed yeast in tepid water and stir it into the batter. Cover closely and keep in a warm place until morning, when fry on a griddle. If found to be too stiff, thin it with a little tepid milk.

CORN MEAL WAFFLES.—It is during the spring that the waffle-iron is generally brought out from its temporary seclusion. If, however, the iron happens to be a new one, don't count on it to supply you with respectable waffles the first or even the second time. The chances are that only the chickens will profit by these bakings. We do not know of anything except use that will keep a new iron from sticking. It should be first boiled in water with potato parings and hay, and then greased and set in the oven to burn off. Repeat this operation several times, and then experiment some time when you have another dessert to fall back on. Don't spare the grease, but use plenty of butter or sweet drippings, and have it smoking hot. Very nice waffles are made from one cup each of cornmeal and flour through which has been sifted one heaping teaspoonful of baking powder; add two tablespoonfuls of sugar and a teaspoonful of salt; the beaten yolks of three eggs, and 1½ cups of milk; then the beaten whites, and lastly a tablespoonful of melted butter. If sour milk or cream is used instead of sweet milk, substitute a half teaspoonful of soda for the baking powder.



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W. B. EWER.

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See Advertising Columns.

The Week.

Since our last, showers have fallen in most parts of the State, varying in amounts from a sprinkle up to half an inch of water—the latter, however, being reported only from one point on the coast. About a third of an inch is the heaviest report from interior valley points. The shower has been generally welcome, for it was not heavy enough to hurt any mown hay, but the dispensation was too light to be much more than refreshing, helping somewhat grain on summer-fallow which still has subterranean moisture to draw from, but producing scarcely any visible effect upon late-sown grain which has no reserves and has about run its course, in many cases not even reaching a hay point. Our grain yield in all parts of the State, except on irrigated land, must be counted very small this year, and the subject of bag prices will be of very little interest to those who will have nothing to put in bags.

Fruit prices are still high and growers are selling rapidly. In well-cultivated orchards and on trees which have been well thinned there will be good-sized fruit, but probably trees otherwise treated will yield but medium or small specimens, except where irrigation

water is available. This year's shortage is, of course, worse, because of the under average rain of last year. The State will be in fine condition for a good soaking next fall.

Whims and Crotchets.

It is really worth one's while to be sick occasionally just to find out how many excellent remedies there are in the world. The readiness with which everybody offers advice to the sick or tells of some sure cure certainly gives a very edifying and pleasing glimpse into the goodness of the human heart.

Well, society is quite sickly, has a great many bad spells, and it is really amusing to see the number and variety of political doctors that are anxious to dose it with their nostrums. Every one has his hobby and is sure if society would take his medicine it would get well and live a long and useful life. We have men who propose to banish hard times by the abundant issue of paper money, others who would usher in the millennium by abolishing private ownership in lands; and still others who would quicken evolution and bring in the Lost Paradise by abolishing private ownership in everything. They scout the idea that they are political charlatans who give the people stones for bread and promises for votes. They assume the more showy name of socialistic reformers, venders of ancient nostrums under new names. But none of them go to the root of the matter. Acutely alive that something is wrong, they would remedy the ills of society by giving it a new coat of paint, or in other words they would put a conscience into it fringed with good manners by arbitrary legislation. That is, they would drive the devil out with a pitchfork. But all these agitators overlook the fact that all laws, customs and habits are the outcome of social conditions, and that if we would make the fruit good, regeneration must take place in the vitalities of the tree. Any other effort to heal the woes and ills of society would be as abortive as the man who tried to lift himself by tugging at his boot-straps.

The efforts of the earnest reformer should be addressed to three things: To relieve the wants and miseries of the destitute and reform depraved lives; to assist the overplus of the population in all the great crowded centers to escape where there is more room; and to teach prudence to the ignorant masses whose sole aim seems to be to multiply wretchedness and increase the generations of poverty and want. Now, whoever finds work for men starving for the want of it, by enlarging his business, starting in a new industry, cultivating wild lands or in some other way gives employment to the idle is a better reformer than noisy quacks and mountebanks who shriek their crotchets and nostrums on stump or platform in bad, bad grammar and worse logic.

That there is great need of practical help is apparent to every man and woman who is not so wholly centered in self as to be oblivious of what is around them. We have a great many very good people who are very anxious to save the wild men of the antipodes and are in a great fume and stew about protecting horses and dogs who never seem to cast a thought to the millions of our fellow-creatures who live in the slums and narrow, stenchful alleys of our cities, a life to which the naked freedom of the savage is happiness. They are dreadfully worried over the squalor and wretchedness of the poor in Peking or Cairo, but heedlessly pass the poor half-clad woman who shivers in the cold wind as she tries to sell papers at the Oakland wharf, and the lame and blind whose only means of existence is selling pencils or apples on the street. There can be no doubt that in every great center there is a deal of preventable evil, the full extent of which is known only to the few who have patiently studied the problem, but from the men with whims and crotchets who never touch the burdens of society with the tip of their fingers, Good Lord deliver us.

The Flowers at San Jose.

The floral fair at San Jose last week was, by all accounts, a wonder, a delight, and a success. The ladies of Santa Clara, with fine taste, judgment, energy, and persistent industry combined, achieved results, the like of which, we are assured, was never seen before—not even in San Jose.

On entering Horticultural hall the general effect of the warm, rich masses of color was pleasing in the extreme. Directly in the center a silver cross rose from a mound of rocks and roses; to right and left were floral models of the Conservatory of Music and the Stanford University, and beyond these down the length of the hall flowers followed flowers in groups of harmonized or contrasted colors, until they merged in the forest of pines that adorned the stage. While each design was in itself of great artistic merit, the supreme genius was that which disposed them so effectively as a grand whole.

One of the most noticeable designs was a model of the proposed Conservatory of Music—to aid whose building fund the festival was set on foot. This miniature temple, five by three feet and three feet high, and standing on a table 12 by 16 feet, was composed entirely of flowers. The foundation of the edifice was deep red, made of Giant of Battle roses. Above these rose walls, woven of dainty yellow Celine Forester and white Chromatella, a roof of Homer rosebuds and a spire of yellow marigolds completing the structure. The building stood in the midst of highly ornamented grounds, upon an elevation covered with deep green moss to resemble grass. Musical instruments fashioned from flowers brightened this mossy mound, and around the whole ran a brilliant border containing 50 varieties of roses. The words "Conservatory of Music," in white, pink and red rosebuds, appeared in front of the entrance. The conservatory was lighted from within, bringing out the effect of the stained-glass windows.

On the Berryessa table was a terraced garden of roses crowned with lilies, and roses fashioned into forms of lyre and harp were conspicuous among baskets of varied flowers.

The garden of Romeo and Juliet was filled with forget-me-nots, begonias, yellow jessamines, ferns, and palms; and trailing ivy and orange blossoms fell from the balcony, against which leaned a handsome ladder of white and moss-roses.

Peculiarly attractive and interesting was the table on which H. A. Brainard had arranged 84 species of California wild-flowers, all gathered within five miles of the city of San Jose.

One of the most elaborate exhibits represented the studio of an artist. The central piece was an easel of evergreens supporting a large picture, framed. The frame was made of marigolds and the landscape of masses of sprays. On another easel, the frame of the picture was of La France roses and the subject a basket of Cloth of Gold roses. Several handsome plaques adorned the walls, every part of them, frame and subject, being made up of flowers. One was a fruit-piece of oranges and bananas, another a spray of roses; several handsome rugs made of roses lay about the room.

The four walls of the "Drawing Room" were adorned with Lady Banksia roses, sprays of Indian fern, spruce, pine and redwood evergreen, while the frieze was built out with pampas-grass, wheat, barley and oats intertwined with sprays of evergreen and ivy. The room was completely furnished with sofas, chairs, tables, portieres, rugs, curtains, etc., all made of lovely exotics, ferns and grasses.

The chapel of the Leland Stanford, Jr., University, as it will appear when finished, was beautifully represented in flowers by the ladies of Mountain View.

A liberty bell of pure white roses with the clapper of contrasting red was one of the most striking of the decorations. So well were the roses that form it blended together that it seemed like one huge flower of perfect form.

One of the most unique and (considering the object of the fair) appropriate designs consisted of four bars of "Home, Sweet Home," written in the most exquisite roses—red, pink, cream and white. The large table, 8x16 feet, covered with moss, represented the open pages of a book, upon the leaves of which the music was written.

Among the other prominent booths, the Fairy Grotto, the Queen's Palace, the Vendome Parlor and the Winter Palace would receive extended notice, were not our limits this week too narrow to do them justice.

The evening entertainments were well patronized, and the March of the Titled Roses, amid showers of rose leaves, by 50 ladies and gentlemen in fancy costumes, as well as the drill and tableaux by two score "fairies" were brilliant and admirable.

The visit of General Fremont with his wife and daughter, which took place on Wednesday, called forth great enthusiasm; the Pathfinder and the ladies who accompanied him receiving a most cordial and touching welcome.

The entire fair was under the direction of Mrs. E. O. Smith, who was most ably assisted by Mrs. T. Kirk, president of committee of 100; Miss Percy Harris, secretary; Mrs. Searle, Mrs. Dr. A. J. Cory, Mrs. M. Gay, Mrs. F. M. Terry, and the many other ladies in charge of the booths, to all of whom the press of San Jose awards the meed of praise unqualified and unstinted.

Low Freights on Wheat.

The *Herald of Trade* of this city prints an interesting statement giving the following table of comparison of prices per cental for No. 1 white shipping wheat in this city, prices per quarter for just shipped and the rate of freights, iron vessel, per long ton, to the United Kingdom at the close of the month of April of each year for 11 years:

Year.	Spot.	Just Shipped.	Freight.
	s. d.	s. d.	s. d.
1878.....	\$2.00	55.	50.
1879.....	1.60	44.	45.
1880.....	1.90	53.	45.
1881.....	1.40	46.	85.
1882.....	1.65	48.	65.
1883.....	1.82½	47.	45.
1884.....	1.57½	40.	35.
1885.....	1.55	40.	36.3
1886.....	1.32½	35.	39.6
1887.....	1.75	38.	22.6
1888.....	1.36½	33.9	25.

It is truly remarked in connection with this interesting showing that the decided reduction the last few years in charters made the wheat industry in this State possible, for with a range to and above 40s. would, without a corresponding advance in the price of wheat in Liverpool, have sent prices for No. 1 shipping wheat to such low figures in this market as to have netted a loss to farmers. That which first led to a fall in charters was the demand for faster ocean service, and this called into existence lines of steamers having very large carrying capacity. With their more general adaption for the shorter routes that did not consume over a month in transit, sailers were forced into more distant service, which naturally caused an over-supply of the latter, necessitating a corresponding lower rate of freight.

One of the most encouraging features of this course of affairs is that even at the low rates which have prevailed, the ocean carriage business has been profitable to owners. The *London Economist* and also the *Statist* are authority for the statement that English ship-owners had an income last year of over \$100,000,000 from their investments. This in excess of losses by the element or from other causes, goes far to convince the skeptic that the ocean carrying service will not be excessively high, for so long as a good income can be derived from investments in ships, so long will they be built and kept in service.

But the low rates of freight to distant markets are only one of several factors which have kept our wheat industry alive in face of severe competition. Other factors are the greatly cheapened cost of harvesting through the introduction of improved machinery, and the low rates of interest at which growers have been able to secure money upon wheat stored in warehouse. Farmers have also been benefited to a certain extent by the over-reaching combination of dealers who have found themselves in the corner rather than the wheat.

To one who has watched the course of wheat in California for ten years, the present situation is a startling departure from the condition of affairs at the beginning of that period. Then there were extortionate ocean freights, exorbitant rates of interest and all combinations and conspiracies profiting the conspirators and crushing the farmer. Verily the world does move!

THERE are 75,000 tons of wheat stored at and about Vallejo.

On the Original Habitat of *Icerya purchasi*.

[Written for the RURAL PRESS by PROF. C. V. RILEY.]

In view of the international interest attached to the subject of this note, and to the fact that I made a brief communication upon it before the British Association at its late meeting in Manchester, some final conclusions upon it may be of interest to your readers.

My search for the original habitat of *Icerya purchasi* has led to much interesting correspondence with naturalists in different countries, and a number of side veins have been struck and followed up with important results. At the time of my communication to the PACIFIC RURAL PRESS of June 11, 1887 (reprinted in Bulletin 15 of the Division of Entomology), I was rather inclined to the opinion that *purchasi* might be a synonym of *sacchari* and that the original home of the species would turn out to be the Islands of Bourbon and Mauritius. The correspondence there published with Messrs. Trimen of Cape Town, Crawford of Adelaide, Kirk of Wellington and Baron Von Mueller of Melbourne, developed nothing to alter this impression, but rather confirmed it; and I was particularly anxious to get some exact information from the islands in the Indian ocean. The gentlemen whom I have so far addressed have been either too busy to attend to the matter or they have turned it over to others from whom I have not yet heard. In other ways, however, I have arrived at a definite conclusion contrary to the surmise of last June with regard to the identity of these two insects, and this conclusion was formed first from a study of Signoret's types in Paris and subsequently by a bit of roundabout correspondence which is of sufficient interest to be treated at some little length. I was very sorry to find, when in Paris last October, that my old friend, Dr. Signoret, was extremely sick and unable to give any attention to affairs, and, as he was at his country place, I had some difficulty in making an examination of his types; but, finally, through the courtesy of M. Fairmaire, I succeeded in making a study of them, and, although the specimens were for the most part pinned and dried and in poor condition for comparison, yet enough perfect material remained to make me quite positive that *sacchari* was distinct from *purchasi*. In the meantime, during my visit to Europe, another specimen of the old original lot sent by Dr. Icery of Mauritius to Signoret in Paris in 1874, or thereabouts, and which was the one sent by Signoret to Maskell in New Zealand in 1878, was received from Mr. Maskell and immediately forwarded across the Atlantic by Mr. Howard and later was brought back to Washington where it now remains probably the most traveled insect in any collection. This specimen also was in poor condition.

My second verification of the conclusion of non-identity was arrived at as follows: Mr. J. Horne, Director of the Botanic Gardens at Port Louis, Mauritius, replying to my communication, asking for particulars and specimens concerning the "Pou blanc" in Mauritius informed me that the insect was there also known as the "Pou anglais," and was supposed to have been described by an English entomologist many years ago as *Dorthisia seychellarum*. Reference to all accessible works failed to give me a clue to any such species of *Dorthisia*, and application was made to Mr. J. W. Douglas of England, who has monographed the genus, for information concerning the use of this name. Through his kindness I learned that the insect was briefly described by Westwood in the *Gardener's Chronicle* for Dec. 22, 1885. On consulting this article I found the insect figured both from a dorsal and a ventral aspect with also an enlarged representation of the antenna of the female. I saw at a glance that the insect was the same as that described by Signoret as *Icerya sacchari*, and that it was no *Dorthisia*. The "Pou blanc" is therefore *Icerya Seychellarum* (Westwood). The specific name was given to this insect by Westwood from the fact that the insect was received upon the leaf of a palm from the Seychelles islands.

The third verification was made in a roundabout way almost at home. Learning from Mauritius that Col. Nicholas Pike, United States Consul at that island many years ago, had, while in Mauritius, paid some attention to this insect, I wrote to Col. Pike who at present resides in Brooklyn, N. Y., and was much grati-

fied at receiving a long and interesting communication from him. Among other facts he stated that some 20 years since he deposited with a lot of other natural history objects a few specimens of the "Pou blanc" with Professor Louis Agassiz at Cambridge. I then wrote to Dr. Hagen who was at once able to place his hand upon the specimens mentioned by Col. Pike, and who most courteously forwarded three of them—all in admirable preservation, as they had been saved in alcohol. These correspond with Signoret's description and with Signoret's and Maskell's specimens and with Westwood's figures and description.

We are still, it will be observed, as far off as ever from any absolute knowledge as to the

history of insect outbreaks will appreciate this point.

The Recently Introduced Parasite of *Icerya*.

The notice in the PACIFIC RURAL PRESS of April 21st, entitled "Australian Parasites of the Fluted Scale," while essentially correct, calls for some remarks. The parasite in question was first reared by Mr. Frazer S. Crawford of the Surveyor-General's office in Adelaide, South Australia, from the fluted scale, in small numbers only. Specimens were sent nearly a year ago both to myself in Washington and to Miss Omerod in England. Owing to the fragmentary condition of the specimens received, the true generic position of the parasite has not yet been determined. During the past winter Mr.

reason that our *Icerya* has several times mentioned in print under the erroneous name of *Orthesia* or *Dorthisia*, in South Africa and in Australia as well as once or twice in this country. C. V. RILEY.
Washington, D. C., April 30, 1888.

A Monument to Audubon.

The Linnæan Society of New York asks contributions to assist erecting a monument to mark the resting place of John James Audubon in Trinity cemetery, New York City. The movement originated with the Academy of Sciences of that city and, we are told, has been met with much favor. The presenting of the enterprise for the favor and support of the public, has been confided to the committee appointed from the Linnæan Society of New York, who now issue their appeal.

We are largely indebted to Audubon for the present lofty standard of American natural history, his name has given inspiration to many, and the grandeur of his achievements in this department of science has produced a line of successors of which America is, and may well be, proud. Genius knows no national bounds, great men are cosmopolitan; in honoring Audubon, the American-Frenchman, the hunter-naturalist, the artist-ornithologist, the indefatigable and ardent lover of nature and depicter of her manifold beauties, we feel that all the world will heartily commend the project and rejoice at its successful conclusion.

The engraving on this page represents the proposed monument, which it will be seen calls to mind the leading features of Audubon's life-work. We have thought that there might be many on this coast who would like to share in the effort to signify the popular appreciation of the distinguished naturalist and his work. Contributions may be sent to L. S. Foster, Chairman of the Committee, care of Linnæan Society of New York, 11 West Twenty-ninth street, New York city. We are assured that a prompt acknowledgment of receipt of contributions will be made.

Sericulture.

The Ladies' Silk-Culture Society held a meeting on Thursday of last week at the rooms of the State Board of Horticulture. Dr. W. P. Gibbons, Prof. Hilgard, Wm. M. Noyes, Mrs. T. H. Hittell, Mrs. H. B. Williams, Mrs. L. E. Pratt, Mrs. S. D. Mayer and Mrs. O. M. Washburn were present.

PRES. GIBBONS stated that in accordance with the wishes of the society, as expressed at the March meeting, less than \$200 had been expended for trees during the past month. About 300 two-year-old mulberry trees and 1000 Japanese yearlings had been purchased at a cost of \$131.75, and planted at the Piedmont station, where there are now 11,000 trees and cuttings in the orchard.

OF 8000 eggs received from Japan, about 6000 have been hatched at the station, as well as 2000 eggs of the society left over from last year. About 2000 Japanese eggs will be culled out for seed.

DR. GIBBONS thinks it a good idea to wet the leaves while hatching, as silkworms seem to like water. He has treated worms in this manner and they flourished, contrary to the theory that dry leaves are required. He reported that \$2516.32 remain in the treasury to last the Society until July.

MONSTROUS ROSES.—The Stockton Mail says Herbert Baldwin, a well-known bookseller of that city, has a rosebush that produces flowers of extraordinary size. None of them are less than six inches in diameter, while the largest is nine inches, measured straight across. The flower is very deep. The petals are on a corresponding scale, the largest being about two inches long. They are similar in hue and texture to those of the red velvet rose, a bush of that variety having been used in the series of graftings which were made in experimenting. There were five graftings in all, and then seeds were planted from the last growth. The bush which produces the giants is one of the seedlings.

FLORAL FAIR IN SAN DIEGO.—The ladies of San Diego under the management of the Woman's Home Association, have a flower festival this week. The proceeds will be used toward the erection of a Woman's Home, on a five-acre lot, donated to them in the City Park.



DESIGN OF PROPOSED MONUMENT TO AUDUBON.

original habitat of *Icerya purchasi* outside of Australia, so that I am rather confirmed in my first conclusion that it is an Australian species, though I shall not be surprised if, in the course of the next few months, specimens turn up from Mauritius. There is a possibility that both the insects occur in that island, but, all things considered, it is much more likely that *purchasi* was introduced from Australia to the Cape of Good Hope, to New Zealand and to California. The reasons which lead to these conclusions are as follows:

1st. We do not know that *purchasi* occurs in Mauritius, Reunion or any of the neighboring islands, while we do know that it occurs in several parts of Australia.

2d. The insect made its first appearance in South Africa, New Zealand and California upon plants that are peculiarly and distinctively Australian.

3d. Although it may seem paradoxical, the very fact that the species does not appear to be very abundant or injurious in South Australia, is rather an argument for than against its being an indigene there. Any one who has studied

Crawford discovered that the same parasite also infests a very large Coccid belonging to Maskell's genus *Coelostoma*, even more abundantly than it does the *Icerya*. He has hence been able to rear the parasite in considerable numbers, and, at a suggestion from the office here, sent living specimens to Mr. Coquillett, and also, as he notified me lately, to Mr. Klee and Mr. Maskell of New Zealand.

Of the lot received by Mr. Klee, and by him sent to Mr. Koebele in Alameda, the latter reports that they were dead on receipt; while Mr. Coquillett writes that of those received by him direct from Mr. Crawford he was able to rear living parasites which were at once confined with *Icerya* for the purpose of endeavoring to establish the species in California. The success of this experiment is more than probable, and, if so, California will owe Mr. Crawford a debt of gratitude.

The correction of the statement that the second insect host of this parasite is an *Orthesia* is important, as *Coelostoma* is more closely allied to *Icerya* than is *Orthesia*, and as the statement is liable to create some confusion for the

ARBORICULTURE.

Shade Trees for California.

The public is indebted to the Sacramento Improvement Association for drawing out the observations of several experienced tree-growers of the capital city as to the adaptations of certain trees for planting in this State. Of course what is best for Sacramento is not necessarily best for some other parts of the State, but the remarks, which we shall reprint below from the report in the *Record-Union*, have a wide bearing.

The State Gardener's Views.

David Meldrum, the State Gardener, who has charge of the beautiful grounds around the State Capitol building, said he had been requested to prepare a list of trees suitable for street and avenue planting. He favored ornamental evergreens. Of the evergreens the magnolia grandiflora was a very fine ornamental tree. The Italian holly had a very bright foliage, was a beautiful tree and had a fine shape. The Portugal laurel was most beautiful for street planting; it had a beautiful foliage, long chains of white flowers, pleasing to the eye, and very fragrant. The araucaria excelsa was one of the finest ornamental evergreen trees in California. It is a native of Norfolk island, Australasia. There are two other varieties of the araucaria, the Bidwillii and the imbricata, that are also handsome ornamental trees and would do well in the Sacramento climate. The Grevillea robusta is a most beautiful sidewalk tree. It grows rapidly, is palm-like in shape, and is one of the handsomest lawn trees that grows. It grows to a height of 50 or 60 feet, and is quite hardy. The American arbor vitae is a fine tree, there being some excellent specimens of this species in Capitol Park. The Siberian arbor vitae is also a fine tree. The Sequoia sempervirens, redwood, a native of California, the "big tree," is excellent for sidewalk planting and much admired by Eastern visitors. The Lawson cypress and the Monterey cypress are both excellent trees.

Regarding deciduous trees for lawn or sidewalk planting, my observation is that there are a half dozen or more varieties that are suitable. The white elm (*Ulmus Americana*) and the cork elm, are both good. The Oregon maple is a fine tree, as is also the Norway maple. The latter grows well in Sonoma county. The tulip tree is a fine grower, has a smooth bark, and bears most beautiful flowers, and for an ornamental tree has few superiors. The Eastern yellow poplar and sugar maple do not do very well here. I would not recommend those or any other species that I am not acquainted with. The cost of these trees varies all the way from 50 cents to \$10 each.

Views of a Practical Florist.

F. A. Ebel, the well-known florist and nurseryman, was next called upon. He said in selecting deciduous shade trees he would by all means recommend the cork elm, as it makes the best and most symmetrical tree, is entirely free of insects and requires less care than any other large-growing tree. The horse-chestnut is a fine growing tree and no pruning is required. Then the European linden (*Tilia grandiflora*) requires, perhaps, a little more care in the beginning, but which amply repays by its beautiful foliage and fragrant blossoms in the early summer. The Norway, silver-leaved, sugar and variegated maple is also fine for shade trees. The tulip tree (not much known in this part of the country) is a beautiful, even-shaped tree, and requires no trimming whatever. Its beautiful flowers are produced on the tip end of the branches and resemble the tulip, from which the tree derives its name. I saw 50 or more of these trees, all of the same height, surrounding a small lake in central Germany (Hesse Cassel) and never have seen a prettier sight. Then we have the ash, beech, birch, China umbrella and other trees well adapted for this section.

Of evergreen trees he would recommend the magnolia grandiflora, familiar to everybody. Grevillea robusta, pepper tree, several species of acacias, also laurels, pittosporum, palms, pichardiana filamentosa, chamærops excelsa, phoenix canariensis and dactylifera, all of which, with proper planting and a little care in the start, will make a showy sight, especially if deciduous trees are planted alternately with the evergreen. In his opinion the deciduous tree, during the winter, when it is without foliage, is still a protector to the more delicate evergreen thus planted with it. The trees so planted should have plenty of room, and by the time the evergreen is large enough, the deciduous trees may be disposed of altogether.

As for mode of planting, a large hole should be dug for all trees; the top, or better soil, should be thrown into the bottom of the hole, and, if necessary, should be filled entirely with new soil. The cost of doing so will amply repay in the growth of the trees. With evergreen trees persons should take good care that trees are not stunted or pot-bound, as it will take a long time for them to get over it; in fact, healthy trees should always be selected, and the best way to accomplish this, none but an experienced person should be trusted with selecting them.

It is rather a difficult matter for me to speak of, as to give any rule or regulation for pruning is almost impossible. Different trees will need

different treatment, and if people in general will employ none but skilled hands to do it, there is very little danger that a tree will be ruined by pruning. The greatest trouble is that most people are the best pleased with the man who cuts off the most branches, they not knowing themselves what is right in regard to pruning trees. A close observer will find throughout the city that the most trees are spoiled by too much pruning. For example, a cork elm should be trimmed and shaped in the first and second years after planting. When that is done properly, the tree will take care of itself better. A person that knows nothing about pruning will spoil more in one hour than the tree will make good in five or ten years.

Mr. Williamson's Views.

Robert Williamson, the well-known nurseryman, and a member of W. R. Strong & Co., next added his views. He said he had been highly entertained with the remarks of those that preceded him. Their views were excellent, their selections admirable and their suggestions good. He said of all deciduous trees, however, he thought the cork elm the finest. It was a strong grower, symmetrical and uniform in its habits. The American elm was not uniform in its habits; one would be weeping, another upright and another straggling. He grew the cork elm from cuttings, and got uniform trees in every instance. The silver maple he regarded as a very fine tree. It had a uniform habit, and that was the beauty of a street or avenue, to have it all look alike. This committee, of course, cannot dictate what kind of trees shall be planted, and there will be as many varieties as tastes in the same block. What we should endeavor to do is to

Educate the People

Up to the fact that the best should be adopted, and then all on the same street plant that and none other. The Carolina poplar would do well in the lower or southern portions of the city. The handsomest tree in the city to-day is the China umbrella trees in Add C. Hinkson's yard, at Twenty-third and H streets. There is no trimming to be done; all you have to do is to get it up. The prettiest avenue I ever saw was one shaded with umbrella trees. If the tree is ten feet high, then it is ten feet across; if 20 feet high, then 20 feet across, and a perfect umbrella. It has a dense green foliage. If you want to make selections of evergreen trees, you must take the character of the soil into consideration. The excelsa araucaria wants a moist climate, but the Bidwillii will do well in this section. The Monterey cypress is a good tree, is cheap and can be obtained almost anywhere. The Monterey pine is another cheap tree, and will grow almost anywhere. The Grevillea robusta won't stand a cold snap or heavy wind. The sugar maple is a slow grower and is a failure here. The tulip tree grows slowly here, and not so luxuriantly as in Germany. The magnolia grandiflora may stand at the head of the list, as Mr. Meldrum says, but it is a slow grower and a very expensive tree. A tree from two to four feet high costs all the way from \$1 to \$2.50.

There is a tree that has been suggested to me by Mr. Gillet of Florida, and that is the wild orange. It is a beautiful tree, a rapid grower, hardy, and will stand more frost than the sweet orange, the fruit hanging on the tree for several months after it is ripe. The small boy will let them alone, for if he tastes one once he will never do so again. The fruit is large, and finer looking, if anything, than the cultivated varieties. Those who want a good cheap tree can do no better than plant cork, maples or palms. The California palm is the best, because it is hardy and a rapid grower. The suggestion of Mr. Ebel to alternate the deciduous trees with evergreens, is an excellent one.

The Florida orange, in my opinion, is the best tree we can possibly get. We can club together, get some of these colonies to go in with us, and get out a carload of 5000 or 6000 trees. I would like to see our streets set out with wild orange trees. In Jacksonville and other cities in Florida they have no other shade or ornamental trees, and the sight is truly beautiful, and if we had it here the sight would simply paralyze the Eastern visitor. They require no more, in fact not so much water, as other trees.

The blackwood acacia is a fine tree, as are also some of the pepper varieties, and they will do well in the eastern suburbs.

Mr. Williamson was asked how large the wild orange tree grew, and he replied those on the public streets in Jacksonville were 40 and 50 feet in height, of fine symmetry, never required any pruning, and no care. Their foliage is a dark green. The speaker gave some general views on tree-planting and pruning. He said Sacramento had a number of wood-butchers going around town hacking trees to pieces. They added nothing to the beauty of the trees, and did much to injure them.

A Weather Expert's Opinion.

Samuel Gerrish, a gentleman who has always taken a great interest in the cultivation of semi-tropical plants, was next called upon. He said: "The beauty of any city that makes pretensions to a semi-tropical climate is in its verdure in the winter season. If the trees that will grow equally well in a more northern climate are largely planted, they will present an uninviting aspect to tourists from cold climates. Therefore it is better for us to plant those trees that retain their green foliage during the entire year. If one were to be taken to the State

Capitol building and look over the city, he would see very little verdure on the trees. It presents a true winter aspect—trees with naked branches everywhere. It is true these trees are fine in summer, but in the coldest climate they are the same. If we boast of a semi-tropical climate, let us show travelers that we also grow semi-tropical trees.

"The habit of tree-trimmers and gardeners of treating semi-tropical evergreen trees as they would hardy deciduous trees is suicidal, for many of them have been killed by this method. Orange, eucalyptus, olive and all trees of their tender nature should be pruned in the spring, and not in the fall, to suffer from the cold and set back if not ruined. The olive tree is not a slow grower, as compared to the orange, is very hardy, and for a shade tree in the city is beyond question desirable, as it will root well and stand the winds. The magnolia grandiflora is also one of the very best. These three varieties are suitable for a moist, sandy or any kind of soil, but require water. The fan palm tree (*Chamærops excelsa*) is the most hardy of all palms; never had a leaf touched by frost in this city; grows rapidly, attains a height of 40 feet, and is elegant for a sidewalk tree. There are many others that would add to the beauty of the city. The pepper tree does well if planted where it can root in a stiff, dry soil, but is no tree for our wet seasons here, as it will not root, and blows down in any high wind.

"The 30 varieties of eucalyptus should furnish many specimens of this beautiful tree to decorate our streets. Let us by all means study this question and urge all our citizens to adopt the methods of our Southern brethren, and make our city smile in winter."

MYSTERIOUS FATALITIES.

What is it That is Killing so many Prominent Men?

The death of Kaiser Wilhelm, ex-Gov. Hoffman, Banker J. W. Drexel, Lieut.-Gov. Dorsheimer, Dr. Carpenter, Chief-Justice Waite and Genl. B. H. Brewster, in quick succession, and all from the same cause, a though having different names, is startling.

March and April are fatal months, not only for consumptives but also for many diseases more disguised but none the less fatal.

Gov. Hoffman had heart disease, Gov. Dorsheimer, apparently a strong, well, robust man, over six feet high, sickens and dies in four days of pneumonia.

Chief-Justice Waite meets the same fate and he was apparently the personification of vigor.

Drexel, the Philadelphia banker, and Brewster, ex-Atty. Genl., were suddenly cut off in the midst of great usefulness, by Bright's disease, and Dr. Carpenter, the well-known New York physician, suddenly died of Kidney disease, never having suspected that he was at all troubled therewith!

This reminds us of the case of Dr. Frank Hawthorn, of New Orleans. He was lecturing before the Louisiana university on the peculiarly deceptive character of Kidney disease and the methods of microscopical and chemical tests.

After having shown specimen after specimen of diseased fluids, and made very clear the point that kidney disease may exist without the knowledge or suspicion of the patient or practitioner, with gracious self-confidence he remarked, "Now, gentlemen, let me show you the healthy water of a strong, well man."

He applies the test!

He staggers!

"Gentlemen, I have made a terrible discovery! 'he gasps,' I myself have the fatal Bright's disease!"

In less than a year this specialist of the commonest and most fatal of diseases was dead. He was a victim of advanced Kidney disease, the presence of which in himself he had never suspected!

L. B. PRICE, M. D., a gentleman and physician of the highest standing of Hanover C. H., Va., four years ago, after trying every other remedy for Bright's disease, including famus mineral waters, cured himself by Warner's Safe Cure, and March 24, 1888, wrote: "I have never had the slightest symptoms of my old and fearful trouble."

MR. JOHN DOHERTY, of Concord, N. H., was given up with Bright's disease by the best physicians in 1879. He was in a dreadful state. After using and being cured in 1881 by Warner's Safe Cure, in 1887, he wrote: "I am better than ever."

JOHN CULLEMAN, Esq., 100 Gregory St., New Haven, Conn., was first taken sick in 1873, gradually run down until he had pronounced Bright's disease, rheumatism and all the other deceptive signs of kidney disease. The best physicians in New Haven could do nothing for him. He then began using Warner's Safe Cure, 200 bottles of which he and his family have used and he is cured.

W. T. CRAWFORD, proprietor St. Charles Hotel, Richmond Va., and well known all through the South, several years ago was in the death-agony from kidney disease, convulsions and Bright's disease. The best Philadelphia specialists in such diseases pronounced him practically dead and incurable. Everything else failing, he took Warner's Safe Cure abundantly and regularly, until fully restored to health, and now he says: "At a lapse of many years I am as sound as a dollar, with no symptoms of my old trouble. I owe my life to Warner's Safe Cure."

Kidney disease is the most deceptive, the most universal, the most fatal disease.

If the most learned men cannot know without the use of microscopical and chemical tests that they have kidney disease, how much more liable is the layman to be, unknown to himself, in the very jaws of death, who does not feel as well as formerly, but who does not think anything specially ails him, and whose physician may assure him that he will soon be "all right."

In these days, people recognize that it is wiser to prevent disease than to await its arrival to cure it. When you know that you may be in the greatest peril and not have any idea of the fact from any defined set of ill-feelings, the wisest course to pursue is to follow the counsel and experience above outlined, and thoroughly renovate the system, cleanse the blood, tone the nerves and insure your own life against these common mysterious fatalities.

Lands For Sale and To Let.

Miramonte Colony

— IN THE —

GREAT ARTESIAN BELT,
KERN COUNTY.

This tract comprises 2640 acres, all level land and ready for the plow.

In this colony is the

Greatest Artesian Well in the
World,

And a perpetual water-right goes with the land bought. Tracts of 20 acres will be sold for \$500—only one-third cash; balance, one-third in two years, and one-third in three years, with ordinary interest.

Apply at once for best selection to

C. H. STREET & CO.,

Successors to Immigration Association of California,

415 Montgomery St., San Francisco.

Agricultural and Grazing
LANDS FOR SALE.

7975 Acres of fine grazing and agricultural land, including 4000 head of fine grade stock sheep; abundance of water; 9 miles from Merced City, and near Merced River; price, \$7.25 per acre; 1000 acres good wheat land. Address

OSTRANDER & SONS,
Merced, Cal.

Or N. C. CARNALL & CO.,

624 Market Street, San Francisco, Cal.

CHICO VECINO!

Best location in the State of California for beautiful suburban

HOMES.

Located near the thriving city of CHICO, Butte County, California. Subdivided from the heart of the famous

RANCHO CHICO,

The well-known property of

GENERAL JOHN BIDWELL.

Town Lots and acreage property, from fractions of an acre upward. TERMS REASONABLE. For further particulars, address:

CAMPER & COSTAR, Real Estate Agents,
Chico, Butte Co., Cal.

Or WM. H. MARTIN.

809 Market Street, San Francisco, Cal.

FOR SALE OR EXCHANGE.

Ranch of 200 acres on Coquille River, Coos County, Oregon; 40 acres bench land 160 acres bottom, 80 acres under cultivation; 14 miles from Coquille City, one-half mile from steamer landing. An abundance of fine spring water on place. Price, \$1500 cash, or will exchange for California property in vicinity of San Francisco Bay. For further particulars apply to

H. GOETZ.

659 Clay St., San Francisco, Cal.

LAND & WATER FREE!
800 Acres Rich, Level Land.

To some one who will summer fallow and cultivate well, will be furnished free water and use of 160 acres of good land (S. E. Sec 13, T. 21, R. 23) within 9 miles of Tulare, S. W. Forty acres formerly plowed. Land on all sides cultivated and pastured. Water for irrigation (if needed) free. Also (without water) 640 acres (Section 13, T. 23, R. 24), four miles westerly of Tipton and S. P. R. R., all in Tulare County and the Artesian belt. For particulars call on E. M. DEWEY, 7 miles S. W. of Tulare, or A. T. DEWEY, 220 Market St., San Francisco.

GOOD CROPS EVERY SEASON WITHOUT
IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, H. MEYRICK, Box 5, Santa Cruz, Cal.

IT STANDS AT THE HEAD!

"DOMESTIC"
THE LIGHT RUNNING

DO NOT FAIL to SEE THE "DOMESTIC" Before Buying a Sewing Machine.

It is the leader in practical progress. Send for price list J. W. EVANS, 29 Post St., S. F.

THE LOUISIANA TRACT!

SITUATE ONE MILE FROM THE FLOURISHING

City of Sacramento,

With a Population of 30,000, and

$\frac{1}{4}$ MILE from Terminus of an ELECTRIC RAILWAY, now in course of construction.

SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. **5 ACRES IN FRUIT**, well attended to, will make a handsome income. **One Acre in Strawberries** will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$80, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

—APPLY TO—

EDWIN K. ALSIP & CO., - **REAL ESTATE AGENTS,**
SACRAMENTO, CAL.

Catalogue of Lands issued monthly. Send for one.

SANTA YNEZ,

Santa Barbara County, California.

THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil.

TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for home or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

E. de la CUESTA, Agent, Santa Ynez.

McCLUNG & PRAY, Agents, 325 Montgomery St., San Francisco.

SIDNEY LACEY, Agent, Los Angeles.

COOPER & DREYFUS, Agents, Santa Barbara.

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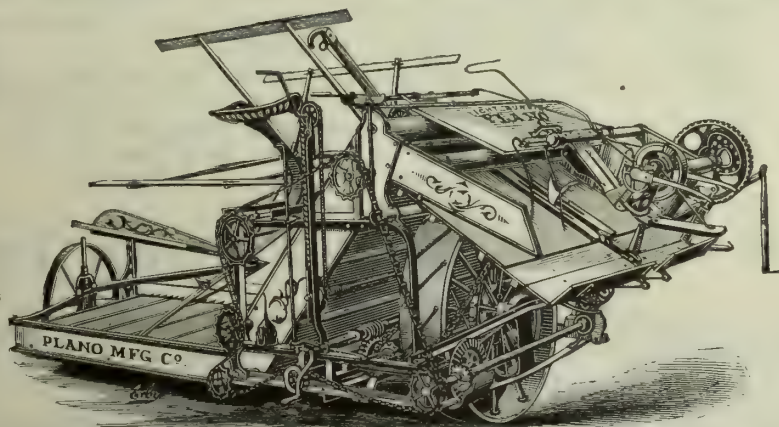
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“PLANO” TWINE BINDER

IS FAMED FOR ITS

Lightness, Durability, Simplicity and Capacity.

Price 5 feet.....\$200



Price, 6 1/2 feet.....\$210

The Light-Running All Steel “Plano” Twine Binder, 5 1/2 & 6 1/2 ft. Cut.

WE HAVE A CERTAINTY ON THESE POINTS OF SUPERIORITY:

There is not even one experiment about it.

The wear is very slight and is easily taken up.

It does not get out of order, for it is well made.

It is an economizer of twine, and does not strain the band.

The size of bundle is most easily regulated.

Tightness of bundle is most easily regulated.

It binds either long or short grain with equal ease and certainty.

Each bundle is completely separated, even in tangled grain.

It is perfectly automatic and needs no attention, except proper oiling.

P. P. MAST & CO.,

No. 31 Market Street, - San Francisco, Cal.

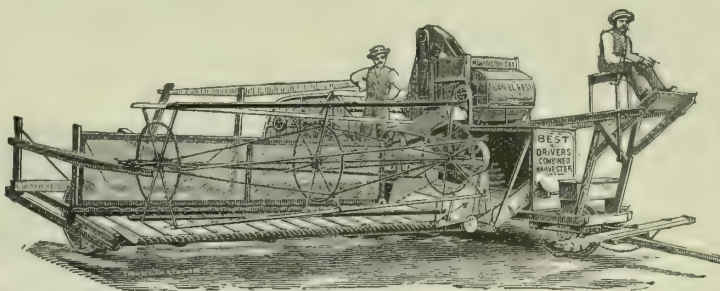
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The BEST & DRIVER COMBINED HARVESTER FOR 1888

HAS PROVED TO BE
THE LIGHTEST DRAFT,
EASIEST TO OPERATE,
THE BEST SEPARATOR
AND GRAIN CLEANING

Combined Harvester in the field, and there are none that can equal our Header in down and tangled grain. For proof of these assertions please see Testimonials in our Circulars.

4 to 6 Horses
Lighter



Draft Than Any
Others.

Do Not Experiment with Machines that have no Cleaners

If you wish to get the highest market price for your grain, buy the only machine that has a Cleaner. I have the only successful Cleaner in the market for Combined Harvesters, and was Awarded the First Premium and Silver Medal over all other Competitors at the State Fair in 1887.

MY PATENT AUTOMATIC GOVERNOR ON THE FAN
Completely Governs the Blast on the Shoe.

MY PATENT BRAKE

Gives the driver complete control of the Machine. All others using the Strap Brake are infringing on this Patent.

FOR PRICES, CIRCULARS AND OTHER INFORMATION CALL AT MY WORKS OR ADDRESS

DANIEL BEST,
San Leandro, Cal.

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TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land?

DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?
DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?
DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10-acre lots, which they are now selling at \$175 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They are building a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State. No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

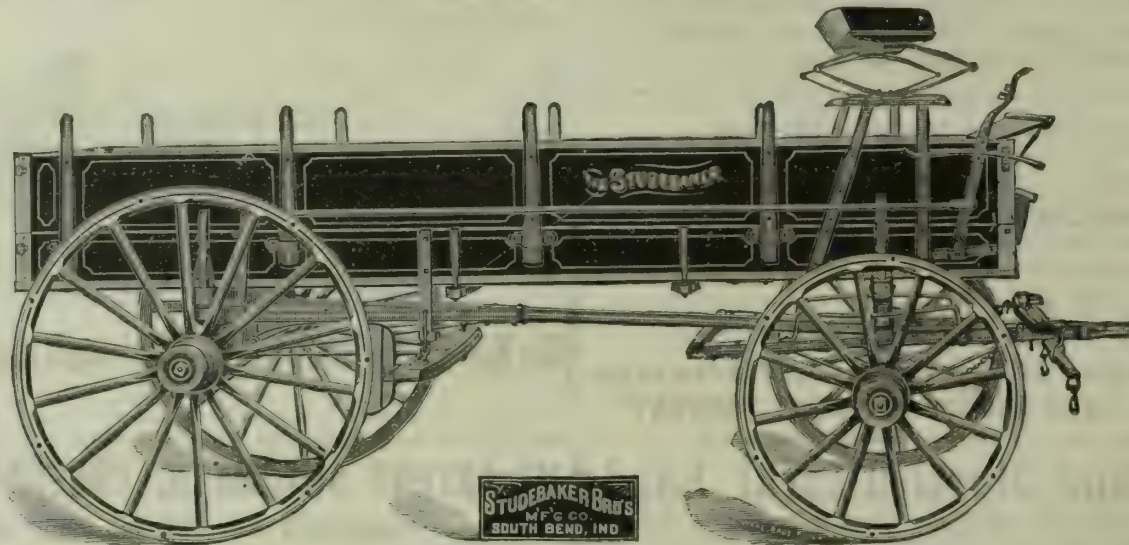
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Send for Catalogue.

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To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

FERTILIZE! FERTILIZE!
NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. KERRIS—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

Dr. J. KERRIS, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

GRANGERS' BUSINESS ASSOCIATION,
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OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.

Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager.

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Howe's Scales and Crescent Coffee Mills

D. N. & C. A. HAWLEY, General Agents,

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THE GIANT POWDER COMPANY.

PATENT OWNERS OF

JUDSON POWDER,

NOBEL'S DYNAMITE,
NOBEL'S EXPLOSIVE GELATINE,
NOBEL'S GELATINE-DYNAMITE,
Best and Strongest Explosives in the World.

The Only Reliable and Efficient Powder For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

BANDMANN, NIELSEN & CO, General Agents, San Francisco.

FERTILIZERS!

Feed the Land and it Will Feed You.

Fertilizers lessen the necessity for irrigation, increase the yield, improve the quality of crops, and keep the soil in a strong, healthy condition.

Special Fertilizers for all Crops.

THE CALIFORNIA BONE FERTILIZERS ARE CHEAPER THAN
BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

Send for circulars, with price and full information, to

California Bone Meal and Fertilizer Co.,

118 CALIFORNIA ST., SAN FRANCISCO.

Self-Playing Organ.

W. H. TILTON.

JAMES CARROLL.

CARROLL & TILTON,

— DEALERS IN —

'Gentlemen's and Boys'

CLOTHING!

An Automatic Organ Combined with an Ordinary Five Octave Organ.

No Teacher or Practice Necessary.

ANYBODY CAN PLAY the latest and most difficult music of every class. Every home should have one.

Send for descriptive circulars, prices and terms to
KOHLER & CHASE, 137 & 139 Post St.
Dealers in all kinds of Musical Goods.

FURNISHING GOODS, HATS, CAPS, TRUNKS, VALISES, ETC.

873 MARKET STREET, opp. Powell, S. F.
Visitors welcome. Information by mail.

The Effect of Parasites on the San Jose Scale.

B. M. LeLong, Secretary State Board of Horticulture, has received the following letter from A. Scott Chapman, State Horticultural Commissioner of Los Angeles. Mr. J. W. Wolf-skill and Mr. Alex. Crow of Los Angeles having noticed the progress of the San Jose scale, at Los Angeles, were for a time at a loss to account for its seeming disappearance, a close examination revealed the fact that they were being killed by a minute parasite. Last week Mr. Crow and myself visited a place on Jefferson street, in the southern part of the city, where the pear trees were last year very badly infested, some of them having died, now they are looking green and thrifty, and much of the new growth is two feet long. It is hard to find a living specimen of the scale, and many of the dead scales show little holes in them where the parasites have hatched. Mr. Crow says that the parasite is the same as the one that works on the willow scale.

CYPRESS WOOD.—It is demonstrated by actual experiment that cypress is admirably adapted to the building from top to bottom, inside and outside. It is a wood that stays where it is put, makes close joints, finishes handsomely, and works as well in every respect as white pine, though perhaps not quite as easily. For siding, cypress should be selected so that there shall not be rough spots in the grain. A careful throwing out of the rougher pieces will obviate a bad appearance that might be caused by a careless carpenter.

Cattle at Auction.

We have at Sacramento, Cal., 52 head of strictly choice, unregistered Shorthorn heifers, all one year old, nearly all solid red, weigh about 800 pounds. They were all bred on our own farms for several generations, and are practically pure bred. For individual merits see the heifers; they speak for themselves. These heifers will be sold at public sale on Friday, May 18th, at the fair grounds at Sacramento, to the highest bidder for cash. Cattle on the grounds for examination. This will be a rare chance for our cattle men to sort up their herds for any purpose.

WM. P. HIGENBOTHAM,
BILL & BURNHAM.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JOHN G. H. LAMPADUS—San Luis Obispo Co.
G. W. INGALLS—Arizona Territory.
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C. E. WILLIAMS—Yuba and Sutter Co.'s.
R. G. HUSTON—Montana Territory.
E. H. SCHAEFFLE—Butte Co.
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Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

Buena Vista Rancho.

A portion of this Rancho, suitable for mixed farming or dairying, containing 1672 acres, will be offered for 30 days at \$35 an acre, one-third cash, balance in three years. Address J. C. HOAG, 312 Van Ness Avenue, San Francisco, or TYLER BEACH, San Jose.

A Rare Chance.

The Gabilan Rancho, situated in Monterey county, containing 7665 acres, is offered at \$36.50 an acre, for 30 days, on long time and easy terms. Address, J. C. HOAG, 312 Van Ness Avenue, San Francisco.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., Room 3.

METEOROLOGICAL REVIEW.—We have received from Sergeant James A. Barwick, of the U. S. Signal Service, a copy of the Annual Meteorological Review, with notes on the resources of California for 1887, compiled by him for the State Board of Agriculture. With the many tables of temperature and rainfall, and Elwood Cooper's treatise on olive culture—which is included—it makes a volume of 230 pages. In the letter submitting it to the Secretary of the State Agricultural Society, the Sergeant says he has endeavored to keep out of his work "flowery descriptions of every little hamlet," and to give a general idea of the resources of each county represented. It is a very timely and valuable publication.

BYRON JACKSON issues a handsomely printed and amply illustrated 56 page catalogue of the engines, pumps, stackers and other irrigating and harvesting machinery which he manufactures at 625 Sixth street, S. F.

BURGE & DONAHOO, general agents for Mitchell wagons, Empire mowers, various sulky rakes and other farm implements and machinery, have removed from 26 Beale street to 9 Main street, S. F.

WELLS, RICHARDSON & Co's

IMPROVED Butter Color.

EXCELS IN STRENGTH
PURITY
BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color. Three sizes, 25c. 50c. \$1.00. For sale everywhere.

WELLS, RICHARDSON & CO. Burlington, Vt.

(33 Colors.) DIAMOND DYES

are the Purest, Cheapest, Strongest, and most Durable Dyes ever made. One 10c. package will color 1 to 4 pounds of Dress Goods, Garments, Yarns, Rags, etc. Unequalled for Feathers, Ribbons, and all Fancy Dyeing. Also Diamond Paints, for Gilding, Bronzing, etc. Any color Dye or Paint, with full instructions and sample card mailed for 10 cents. At all Druggists.

WELLS, RICHARDSON & CO., BURLINGTON, VT.

SPENCER PIANOS

Latest Improved Repeating Action
(PATENTED).

TONE UNSURPASSED.

Durability Guaranteed in any Climate.

F. W. SPENCER & CO.,

723 Market Street, San Francisco, Cal.

Second Floor, History Building.
Largest Piano Warehouses in California. Catalogues and prices by mail. Visitors always welcome.

REMNAANT PALACE,

1326 Market St., opp. Odd Fellows' Build'g
LEON LEMOS, Proprietor.

Remnants of Domestic. Suits to Order,
\$15, \$16, \$17, \$18, \$20; Imported
from \$20 to \$30.

California is a Paradise, but the people would object to go in Paradise toilet. Leon Lemos has contracts with several leading Woolen Mills to buy all their REMNANTS, and can make a fine fitting, well-trimmed suit from \$16 upward.

Farmers will save money by calling on him, as he makes suits to order for the same price as ready made. Samples and prices by mail. Don't forget.

LEON LEMOS,

1326 Market St., opp. Odd Fellows' Build'g

SCREENS

FOR HARVESTING and
CLEANING MACHINES
Manufacturers of all kinds
of Perforated Metal, Lip
and Lip Hook Screens,
round and slotted, or any
other kind desired for cleaning
and separating grain.
Farmers will please take
notice that the metal screens do not clog or choke up as do
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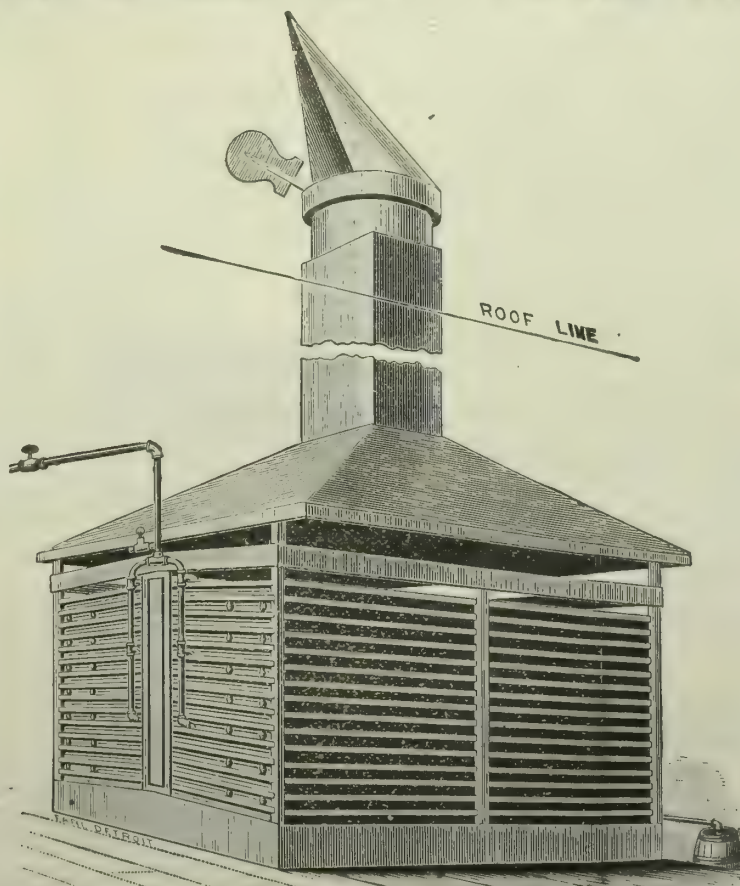
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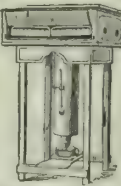
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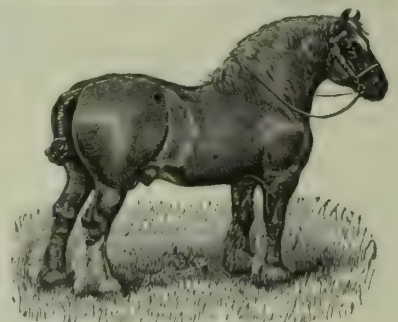
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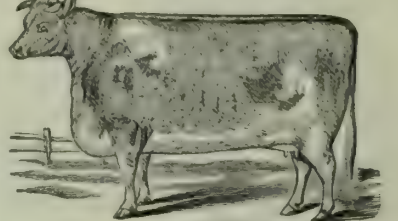
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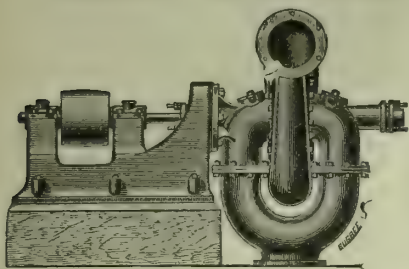
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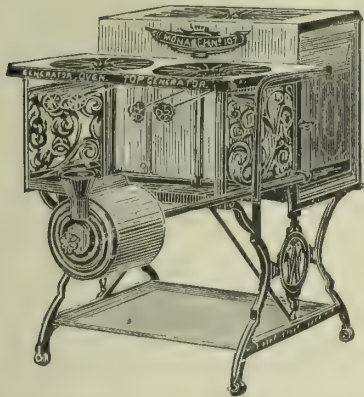
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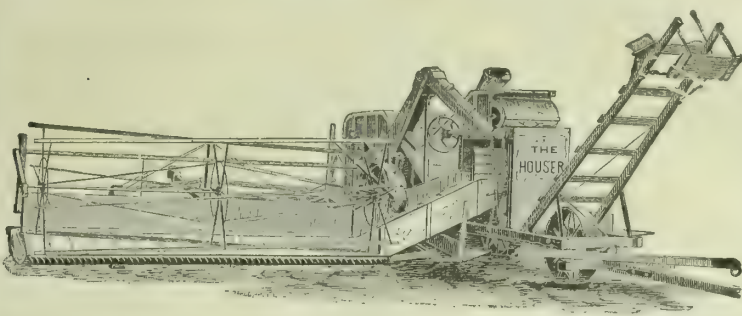
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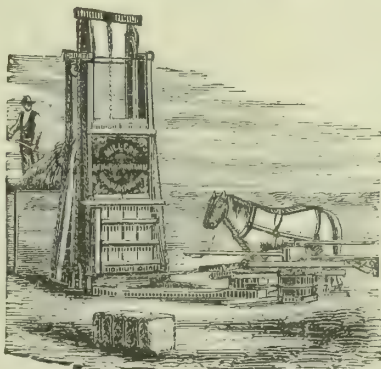
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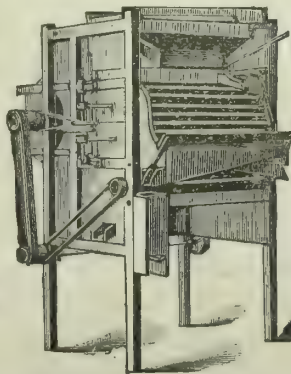
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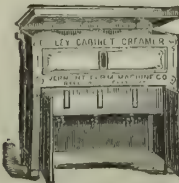
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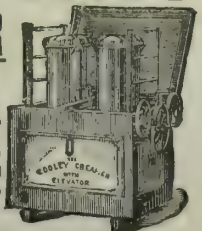
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WITTLAND & FREDRICKSON, Commission Merchants.

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S. H. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, May 9, 1888.

Continued activity has been the characterizing feature of the week in all farm products, but particularly in fruits and vegetables. The weather the past week was of a more favorable character for both growing and maturing crops of fruit and grain. The failure of W. T. Coleman & Co. for about \$2,500,000, with a strong probability that the assets will not reach over \$1,000,000, although given out at over \$4,500,000, has a depressing temporary influence on fruits, etc., for canners use. Both English and Eastern wheat markets have ruled strong. To-day's cables are as follows:

LIVERPOOL, May 9.—Wheat—Very inactive. California spot lots, 6s 6½ to 6s 9½d; off coast, 34s; just shipped, 34s 6d; nearly due, 34s 3d. cargoes off coast, steady; on passage, inactive; French country markets, firm; wheat and flour in Paris, quiet; wheat on passage to Continent, 434,000 qrs; wheat and flour on passage to U. K., 1,191,000 qrs.

Foreign Review.

LONDON, May 7.—The *Mark Lane Express*, in its review of the British grain trade, says: Native wheat is firm. There is a fractional advance in provincial markets. The rates for country flour are maintained. Barley, oats, beans and peas are scarce and prices favor sellers. Prices of foreign wheat in London are against sellers. Russian wheat declined 6d. White wheats are firmer. Corn is in demand at ½d per cwt. advance. Linseed on spot declined 1s. At to-day's market wheat was inactive. Flour was steady. No corn was offered on spot; mixed American, to arrive, is quoted at 25s 9d ex ship.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Date.	Cash.	May.	June.	July.	Aug.
3.....	97½	98½	99½	99½	99½
4.....	98½	99½	100½	100½	100½
5.....	99½	100½	101½	101½	101½
6.....	100½	101½	102½	102½	102½
7.....	101½	102½	103½	103½	103½
8.....	102½	103½	104½	104½	104½

The closing prices for wheat have been as follows, at Chicago:

Date.	Cash.	May.	June.	July.	Aug.
3.....	82	81½	82½	83½	83½
4.....	81½	81	82	83	83½
5.....	81½	81	82	83	83½
6.....	81½	81	82	83	83½
7.....	81½	81	82	83	83½
8.....	81½	81	82	83	83½

NEW YORK, May 9.—Wheat—98c for cash, 95½c for May, 94½c for June, 95½c for July, 94½c for August and 94½c for Sept. 1st.

CHICAGO, May 9.—The closing quotations of wheat are: June, 85½c; July, 86½c. Corn—May, 56½c; July, 55½c.

California Products at Chicago.

CHICAGO, May 5.—The supply of foreign oranges is about exhausted, and there are but very few coming in. The stock of California fruit is liberal, while consignments are arriving constantly. Choice medium-sized fruit sell moderately and rule steady, but the very large fruit is not cared for, and common small oranges are dull. The market is easy at the following prices for California fruit: 140, 176 and 200 to the box, \$3.25 and \$3.50; odd sizes, \$3 and \$3.25; seedlings, \$2.25 and \$3; Navels, fancy, \$5.50; common, \$3.50 and \$4.25.

The California dried fruit supply is considerably smaller than some time ago. There are still a good many plums and prunes left, but there are moderate offerings of other descriptions. The latter sell freely, while the first named are slow. We quote: Apricots, sun-dried, ½ lb, 10½c@11½c; bleached prime do, 13c; do, choice, 14½c@15c; do, fancy, 15c@16c; evaporated, choice to fancy, 14½c@16c; peaches, sun-dried, ½ lb, 11c@12c; do, evaporated, unpeeled, 13c@15c; do, peeled, 20c@22c; plums, unpeeled, ½ lb, 6c@9c; do, pitted, 10½c@11c; prunes, small, ½ lb, 6½c@8c; fancy large, 10c@12c; raisins, loose Muscatels, 2-crown, ½ box, \$1.35@1.45; do, 3-crown, ½ box, \$1.50@1.65; do, London layers, ½ box, \$2.25@2.40.

Hops are steady and meet with a fair demand, and as stocks are very moderate there prevails for choice grades a firm market. Common qualities are quiet and tame. Pacific Coast, choice, 13c@14c ½ lb; common to prime, 11c@12½c.

New California potatoes are coming in freely and sell at \$2@2.25 per sack.

New cabbages from California rule slow, the heads being too large. They bring \$2 per cwt.

Gloomy Wheat Estimates.

NEW YORK, May 5.—The *Herald* prints a great many dispatches from the wheat regions, and in a summary estimates that there will be a deficit in the crop anywhere from 50,000,000 to 80,000,000 bushels. The decrease in California is estimated at 50 per cent.

Miscellaneous.

NEW YORK, May 7.—There has been no movement of moment in hops, but prices are quoted as steady. State new are selling at from 9c@13c; Pacific, 8c@12c; German, 10c@22c.

Raisins maintain their position. The sales are moderate in extent, but the movement is active enough for the light supply. Three-crown best are quoted at \$2.05.

Local Markets.

BAGS—The market is slow and weak for Calcuttas at 6½c@7c for June-July delivery.

BARLEY—The market held strong at full prices up to Tuesday when a lower range set in for options, but holders of actual barley would not sell at the lower bids. Futures dropped on Call about 5c. To-day's sales are reported as follows:

Morning Session: Buyer 1888—200 tons, \$1.02½; 300, \$1.02½; 400, \$1.02½; 500, \$1.02½; 600, \$1.03; 100, \$1.03½; 100, \$1.03½; 100, \$1.03½. Seller 1888, new—1000 tons, 92½c; Afternoon Session: Buyer season—100 tons, 88c. Buyer 1888—100 tons, \$1.04; 300, \$1.05; 100, \$1.04½; 300,

\$1.04½, 300, \$1.04½; 600, \$1.04½; 100, \$1.04½ per cwt.

BUTTER—The market is very strong. There is a decided change in opinion regarding the future. The impression is that the season will be short, and consequently there will be a light pack. In this market buyers are paying full quotations.

CHEESE—The market at the lower quotations is steadier. The demand is increasing.

EGGS—The tone of the market is stronger, with the tendency upward under a good demand and decreasing stocks.

FLOUR—The market is strong at full quotations.

WHEAT—Parcels of the better grades are hard to get in straight parcels. Holders are indifferent sellers. In futures, trading on Call the past week was light. The fluctuations were unattractive. At to-day's Call the sales reported are as follows:

Morning Session: Buyer season—100 tons, \$1.43½; 500, \$1.43½. Buyer 1888—200 tons, \$1.59½; 300, \$1.59½. Afternoon Session: Buyer season—100 tons, \$1.44; 300, \$1.43½. Buyer 1888—600 tons, \$1.61½, 400, \$1.61; 100, \$1.60½; 800, \$1.60½; 100, \$1.60½ per cwt.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to May 7 '87.	July 1 '87 to May 5 '88.
Flour, qr. sks.....	3,820,360	3,218,900
Wheat, cts.....	11,600,669	7,909,745
Barley, cts.....	2,093,376	2,047,803
Oats, cts.....	126,034	147,600
Potatoes, sks.....	736,179	999,977
Corn, sks.....	91,632	207,623
Rye, sks.....	22,962	16,340
Buckwheat, sks.....	5,865	3,054
Beans, sks.....	418,140	381,434
Bran, sks.....	400,686	444,206
Hay, tons.....	91,098	103,873
Salt, tons.....	20,848	14,510
Wool, bls.....	64,854	59,479
Hides, No.....	95,485	92,780
Raisins, 20-lb boxes.....	137,421	114,507
Quicksilver, flasks.....	16,182	26,773
Hops, bls.....	13,002	15,568

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to May 7 '87.	July 1 '87 to May 5 '88.
Flour, sks.....	183,919	325,731
Wheat, cts.....	839,802	1,046,899
Barley, cts.....	5,443	75
Oats, cts.....	314,381	247,630
Corn, cts.....	117,804	12,590
Wool, bales.....	9,549	7,643
Bran, sks.....	27,918	59,013
Hops, bales.....	764	508
Hides, No.....	30,254	28,016
Rye, cts.....	5,289	81,581
Potatoes, sks.....	137,702	81,581

Cereals.

In giving the market on flour the New York Produce Exchange Reporter gives the following: English shippers are as a rule unable to fill their orders, their limits not permitting them, they allude to the large imports into the United Kingdom and express some surprise that their chief markets, Liverpool, London and Glasgow, have been so well maintained under the very large home and foreign supplies. The future of their markets very largely depends upon the shipments from this coast, and they promise to fall off in June and July. Eighty-five per cent of the surplus of the last moderate crop of wheat will be converted into flour before the middle of June, and with the growing crop fully 18 days later than the average of the last 10 years, we shall be compelled to draw on the reserves, and these are quite certain to be exhausted before the close of the cereal year, hence the lateness of the season is becoming more and more important daily. It seems to us that the public as a rule do not realize the gravity of the situation. With warm weather and copious rains all over the winter wheat States from time to time during May, our apprehensions for the growing crop would in some measure be lessened, though there is a large area under winter wheat in Ohio, Indiana and Illinois, that rains in May will do no good, while a very considerable area would be benefited by heavy rains and warm weather. The mean temperature in these States the past two weeks has been far too low for the wheat plant to develop, hence a late harvest is inevitable.

In a later report the Reporter says: The past 3 days we have been surfeited with crop reports from the winter wheat States, a large majority of them unfavorable to the crop and we cannot doubt that the injury to the plant has been serious; the lack of rain and the low, mean temperature have prevented the development of the plant in the chief winter wheat-producing States, and in many localities the plant has been killed, so that we are compelled to reduce our estimate of the probable yield to 69 per cent of an average yield west of Pennsylvania, but east and south of Ohio the crop promises better than last year, but the area last referred to produces a small per centage of the crop of winter wheat. Correspondents referring to the invisible supply, say: It is one-quarter to two-thirds of the quantity held last year. Large purchases have been made at the Northwest this week for the winter wheat States. The Minneapolis *Daily Market Record* of April 24, says: About one-quarter of the seeding has been done in Minnesota, but it will be general throughout Minnesota and Dakota the last of the current week. Reserves in farmers' hands and in elevators are much lower than usual, and a larger acreage of oats, barley and flax will be sown in Minnesota, Dakota, Iowa and Nebraska, and wheat acreage will be decidedly decreased. Prime reports the winter wheat crop has run down in every State in the winter wheat-belt the last 10 days. Toward the close the longs evinced a desire to realize, and with rains at the Southwest a weaker feeling has been reported at the chief Western markets.

J. E. Beerbohm's London *Evening Corn Trade List*, of April 13, says: The extraordinary lateness and extreme coldness of the present spring in Europe, is giving rise to serious apprehensions among pessimists that it will, as "R. W." forecasts, be followed by a cold summer, in which direction, indeed, all past experience leads. Weather prophets go back to 1879 to find an equally cold and backward spring, and argue that as in 1879 so in 1888 will the summer be unfavorable, and short crops will be the result. In 1879, when the springtime was both cold and wet, thus differing from the present season, which has not been wet; the crop of wheat was perhaps the smallest within living memory, and the apprehension that 1888 may possibly be like unto 1879, premature and far-fetched as the comparison is, has doubtless, in conjunction with the prospect in America, unless the outlook improves, of a shortage of about 5,000,000 qrs. in the crop in that country, helped to stiffen the hands of wheat holders.

The London *Miller* reckons the wheat supplies and requirements of the United Kingdom for the months of April, May and June as follows, farmers' deliveries being taken the same as last year, and estimated Russian shipments covering 8 weeks from the Black sea and 4 weeks from the Baltic:

	Qrs.
Total supplies.....	5,048,549
Requirements.....	6,375,000
Deficiency.....	1,316,451

In plain words, our graineries by the end of June bid fair to be practically exhausted of foreign wheat reserves.

Oregon advices report the crops improved by rains both in that State and Washington, but notwithstanding this the wheat outturn is not expected to be more than 80 per cent of last year's yield. The movements to market of the surplus from the 1887 crop is slower, owing to the better prices abroad, at the East and in this city, causing holders to ask more money.

In this State advices report that the cool weather of the past week has been of great benefit to the growing plant. Many fields of barley, wheat and also of oats are being cut for hay, to be summer-fallowed. The plant in nearly all sections is reported not to be high to what the average season brings it, but then the cool weather, unless there are hot winds before maturing, will cause the grain to fill out well.

The stock of wheat in the State, notwithstanding the light export demand, is melting away under a steady home demand, chiefly for milling. The high price ruling for bran and middlings causes millers to convert larger quantities of wheat into flour than they otherwise would.

The past week witnessed a dull and inactive market for wheat, so far as the shipping demand is concerned, but some sales were made to parties who sold futures on Call. There is very little strictly No. 1 white wheat to be had, while milling grades are equally as scarce. The bulk held is off grades.

There can be no doubt but this year's barley crop will not be more than 75 per cent of last year's, while the consumption is not only fully 25 per cent more, but steadily increasing. The stock in this city is not large, considering the heavy receipts and the large quantity required to meet Call Board sales, while the supply in farmers' hands and in interior warehouses is small, owing to the large consumption. From all information at hand, it is safe to state that fully 20 per cent of the fields of barley that would have given a fair average crop have been cut for hay. Sales the past week of both feed and brewing grades have been fair, trading having to a certain extent been restricted by the firmness of holders and the limited offering of the better grades. Last year the bulk of the Oregon barley was damaged by rain; this year the crop promises to be bright.

In oats, the past week witnessed fair trading at steady prices. Stocks are not large, neither is the supply to draw from. Choice grades are scarce and only obtainable by bidding well up.

Corn has held strong throughout the week. Choice grades are scarce and held at full prices. The demand has been only fair.

Rye is firm and in fair demand at full quotations.

Feedstuff.

For ground feed, the market is very strong, with a good demand for the season ruling. Bran and middlings are unchanged, but the better grades of ground barley and feedmeal are firmer.

Hay is reported to be quite general. More fields of grain are being cut for hay, but notwithstanding this, the outturn will hardly equal last year. A large proportion of the hay will be short, owing to the plant being stunted by season of the dry weather. The market holds very strong at full prices. The consumption demand continues quite free.

Vegetables.

The market for garden truck is quite active, with the more backward kinds beginning to put in an appearance. Beans are weaker. Asparagus is generally firmer. Peas are subject to daily fluctuations, with canners cleaning up the market when prices go sufficiently low. Summer squash is in better supply, as are cucumbers, but tomatoes are in light receipt. Cabbages are easy, with fewer going forward to Chicago and other points east of the Rocky mountains.

New potatoes are steadily improving in size and quality. Poor are hard to sell, but large and the better matured are wanted. Shipments to Missouri river distribution points are continued quite free. The crop in this State and Oregon promises to be large.

In onions, the market is firm for the better and more choice selected. Cut onions and new onions favor buyers.

Fruits.

J. Durney of Alameda shipped the first currants of the season to this market. They sold at \$1.50 per drawer. Daily shipments will soon be in order from many different points.

Gooseberries continue slow under free receipts.

Apricots are coming in more freely but they do not find much table custom owing to the high prices asked. The crop in the State will not be more than two-thirds of last year's. For future delivery contract prices named range from 2½ to 3c, but at the close the failure of W. T. Coleman caused more offish feeling, which will doubtless prove temporary, for "cots" are considered too much of a luxury to allow canners to pass them by, besides this driers will take them quite freely.

Strawberries come in freely; prices fluctuate from day to day. The crop this year will be very large, as will the crop of all other kinds of berries.

In answer to the writer's request to send information regarding crops, prices, etc., the following has been received from Watsonville:

Cherries will be an average crop. Apricots—Royals will be a fair crop, but of Moorpark there is a total failure. These are the only varieties raised here to any extent. Peaches will be a full crop and of fine size. Of plums and prunes there will be a good crop; apples and pears a fair crop. We hear of 3c being paid in some sections for apricots but then no buyers have been in this locality. A good many tons of fine "cots" could be brought in the neighborhood of Green Valley and Corralitos, five or six miles north of Watsonville.

It is very hard to get prices paid by cannery men and their agents. One of the late sales given is the entire crop of an orchard at 2c per pound for pears, plums, peaches and apricots, so as to get the latter. The buyer thinks he got a good bargain and the writer believes it also.

In dried fruits there is nothing new to report. Stocks, both here and at the East, are with a light but steady call ruling. Bright colored are wanted.

In raisins the stock is about exhausted. Prices are stiffening.

Live-Stock.

Bullocks continue easy under a fair selling pressure. Feed in the valley ranges is growing scarce, causing many herds to be driven back into the mountain ranges. Mutton sheep are easy with more offering for sale. After this month about all the large bands will be back in the mountain ranges, when better prices are looked for. Lambs and calves are without essential change. Desirable sized hogs are wanted, and if in good condition they will fetch full top figures. Milch cows are slow. In horses, there is a good inquiry for general utility animals, single footers, driving animals and matched teams. Prices are about as heretofore quoted in this department.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed and one-half from the price of grass-fed, that is, animals running at large).

HOGS—On foot, grass-fed, 6½c@6¾c ½ lb.; dressed, 9½c@10c ½ lb.; soft, 6c@6½c ½ lb.; dressed, 8½c@9c ½ lb. Stock hogs, 3½c@5c ½ lb.

BEEF—Stall-fed, 8c@8½c ½ lb.; grass-fed, extra, 7½c@8c ½ lb.; first quality, 7c@7½c ½ lb.; second quality, 6½c@7c ½ lb.; third quality, 5c@6c ½ lb.

VEAL—Choice, 9c@10c ½ lb.; fair to good, 7c@8c ½ lb.

MUTTON—Wethers, 6c@6½c ½ lb.; ewes, 5c@6c ½ lb.; lamb-spring, 8c@9c ½ lb.

Miscellaneous.

Wool continues inactive, owing to buyers holding off. In England, prices to-day are higher than in this country for the same grades of wool. The opinion gains ground that manufacturers have formed a kind of trust to keep prices for American wools down, so as to equalize the cost of wools, owing to the necessity of having to import certain grades, or, in other words, they pay more for foreign wools, besides paying the duty, than for American wools, so their manufacture goods will not cost so much.

In hops, there is nothing new to report. Choice grades are hard to get. Eastern advices report the crop outlook both at the East and abroad as very favorable.

Beans are slow, but firm.

Sugars will, it is claimed, be higher soon.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way.....	417,107	233,210
In port, disengaged.....	56,597	118,851
In port, engaged.....	10,361	3,862
Totals.....	484,065	355,923

To obtain the carrying capacity, add 60 per cent to the tonnage.

Tonnage on the way to Oregon, 15,077; tonnage at Portland, Oregon, loading and to load, 19,114.

Total tonnage, 34,191.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

	WEDNESDAY, May 9, 1888.
Apples, bx com.....	12½c
do choice.....	10c
Apricots, lb.....	2c
Bananas, bunch, 2 00 @ 4 00	20c
Blackberries, ch.....	2c
Chantaloupes, cr.....	4c
Cherries, white bx	11c
do black bx.....	12c
do Royal Ann.....	7c
Cherry plums.....	4c
Oranberries.....	8c
Cranberries.....	10c
Currants ch.....	3c
Gooseberries lb.....	3c
Peas, black bx.....	1c
do white bx.....	1c
Grapes, white.....	2c
do black.....	2c
do Rose Peru.....	2c
do Muscat.....	2c
do Tokay.....	2c
Isabel.....	1c
Wine, Zinfandel.....	1c
do Mission.....	1c
Limes, Mex.....	3c
do Cal box.....	4c
lemons, Cal, bx 1 00 @ 2 50	25c
do Sicily, box 4 00 @ 5 00	50c
do Australian.....	50c
Nectarines, box.....	15c
Oranges, Com bx 1 50 @ 2 00	20c
do Choice.....	25c
do Navela choice.....	35c
do do Com.....	20c
do Panama.....	20c
Peaches, bx.....	20c
Orawords, bx	20c
do choice.....	20c
Pears, bx.....	20c
do choice.....	20c
do Bartlett, bx	20c
Persimmons.....	20c
Jap, bx.....	20c
Pineapples, dos 2 50 @ 4 50	45c
Plums lb.....	15c
Pomegranates b	15c
Prunes lb.....	15c
Quinces bx.....	15c
Raspberries dr 1 50 @ 2 25	25c
Strawberries ch 3 00 @ 6 00	60c
Watermelons, 100	100c

RAISINS.
Dulcena black, fcy 3 25 @ 3 50
Imperial California, 2 00 @ 2 25
et. fancy..... 2 00 @ 2 25
Crown London
Layers, fcy..... 2 00 @ 2 25
do Loose Muscatels, fancy 1 90 @ 2 10
do Loose Muscatels, 1 80 @ 2 10
do Loose Muscatels, 1 60 @ 2 10
do Sultanas..... 1 60 @ 2 10
Dried, sacks, lb..... 5c
Outside brands of raisins
sell at from 25 cts to 50 cts less than above quotations.
Fractions come 25, 50 and 75 cents higher for halves, quarters and eighths.

do Chofes.....	25	@	4 00	ters and elghths.		
do Naveia				VEGETABLES.		
chofes.....	3 50	@	5 00	Artichokes, dos.....	—	—
do do dom.....	2 00	@	3 00	Asparagus bx.....	75	@ 2 00
do Pan.....	—	@	—	do extra choice 2 10 @ 3 00	2 10	@ 3 00
Peaches, bx.....	—	@	—	Okra, dry, lb.....	15	@ 20
Crawford, bx	—	@	—	do green bx.....	—	—
do chofice.....	—	@	—	Paranips, chl.....	2 50	@ 3 25
Pears bx.....	—	@	—	Peppers, dry lb.....	8	@ 10
do chofice.....	—	@	—	do green, lb.....	10	@ 15
do Bartlett, bx	—	@	—	Pumpkins prot.	—	—
Persimmons,	—	@	—	Squashes, Marrow	10	@
do.....	—	@	—	fat, tub.....	—	—
Pineapple, dos.	2 50	@	4 51	do Summer lb.....	10	@ 15
Plums lb.....	—	@	—	String beans lb.....	2 10	@ 5
Pomegranates, b	—	@	—	Tomatoes box.....	3	@ 4—
Prunes lb.....	—	@	—	do chofice.....	—	—
Quices bx.....	—	@	—	Turnips chl.....	1 00	@ 1 25
Raspberries dr. 1 50	1 50	@	2 25	Beets, sk.....	1 25	@
Strawberries ch. 3 00	3 00	@	6 10	Cabbage, 100 lbs	1	@ 10
				do.....	—	—

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 9, 1888.	
BEANS AND PEAS.	
Bayo, chl.....	2 00 @ 2 25
Butter.....	— @ —
Pea.....	3 40 @ 3 65
Red.....	2 20 @ 2 50
Pink.....	2 20 @ 2 50
Large White.....	3 40 @ 3 70
Small White.....	3 25 @ 3 55
Lima.....	2 00 @ 2 10
Old Peas, blk eye	2 00 @ —
do green.....	2 10 @ —
do Niles.....	2 10 @ —
BROOM CORN.	
Southampton.....	60 00 @ 80 00
Northampton.....	60 00 @ 80 00
CHICKEN.	
California.....	6 @ 7
German.....	7 @ 8
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. fresh roll, lb.	21 @ 25
do Fancy brands	26 @ 27 1/2
Pickle roll.....	— @ —
Firkin, new.....	— @ —
Eastern.....	19 @ 22 1/2
CHEESE.	
Cheddar, Cal., D.	9 @ 12
Eastern style.....	10 @ 13
EGGS.	
Cal., ranch, doz.	19 @ 20
do, store.....	15 @ 18
Ducks.....	— @ —
Oregon.....	— @ —
Eastern.....	15 @ 15 1/2
FEED.	
Barley, ton.....	16 50 @ 18 50
Feed meal.....	30 00 @ 31 00
Grd Barley ton.....	21 00 @ 22 50
Hay.....	11 00 @ 12 00
Middlings.....	19 00 @ 21 00
Oil Cake Meal.....	32 50 @ —
do new process.....	28 50 @ —
Straw, bale.....	45 @ 65
FLOUR.	
Extra, City Mills 4 00 @ 4 35	
do Country Mills 3 75 @ 4 00	
Superfine.....	3 25 @ 3 50
GRAIN, ETC.	
Barley, feed, chl.	95 @ 1 02 1/2
do Brewing.....	1 05 @ 1 25
Oatmeal.....	1 25 @ 1 40
do Coast.....	1 15 @ —
Buckwheat.....	1 75 @ 2 25
Corn, White.....	1 32 1/2 @ 1 40
Yellow.....	1 32 1/2 @ 1 37 1/2
Small Round.....	1 35 @ —
Nebraska.....	— @ —
Oats, milling.....	1 60 @ 1 70
Choice feed.....	1 40 @ 1 45
do fair.....	1 35 @ 1 37 1/2
do Gray.....	1 30 @ 1 27 1/2
do Oregon.....	— @ —
Eye.....	1 00 @ 2 10
Wheat milling.....	— @ —
Gilt edged.....	1 45 @ 1 47 1/2
do fair.....	1 42 1/2 @ 1 43 1/2
do fair to good.....	1 38 1/2 @ 1 41 1/2
Shipping choice.....	1 37 1/2 @ 1 38 1/2
do good.....	1 32 1/2 @ 1 36 1/2
do fair.....	1 33 1/2 @ 1 35
HIDES.	
Dry.....	11 1/2 @ 12
Wet salted.....	5 1/2 @ 6 1/2
HONEY, ETC.	
Bee wax, lb.....	21 @ 25
Honey in comb.....	11 @ 15
Honey in comb.....	16 @ 17 1/2
Extracted, light.....	6 1/2 @ 7 1/2
do dark.....	5 1/2 @ 6 1/2
HOPS.	
Oregon.....	6 @ 15
California.....	6 @ 15
ONIONS.	
Pickling.....	— @ —
New.....	60 @ 1 00
Silverskins.....	— @ —
Cut.....	— @ —
NUTS—JOBBER.	
Walnuts, Cal., lb.	8 @ 10
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PACIFIC COAST WEATHER FOR THE WEEK.
(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San Diego.			
	Rain.....	Temp.....	Wind.....	Weather.	Rain.....	Temp.....	Wind.....	Weather.	Rain.....	Temp.....	Wind.....	Weather.	Rain.....	Temp.....	Wind.....	Weather.	Rain.....	Temp.....	Wind.....	Weather.	Rain.....	Temp.....	Wind.....	Weather.	Rain.....	Temp.....	Wind.....	Weather.	Rain.....	Temp.....	Wind.....	Weather.				
May 3 9.																																				
Thursday.....	.24	56	S	Ry.	—	—	—	.12	58	S	Cy.	20	60	SE	Cy.	.14	57	SE	LR	.10	66	Nw	Cy.	.00	65	SW	Fr.	.03	68	SW	Cy.	.01	62	Nw	Cy.	
Friday.....	.19	56	S	Cy.	—	54	N	CL	.02	70	N	CL	.16	66	N	CL	.09	63	W	CL	.30	68	Nw	CL	.03	57	Nw	CL	.01	66	SE	Cy.	.01	63	SW	Cy.
Saturday.....	.00	62	Nw	CL	.00	56	W	CL	.00	78	SW	CL	.00	70	W	CL	.03	58	SW	CL	.00	76	W	CL	.00	65	Nw	CL	.01	66	W	Cy.	.01	64	W	Fr.
Sunday.....	.00	76	E	CL	.00	54	Nw	Cy.	.00	82	Nw	CL	.00	70	SW	CL	.00	57	SW	Fr.	.00	82	N	CL	.00	59	S	Cy.	.00	66	SW	Cy.	.00	64	W	Cy.
Monday.....	.00	80	S	CL	.00	56	Nw	Cy.	.00	76	S	CL	.00	68	SE	CL	.03	57	SW	CL	.00	76	N	CL	.00	60	S	Cy.	.00	64	SW	Cy.	.01	60	Nw	Cy.
Tuesday.....	.00	62	N	CL	.00	56	Nw	Fr.	.00	74	S	CL	.00	72	SW	CL	.00	53	W	CL	.00	76	S	CL	.00	59	W	CL	.00	66	S	CL	.01	62	Nw	Cy.
Wednesday.....	.01	58	S	Cy.	.00	54	N	Cy.	.00	78	SW	Fr.	.00	72	SW	CL	.00	57	SW	CL	.00	84	Nw	CL	.00	64	W	CL	.00	62	SW	Cy.	.00	64	Nw	Fr.
Total.....	.44				.10			.11				.35				.23			.30			.03			.02							.05				

EXPLANATION.—CL for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates small to measure. Temperature, wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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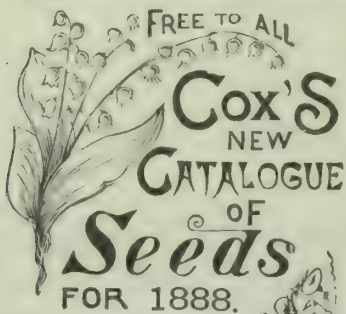
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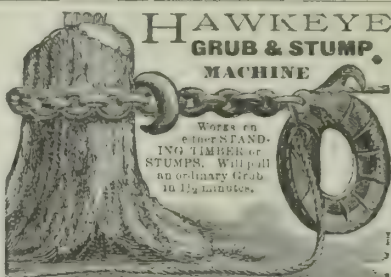
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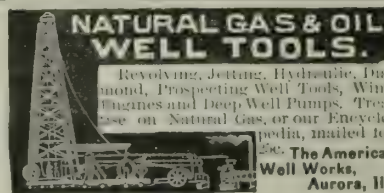
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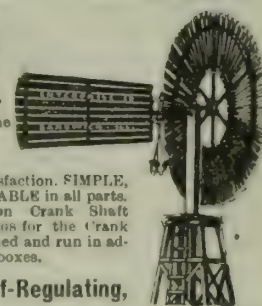
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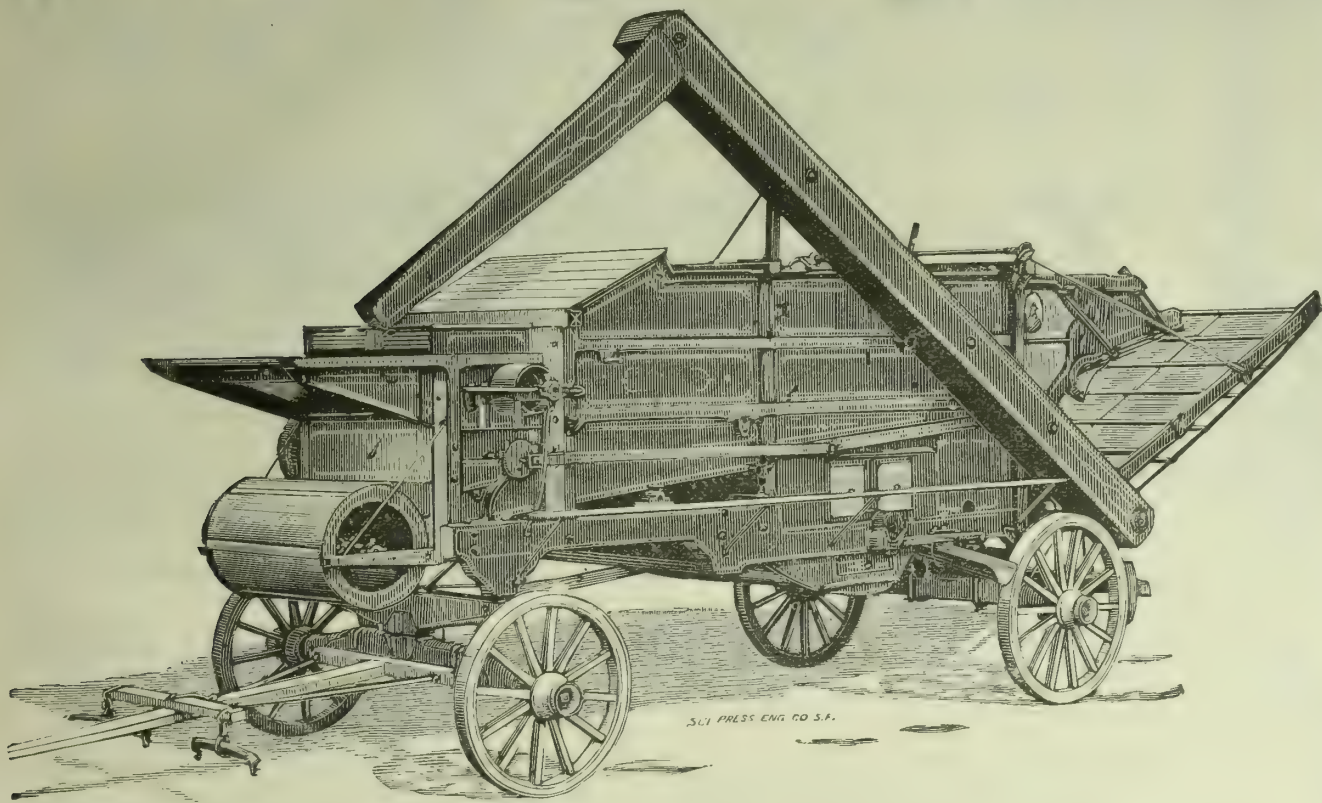
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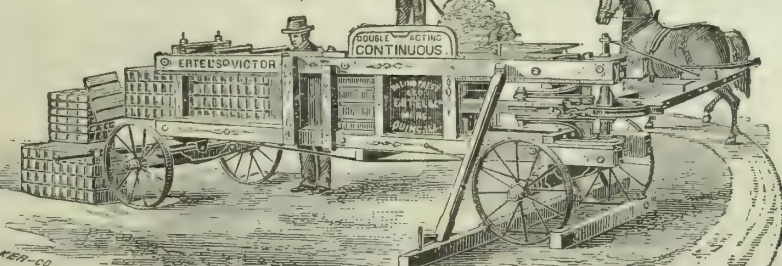


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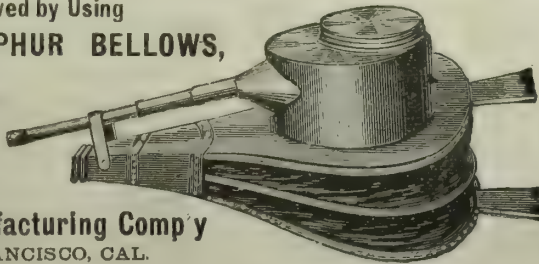
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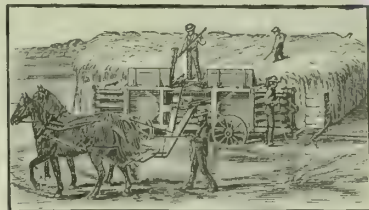
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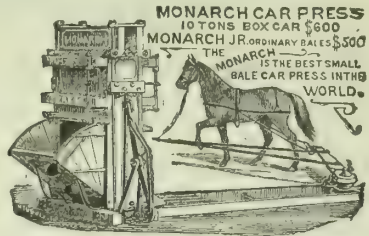
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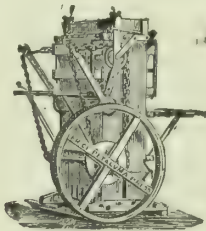
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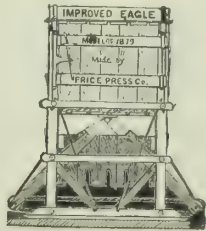
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PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XXXV.—No. 20.

SAN FRANCISCO, SATURDAY, MAY 19, 1888.

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Government Land Surveys.

There is no doubt that settlement is restricted and settlers who have the courage to go forward are much embarrassed by the impossibility of obtaining authoritative surveys of the land to which they desire to secure title. This matter has been frequently discussed, and Pacific Coast representatives have endeavored to secure further surveys, but so far without avail. Even the proposition for the settler to advance cost of surveying does not work, because, it is alleged, the rates allowed by the Government are too small to compensate a surveyor for dragging his chain.

This matter has recently been the occasion of renewed correspondence between our local land offices and the Washington office, and last week a letter was received in this city in which it was stated that applications for public surveys could be received, and on approval of such applications by the Washington office, the local office can make estimates for deposits; but "all estimates must be based upon the existing legal rates of mileage, namely, \$9, \$7 and \$5 for standard and meander, exterior and subdivisional lines."

It is said that no surveyor will accept these rates, so the application becomes of no avail. Formerly, the department allowed special and augmented rates, but these have been forbidden by recent instructions, and the deputies are not permitted to receive any extra pay from settlers whose land they survey. Much settled land in this State will remain unsurveyed until the work of surveying is made reasonably profitable.

An interesting question as to whether a single woman who takes up land may marry without forfeiting her contract with the Government has lately been under consideration. There seems to be a doubt whether she can hold a pre-emption under these circumstances. It is now the law that when a single woman, claiming land by homestead right, marries, such marriage does not disqualify her from perfecting her right, if she continues to live on the land. It is a matter of great interest to the single women in the West who are holding land under the pre-emption law, whether the Commissioner will make any distinction between a pre-emption and a homestead claimant. This is the first time this question has ever been raised in the San Francisco Land Office.

Grain Bags.

The price of bags is not nearly so interesting a matter as it was a few weeks ago, for the unfavorable turn of the season has dissolved all bag corners and combinations. They are water-proof concerns and flourish when the floods are high, but crack all to pieces in a drouth. It is interesting, however, to know that the State's prison factory has gone along with its work, unaffected by rain or shine.

think it is advisable to contract for 1500 bales to be brought by way of Hongkong. I have secured 100 bales more than our shipment by the Falls of Clyde at the most reasonable rates, which gives 6600 bales for our new stock.

This is good news, for if we get a short grain crop this year, we shall expect a long one next year, and it will be well for the State factory to go on piling up the stock, subject to farmers' orders and not for sale to corners. The prison supply thus will act as a safety guard against extortion and at the same time will relieve the

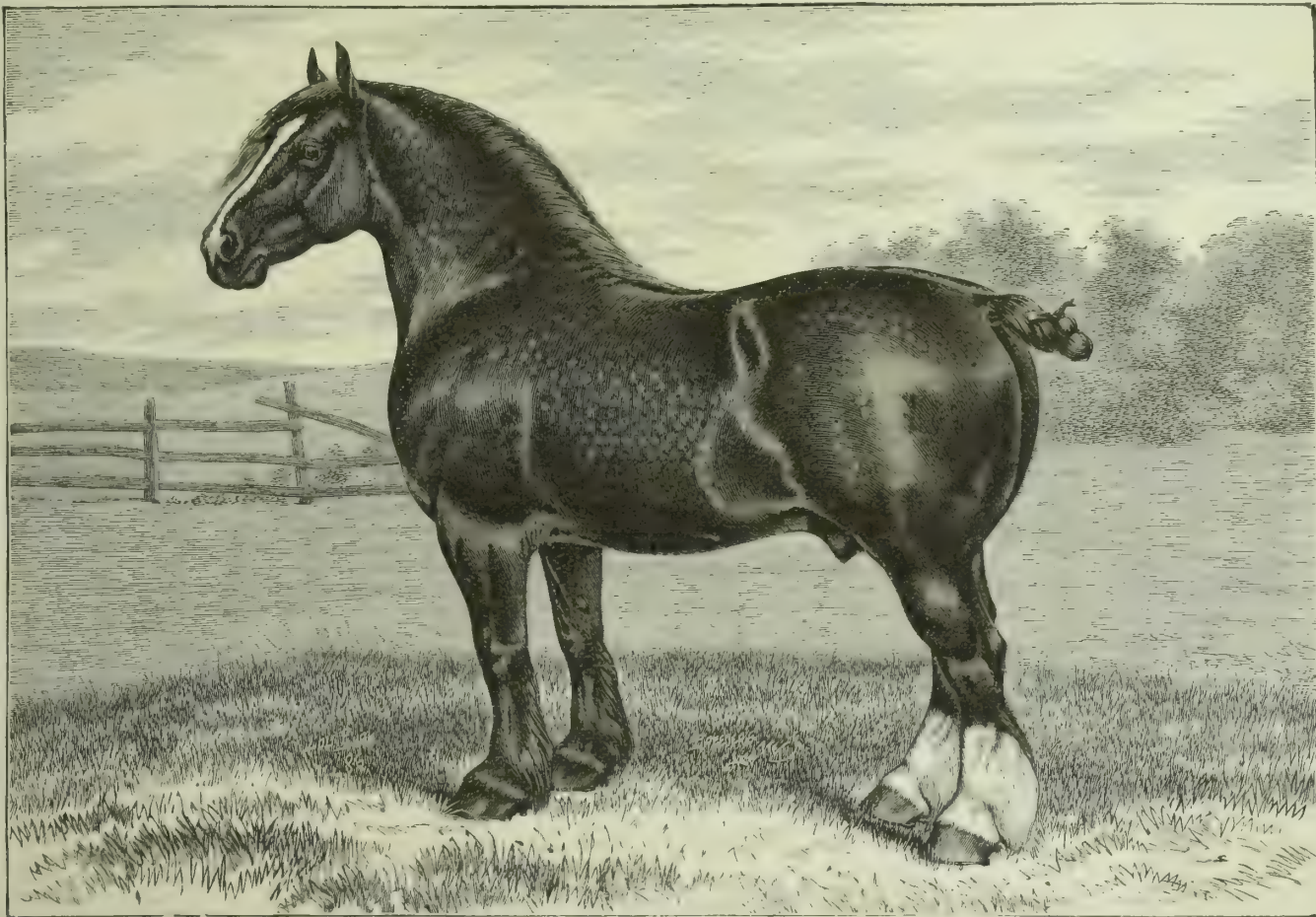
A Fine Clyde.

We have had a number of fine portraits of Clydesdale horses, but has there been any more handsome than the one which adorns this page? It is indeed a moving representation of a grand animal, full of life and grace and force. It is in fact such an animal as we would expect to see from a review of his record.

Gilderoy (1438) 2826 was foaled in April, 1878. He was bred by Mr. Duncan, Kirkton,

Deskford, Banffshire, Scotland, and owned for several years by Mr. McRobbie, Sunnyside, Aberdeen. He was imported in 1886 by Galbraith Bros., of Janesville, Wis. He is bay with white mark on face and hind legs white over pasterns.

Gilderoy began his notable work as a prize-winner as a three-year-old. He won the £50 prize given by the Nairnshire Farmers' Club, first prize and silver medal at the Royal Northern Agricultural Society's Spring Show at Aberdeen and first prize at the same society's Summer Show in 1881. In 1882 he won the £100 prize given by the Buteshire Farmers' Society. In 1883 he gained the Highland and Agricultural Society's premium of £115 at Glasgow. In 1884 he was awarded the Glenkens, Balmaghie and Parton Horse-Breeding Society's



CLYDESDALE STALLION GILDEROY, IMPORTED IN 1886 BY GALBRAITH BROTHERS.

Warden McComb in his report to the directors May 12th says:

I have the honor to report that the bag factory has been operated to the full capacity of the looms, with relays of operatives, until two days ago, when all the raw jute in our possession was converted into burlaps. The demand for grain bags was very brisk while the crop prospects were good, and our product was sold as fast as it could be manufactured. During the long-continued dry spell the demand has been very light, and I have accumulated enough to fill orders promptly as soon as the farmers decide how many bags will be needed for their respective crops. The farmers will have the advantage of lower prices for grain bags for the remainder of the season, as it is quite evident that the combination has not succeeded in the attempt to control the market by pooling their stocks to withdraw a portion of them from sale. The farmers are now fully aware that they can write to the warden of the prison and buy their sacks at the lowest current prices.

The 6500 bales of raw jute purchased for the bag factory will keep the mill employed for about 10 months, and will consequently leave a gap of two months next year unless we secure enough by steamer freight to last until the arrival of the sailing fleet from Calcutta, and I

people from taxes to support the convicts. The bag factory at the prison seems to be working well for the public benefit, so far, at least.

A FLORAL FREAK.—Mr. N. C. Whyte lately left with us three roses, grown on two adjacent bushes at his place in Oakland, which afforded an interesting example of cross fertilization. One was a handsome specimen of the green rose; another, a symmetrical pink rose—variety uncertain; and the third, which grew upon the same bush with the second, on the side toward the other bush, appeared to be a mixture of the two varieties, having a number of its petals smooth and rosy-hued, while others were greenish and crinkly. It was quite a curiosity in the hybrid line.

THE San Francisco sub-treasury now contains between \$56,000,000 and \$57,000,000 in coin. A count of the money is now in progress.

IN the cattle ranges south of Elko, Nevada, the feed is said to be more abundant than for six years past.

premium of £100. In 1885 he won the Dalbeattie Horse-Breeding Society's premium of £100 and fourth prize at the Highland and Agricultural Society's show at Aberdeen. In 1886 he was awarded the Kirriemuir Horse-Breeding Society's premium. He has been in the short list at the Glasgow Stallion Show for the last five years.

After his victory at home in 1886, Gilderoy was purchased by Galbraith Bros., the well-known importers and breeders of Janesville, Wisconsin. Within a few weeks of landing in America he was exhibited at the Interstate Fair at Madison, Wis., where he won first premium, also first premium the following week at the Wisconsin State Fair, held at Milwaukee, Wis., and 3d prize in a strong class at Chicago Fair. We have not at hand his later records.

Galbraith Bros. have long been liberal purchasers of the best British stock, and the *Mark Lane Express* recently alluded to them as owning "perhaps the largest, if not also the best, collection of British horses in America."

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Travels in Tulare.

EDITORS PRESS:—In traveling eastward from the head of Tulare lake on the north to the foot of the Sierra Nevada mountains, the writer has taken a few notes, some of which he submits for the consideration of your readers.

The grain crops about Lemoore, which is situated in the western part of Lucerne valley, are less promising than they have been for many years. Up to about March 1st they looked well, but the entire absence of spring rains has caused the grain to dry up in many instances before it had become sufficiently matured to be worth cutting for hay.

Alfalfa, however, looks well, and there will be considerable fruit, although the late frosts cut off most of the apricots and a few of the early peaches.

We pass out from Lemoore into the Grangeville country, where the rich soil so well irrigated from numerous ditches will yield very fair crops of all kinds.

In the vicinity of Hanford many fields of good grain can be seen where water from irrigation ditches has been used unsparingly, but some of the farmers having used little or no water, will harvest very poor crops of grain.

One and a half miles east of Hanford is situated the very productive and well-kept farm of Mr. Vincent E. Hill. This gentleman is an Englishman by birth and education, and having had some experience in butter and cheese-making in that country, he is preparing to engage somewhat extensively in the same business here.

Mr. Hill prefers the Shorthorns to either the Holsteins or Jerseys for dairy purposes, and has been for four years breeding his cattle into that stock. Last fall he purchased from Robert Ashburner of San Mateo a thoroughbred bull calf at a cost of \$175, besides freight charges. The writer thinks this young animal is as fine a specimen of the bovine species as he ever looked upon.

Six miles northeast of Hanford lies the farm of Mr. Elias Gallup, who is one of the best-known fine stock-breeders in the Upper San Joaquin. The many premiums that he has received on his fine hogs at different fairs for many years past have given him a reputation of high rank in that line, but of recent years he has also given much attention to breeding fine cattle to sell to breeders and to dairymen. Unlike Mr. Hill, he gives preference to the Holsteins for dairy purposes, and has not long since purchased a thoroughbred bull of that stock from H. W. Meek of San Lorenzo, at a cost of \$300. He is a two-year-old bull, by name Golden Gate, sired by Minstrel, dam Alameda Maid. Mr. Gallup expects soon to be able to compete with any cattle-breeders in the State.

In the extreme eastern part of the valley of Lucerne, ten miles northeast of Hanford, the writer had the pleasure of passing one night under the hospitable roof of Mr. D. C. Hayward, who resides on his fine stock farm of 800 acres. Prior to the construction of the numerous irrigation ditches taking water out of King's river, this farm was overflooded each winter, which circumstance has rendered the soil very rich and productive, and now very valuable since it no longer overflows. Mr. Hayward has about 300 head of cattle, many of which are choice dairy cows. He, like Mr. Gallup, prefers the Holsteins for dairy purposes, and is breeding his whole herd into Holsteins as rapidly as possible. Looking to this end, he purchased for his own use, two months ago, a thoroughbred bull of this breed two years old from Senator Stanford's herd, at a cost of \$300. Mr. H. is now building a cheese factory, and intends to engage in the business of cheese-making quite extensively in the near future. This gentleman is also making a fine showing in the breeding of horses for draft and for road purposes.

He now owns and keeps on his place two stallions six years old, imported two years ago from France by Theodore Skillman of Petaluma.

One is a coach horse whose registered name is Elector. He is 16 hands high and weighs 1400 pounds, in color a bright bay; the other is a Norman, whose registered name is Cheri, a coal-black, weighing 1680 pounds. Both are splendid specimens of their kind, and are very valuable for breeding purposes.

Mr. H. has a field of fine young horses which it is really a pleasure to see, and most certainly they are a credit to their owners and to Lucerne.

The gentlemen thus far named by me are all subscribers and close readers of the RURAL, and do not hesitate to speak in the highest terms of your paper, and to extend a cordial welcome to your representative. Soon after leaving Mr. Hayward's farm, in an easterly direction, one passes out from the beautiful and most fertile valley of Lucerne on to an alkali plain, which seems to be worthless for all other purposes than to furnish pasturage for jack-rabbits.

Over this apparent desert you continue for eight miles, and until you enter the town of Traver. Leaving Traver, you enter into the '76 country, which takes its name from an irrigating canal that brings water out of King's river 30 miles above, in Fresno county.

The '76 is a wheat country exclusively, and I presume what may be called half a crop will be harvested there this year, at least no more.

Near the town of Traver, in a northeasterly

direction, are three separate colonies in which fruit-growing is the principal industry, but the business is in its infancy, scarcely any of the trees or vines being yet in a bearing condition.

At the eastern boundary of the '76 country lies the new town of Sibly, situated on the eastern branch of the S. P. R. R. now in process of building, and which skirts the foothills from King's river to Porterville. Sibly is in a beautiful location, and a thriving town will probably be built there soon. We then pass out of the irrigated district, and after traveling eastward four miles enter Stokes valley, which has a national reputation for its early fruits.

The grain crops throughout all the country east of Sibly are just about good enough to pay for harvesting, save a few spots where nothing will be gathered.

Stokes Valley

Is a beautiful nook running back among the foothills of the Sierras 20 or more miles from Visalia. It is about eight miles long and four miles wide, high hills covered with timber and which rise abruptly from the plain surrounding it on three sides.

Near the head of this valley on the northern side in a sheltered cove is the home of Horace Whitaker, a most beautiful spot, where he produces some of the earliest and finest fruits grown in the State. At the head of the valley on the north side is situated the fine farm of Mr. W. C. Courtner, an excellent farmer and most hospitable gentleman. Mr. Courtner has several hundred acres of fine grain land; he is also engaged in stock-raising, and last year produced the earliest figs grown in the State.

In the northeast corner, at the very head of the valley, is the famous Thomas & Boyd orchard, which was planted and cultivated by I. H. Thomas of Visalia, and from which, for many years, he has gathered the earliest peaches and apricots found in the San Francisco markets. Oranges are also successfully grown here, and with proper facilities for irrigation, which will probably be had soon, the whole valley will blossom with the orange, the vine, and the fig tree, and become one of the most beautiful as well as most healthful spots on earth.

A. F. JEWETT.

Stokes Valley, May 6, 1888.

Yolo County Notes.

EDITORS PRESS:—As it has been some time since our county has been reported, I take pleasure in so doing now. I can say that grain and fruit prospects are good. It is true that there are some "spots" where grain sown in winter will be light, but the summer-fallow is good everywhere, even in the "hills" on the west of the county. A gentleman who has grain in Hungry hollow (our dry part of the county) told me last evening that the prospect up there was never better. But of all places, the river ranchers will harvest the crop this year. There have been no floods to interfere and the grain never looked finer, including even volunteer. Haying is pretty well under way. As to amount of acreage being out, am not able to say, but as regards quality, can say that it is good, not a superabundance of straw, but just right.

As it is generally known that our rainfall has been a little over 12 inches for the season, it might have been interred that we were having a drouth, but such is happily not the case. As the rain came gently, it all stayed in the soil, thoroughly moistening it and bringing about the best results possible with the amount that was precipitated. Too much rain at a time is worse than not enough in our locality, as it settles the soil very hard and firm, destroying the tilth and increasing evaporation, causing the grain to lack kernels at the top of the head.

Fruits.

Peaches are plenty as far as I can learn, but apricots are rather below an average. The Moorpark bloomed in time to be caught by a late frost. After the frost a few blooms came out and a few apricots were the result, but most of them have fallen off. I must award the prize to the Routier or New Peach apricot again this year for productiveness. It is a constant bearer, and there is no better for drying and for general purposes. The fruit is not so sweet as the Moorpark, and it is not so juicy, which makes it a better shipper.

What Are They?

We have several varieties of apricots in this section that we do not know any name for. I will try and describe three of them, and if any one can give us any light on the subject, we would be thankful. It has been told me that the buds came from Mr. W. N. Smith's orchard at Vacaville. Perhaps if that is so he may know the names. The first variety ripens next after the Pringle. The tree looks very much like the Routier, only it is more of an upright grower, very vigorous; leaf, same shape and a shade lighter green; bears young and constantly; fruit resembles the Routier in shape, only about two-thirds as large, with a blush on the side exposed to the sun; free at the pit; flesh, a shade lighter. It is the first variety that comes in of any consequence among us. I regard it to be good for drying, and canners took it last year with others and did not demur. There is one thing against it—its lack of sweetness that the Moorpark and Royal have.

Another variety is a vigorous and upright grower, will grow very thick in the top, if al-

lowed to; leaf round (2½ inches in diameter), very dark green; fruit ripens same time as the Routier, and is one-third larger than any Royal I ever saw; blush on side exposed to sun; if not exposed a cream-colored flesh the same (creamy).

Another kind has nearly the same description as regards fruit, only a little larger, but the tree is the reverse in habit. It grows scattering limber twigs, has a tendency to shoot branches horizontally from every side; leaf pointed, and is inclined to partly close up; is also dark green.

The last two varieties described ripen the same time but do not bear young. They do not amount to much before they are five years old, but after that bear regularly as far as we know. Trees over that age have done so with us.

Prunes, as far as I can ascertain, are a good crop, and one gentleman told me he sold his last year's crop for 10 cents per pound, and had been off-red the same for this.

The grape looks exceedingly well, there having been no late frosts to interfere, and the warm weather we have had has caused the vine to do its best by way of foliage and bloom. Taken altogether, the prospects for this year's harvest are good, equal to, if not above, an average.

J. R. SPRINGER.

Woodland, Cal.

West Side Notes.

EDITORS PRESS:—Writing agricultural notes from the West Side, especially if one ventures into the realm of prediction, I have concluded is very unsatisfactory.

Two characters could easily be sustained while honestly describing things as seen at time of writing. For instance, there has been a heavy rain, and under the influence of a warm sun the grain comes on rapidly. Every one is confident, and "Hopeful" takes the pen to jot down a few time-worn phrases: "Farmers' faces wreathed in smiles, all nature jubilant, crops now well assured," etc.

But alas! week after week goes by and the hoped-for later rains do not come. The north wind blows unrelentingly, the blades of grain begin to turn yellow, and that strange process called going back also begins. A field that had been covered with a rank, waving growth of grain, a foot or more tall, is soon shrunken to scattered bunches several inches shorter—the wheat really seems to have gone "back into the ground," as they say. The discouraged farmers are remarking: "How like '77 or '87," or some other dry year.

Very likely now "Croaker" takes up the pen to write of gloomy prospects and hard times.

So it goes a constant alternation of hope and fear, until no wonder a young friend who invested here one year (and by the way did very well in the end) said he would not try it again, as he couldn't afford to be scared so often.

Hearing reports from other parts of the State, I am convinced the west side compares more favorably than usual. Farmers are now cutting hay, of which there will be considerable of excellent quality, and some grain will be thrashed. Coming after the complete failure of last year, farmers will feel somewhat pinched, but we have reason to be thankful it is no worse, and all are hopeful for next season.

We have here an annual demonstration of the benefits of winter irrigation, as Corral Hollow creek, spreading out on the plains in ever-shifting channels, always yields several hundred acres of good grain even in dry years, but the few attempts to control it have not met with much success so far, its great fall causing it to rush with such force after heavy rains that costly works would be needed to restrain it.

For the sake of pasture for our stock we have been spending the spring months at our long deserted Corral Hollow farm, in the shadow of the foothills, six miles from Tracy. Here we were forced to see a roaring torrent of water rushing through in its well-worn channel, powerless to apply it to the thirsty land. Rich soil, fine climate, grand and extensive views—the single drawback lack of water. Now in May the gravelly creek-bed has long been dry; even the well on the lower flat has but a few inches of water, and the stock must be driven a mile or more to water.

After reading in the RURAL PRESS some time ago of rivers whose waters ran beneath, while the sand and stones were on the surface, a pick was applied in several places, but the water was not there. We feel financially unable to sink a well this year. Judging from wells in the region, it would require a depth of 150 to 200 feet; and for such a well, all complete, we would gladly deed 40 acres of land. Who wants a chance for a home in one of the finest climates, etc.?

Some time ago, while out star-gazing, I was much puzzled to notice a long line of brilliant lights along the northeastern horizon. I puzzled in vain. They did not look in the least like tulle fires, and even my slender stock of astronomical knowledge refused to believe there was so magnificent a constellation in the sky. Later we learned they were the electric lights of Stockton, some 25 miles away. How the world moves on while we rest in this quiet place! I have always regarded the

Dehorning of Cattle

As a cruel and generally unnecessary practice. Reading lately of great mortality and suffering among recently dehorned stock in Illinois, I

hoped it would discourage the practice. If we must have hornless stock, why not try the milder plan of burning when young? A calf whose horns, soon after their first appearance, were so slightly burned as apparently to cause no pain, has now, at a year old, mere knobs that hardly show where the horns should be, and doubtless, if desirable, a little deeper burning would have been more thorough.

Tracy, May 13th.

Mrs. J. M. K.

THE STOCK YARD.

The Low Hall Shorthorns.

We find in the London *Live-Stock Journal* an account of the Low Hall Shorthorns, which is of general interest for its historical and practical data, and of particular interest because it describes the upbuilding of the herd by the late R. W. Ashburner, father of Robert Ashburner of Baden Farm, San Mateo county, as well as of his brother, the present owner of the Low Hall herd. We quote from the *Stock Journal* as follows:

The Low Hall Shorthorn herd, principally composed of Bates Shorthorns, must ever be closely identified with the introduction of the breed into the northern counties of England, and, by parity of reasoning, also with that of the improved breeds of sheep—Leicesters, Shropshires and Hampshires—for the one followed the successful acclimation of the other. Shorthorn cattle, Leicester and Shropshire sheep, with their crosses, are now found on every farm in these counties, and on several the Hampshire sheep are becoming favorites as giving a greater proportion of lean meat in the lambs. The work of introduction had for one of its pioneers the late Mr. R. W. Ashburner, the father of Mr. George Ashburner, the owner of the present Low Hall herd. From the year 1830 to 1835 the father of the present tenant of Low Hall (which is one of the numerous farms of the Duke of Devonshire), and the late Mr. Cranke of Hawkfield, near Ulverston, each introduced a few Shorthorns on their farms. The latter farm enjoys a much more suitable situation, the farm at Low Hall being partly on the slope of Kirkby Moor, which rises to an elevation of, we should say, about 1000 feet above sea level. A portion of the inclosed land is on the side of the hill; the house and buildings and other portions of the land at the bottom. It is situated not far from the estuary of the Duddon, and the air, combining the sea and mountain, will no doubt be healthy. There are 250 acres of inclosed land, 70 acres high-lying, and 204 acres of inclosed moorland, of which latter the tenant of recent years has made considerable improvement. These latter are devoted to Herdwick sheep. Here, on the somewhat unpromising site, the late Mr. Ashburner began to build up a herd, and the Roughmold herd of Mr. Caddy was, we believe, contemporaneous. From these sources may be said to have sprung all the herds of the district except that of Holker. The Hawkfield herd did not make rapid progress, no record being kept of the pedigree; but Mr. Ashburner, having once resolved on his course, did not allow the grass to grow under his feet. His neighbors characterized the plan as Utopian, and freely prophesied that it would never succeed. There is nothing, however, succeeds so well as success, and by degrees they began to avail themselves of his stock. Lady, the dam of Favourite 3772 (a portrait of which latter hangs in the hall at Low Hall, and which, if we are to believe the artist, must have been a phenomenal bull), was Mr. Ashburner's original purchase from Mr. Hodgkin of Drigg, Cumberland, for a sum under £20. The first entry in the late Mr. Ashburner's herd-book is Favourite, from Lady, by Young Western Comet 1575. There are still descendants at Low Hall, but perhaps the most distinguished was Duchess of Kirkby, by Grand Duke 10th 21,849. She was a beautiful roan, a good breeder, a heavy milker, and her symmetry of form was such that she won her owner upward of 100 prizes at royal, county, and local shows, retaining her form until advanced years. Shortly after the purchase of Lady, Fairy was added from the same place, and at about a similar price, a daughter of Mr. Booth's Bloom, by Pilot 496. Jasmine was next added to the herd for 25 gs., a high price half a century ago. From Lady's descendants Messrs. Gaitkell, in the year 1840, founded the Hall Sinton herd, in the purchase of Cherry from Low Hall, a daughter of Punch 4849, and from her were descended some of the best stock in the Hall Sinton herd. In 1860 Mr. R. W. Ashburner caused a commotion in the district by the sale of a selection from his herd, and when the animals went at prices varying from 20 gr. upward, a strong stimulus was given to Shorthorn breeding in the northern counties. The herd has kept pace with the times, and in the hands of the present owner it has not only done much to provide the farmers of the neighboring counties with improving sires, but animals from it have gone all over the United Kingdom and abroad, and are still regularly going, for Mr. Ashburner is a regular exhibitor in the prize rings, and doubtless he finds such a course proves a good advertisement for the herd. He still goes largely to the old strains for his prize animals, and as the exhibiting does not appear to affect the breeding, we suppose there must be good constitution underlying, and that

this hardy constitution has not been affected by the succession of sires from fashionable families is likewise no less a tribute to the latter.

The treatment of the cattle at Low Hall is of a natural kind. They are bred with excellent coats of hair, essential in a district so elevated in some of its pasture land. With the exception of the youngest calves and the bulls (the bulls are not allowed to run out in the district), we found, at the end of October, all the cattle in the fields. In the high-lying pastures were the dry cows, keeping up condition in their elevated lookout; descending the hill, we found the in-calf heifers, and so on, in rotation, until in a snug paddock close to the house we found the successful show animals of last year. In the lower lands were the milch stock, and this is essentially a milking herd of Short horns, some of the recently calved cows milking up to 12 quarts. A proportion of the milk is fed to calves, and the remainder made into butter. About 50 acres is annually under the plow, oats, swedes, mangolds, potatoes, carrots, etc., being grown, and this year Mr. Ashburner had been very successful in getting a catch-crop of three acres of a mixture of wheat, rape and mustard sown after the oats were harvested, and on which he was fattening sheep at the time of our visit. The season had been an exceptional one, and it is the first crop of the kind that we have ever known in the district. The remainder of the farm is in grass, pasture and hay meadows. There are about 70 animals in the herd—we say about, for it is difficult to speak definitely of the herd where the animals are ever coming and going. A few young cross-bred animals are annually brought in to fat, and the sheep flock varies from 200 to 300 in lambing time. Some 14 to 20 Shropshire ewes are kept, the remainder are Herdwicks and their crosses—half and three parts bred sheep, to suit the different altitudes of the farm. There are eight horses on the farm, five of which are classed as work horses, two mares being of Clydesdale type and one Shire mare; a remarkably fine action cob, clever either for driving or riding, and two young animals. The horses are all of a capital type, strong and active. Mr. Ashburner is his own farm bailiff, and everything on the farm—horses, cattle, sheep, pigs, turkeys, geese, ducks, poultry, no less than the cleanliness and excellent crops on the land—betoken excellent judgment and the constant supervision of the master mind. The farm, as well as the animals, has frequently been successful at royal, county and local exhibitions; the sideboard is well stocked with prize plate, and the prize cards, won in the course of half a century's regular competition, would go far to paper the walls of Low Hall. The herd consists of several families, Mr. Ashburner having paid liberal prices for the original animals of such, and afterward using bulls of excellent pedigree from the Holker and other first-class herds.

THE VINEYARD.

Brush Mulching of Vines.

EDITORS PRESS:—I have had some experience in successfully making grapevines grow in this dry, warm foothill climate without irrigation, and I believe that my method of taking care of them may, if known, be a benefit to others who are similarly situated. I was told by all the old settlers around here that vines could not be started without water, and that my efforts to do so would be a foolish waste of time and money. I had seen it done in other localities and stubbornly persevered to accomplish the same thing at this place. I am rewarded for my persistency in seeing fine two-year-old vines growing luxuriantly and coming into bearing in a small way the present year. When I first planted the cuttings I was very much troubled with the rabbit pest, and had recourse to a rabbit-proof fence which I began building soon after planting, but the hungry, long-eared thieves began cropping off the young foliage of the vines before my fence was completed, and I was at a loss to know what to do. In order to save the vines in the outside rows which were most exposed, I concluded to place a covering of brush over them for a protection. I did so, and the experiment opened to me an idea which I have since acted upon with uniform success. In a short time after covering, as described, a remarkably hot wave passed over the land and cooked quite a per cent of my uncovered vines, while those covered stood the heated term bravely and came out green and vigorous. I thus, by an accident, as it were, made the discovery of the great benefit of brush mulching, and coming into that knowledge by a haphazard venture which resulted favorably, I persevered in the method of lightly covering them with brush to mollify to a certain extent the burning rays of a summer sun. I covered my small vineyard with the brush mulching and found that those which had appeared to be cooked renewed their growth with vigor. In treating my vines in this manner, I saved a large per cent of them and did the same thing last year with the same good results.

It is much trouble to do this mulching, and it makes a place look ungainly; but if tried, I am quite sure the labor and patience will be rewarded with success.

The benefits of mulching I quite well understood before this trial, but I had only seen straw used for the purpose, and as no straw could be obtained, and as there was a bountiful

supply of brush near by, I made use of what nature had placed within reach. The brush breaks the direct rays of the sun and keeps within a portion of the winter's moisture. All who have observed closely the workings of nature will call to mind how luxuriantly grass will grow underneath a dead brush lying in a field or wood. Brush mulching need have no stronger argument in its favor than this one fact, patent to all thinkers. In operating on this plan the brush should be placed lightly around the vines during the month of May. Sooner or later, as the season may be more or less favorable, the finer the quality of the brush the better the material will be for the purpose.

The season of the year is now at hand when the struggle for life begins with the young vines, and for those persons situated away from irrigating facilities, I would say by all means try this method and you will not have cause to regret it. I do not wish to be understood as affirming that vines can be saved by this plan alone. Thorough and persistent cultivation is necessary, and by putting your soil in proper tilth the brush mulching will be an auxiliary which will carry it through the long dry period of a California summer and fall.

Valley Spring, Calaveras Co.

Vine Pests and Diseases.

The following are recommendations by the Chief Executive Officer of the Board of State Viticultural Commissioners for the destruction of animal and vegetable parasites of the vine, being a resume of rules and remedies adapted to the present season:

The present being the season of greatest activity in the operations of combating vineyard pests and diseases, many of which appear so suddenly in some of our vineyards as to leave no time for the proprietor to waste in looking up the results of former experiments or remedies described in some lost paper or publication, it has seemed a fitting time to publish a brief abstract or summary of the principal enemies abroad at the present moment, together with the best known means of destroying them.

Cut Worms

May, if few in number, be found at night with the aid of a lantern when they are preying on the leaves or young shoots. Another method is to dig them out of their hiding-places near the roots of the infested plant in the daytime, as they retreat with the appearance of daylight to just below the surface of the ground. If in sufficient numbers to warrant, spray the vine with a solution of Paris green (which must be agitated continuously while using to prevent settling) 1 pound to 150 gallons of water. This will not harm the fruit or plant, even though the grapes have attained half the size of a pea. If it is feared that live-stock may get to the foliage and thereby become poisoned, apply the same solution to cabbage leaves, which, if placed near the troubled vines, will attract the cut worms and destroy them. Afterward the cabbage leaves may be picked up and destroyed or left to wither without danger.

To apply the Paris green solution, use any good spray pump, or even a syringe will answer for operations on a small scale.

Sphinx Moth Worm,

(Or army worm, as sometimes improperly called) spray with Paris green as above, using 1 pound to 150 gallons of water. Treat particularly well the outside rows of the vineyard and they will never get farther than these. If only a few infest the vines they may be hunted on the foliage and destroyed by hand.

Grasshoppers.

This plague has been successfully met by the use of arsenic and bran remedy prepared as follows:

Forty pounds of bran, 15 pounds middlings, 2 gallons of cheap syrup, 20 pounds arsenic, mixed soft with water; a tablespoonful thrown by the side of each vine or tree. Cost per acre for trees, 25 cents; for vines, 50 cents. If placed on shingles about the vineyard, much of the poison not eaten may be afterward gathered up and saved. Complete success has resulted from the use of this remedy, as the grasshoppers eat it readily and die in their tracks. For this remedy may be substituted with equal effect the Paris green spray applied as for cut worms.

Thrips

Are best trapped by means of two semi-cylinders framed with band iron and covered with window gauze; these hinged together on one side should be provided each with a semi-circular pan for a bottom so arranged that the whole may be closed about the vine. Rub the gauze over with a rag saturated with coal oil and place a little also in the pan at the bottom. Then, when the whole is closed about the vine, kick the stump of the vine, or disturb the foliage by introducing the hand or a stick from the top, and the insects fly to the gauze, where contact with the oil destroys them. For full particulars regarding the construction of and method of operating this trap, see Second Appendix to Report of Chief Executive Officer for 1888, or RURAL PRESS, April 21st and 28th. Thrips cannot be poisoned on the vine, as they subsist on the sap alone which is sucked from the leaves, thus causing them to wither and dry up.

The Flea Beetle

And others of this class which consume the foliage of the plant, giving to the leaves a rid-

dled appearance, may be trapped also with the above-named contrivance, for commonly, any slight disturbance causes them to drop to the ground, where they secrete themselves. A better method, however, where circumstances will permit, is to spray the vines with the Paris green solution described above.

The False Chinch Bug

Is of a grayish-brown color with pupa of about the same color; both are, when fully grown, about one-eighth of an inch in length. They appear occasionally in spots in the vineyard infesting such vines in great numbers and consuming the leaves. They fall to the ground when the vine is disturbed where they are scarcely visible. They have caused our vineyardists no serious damage, as they disappear after a short season and have not at any time in the past become general. They may be easily caught with the gauze trap and coal oil, or may be poisoned by the Paris green spray.

Hares, Rabbits and Squirrels

Have been a constant menace to young plantations made in new districts. A tight fence affords the most perfect immunity from their attacks. Squirrels may be kept out by making a tight fence along the side of their approach, for they will not travel far to go around this unless the place is very much isolated, because of their fear of dogs, hawks and other natural enemies.

Hares, which come a long distance to devour the vines, will be noticed to confine their attacks to a few vines at different places in the vineyard which they eat down as regularly as the new growth appears. A weak solution of asafetida prepared by dissolving in alcohol and then adding water, has been applied to the afflicted vines with good success. These animals will also be destroyed by the Paris green solution if applied frequently during the early growing season.

Vegetable Parasites — Oidium (Powdery Mildew)

May be best prevented or removed by using sulphur, which should be applied first when the vine is in full bloom, being careful to dust or blow it well over the flowers. Repeat the dose about the middle of June and later again if any sign of the disease appears. If for table grapes, the sulphuring may be continued monthly till they begin to change color. Sulphuring should, however, never be done to wine grapes after the berry has attained two-thirds its full growth, as by so doing it reaches the wine and gives it a bad odor. Let it be remembered that the disease begins its development where the average of day and night runs up to 53° F. It spreads rapidly at 70°, and is checked in its growth where the thermometer indicates near 100° F. Above 100° its damage is rapidly diminished, and at 112°, a temperature quite common throughout the interior vineyard districts of California, the germs lose their vitality and the effects of the disease entirely cease.

The sulphur used may be either finely ground or sublimed. The former is most commonly employed, as it is cheaper and answers the purpose equally well. It should be applied so as to lodge as much as possible on and near the growing parts of the vine. This secures a dense sulphur vapor in direct contact with the diseased organs. Sulphur on the old stump, or even on the surface of the ground, will destroy the oidium, but a larger quantity would be required.

Coulure.

Though not in itself a direct disease, results from other evils. It is in a measure prevented by sulphuring at the time of blossoming, when oidium, which would otherwise interfere with the fertilization of the flower, is removed. This is not always a cure, however, as other causes exist for the evil, principally sudden changes in weather, either hot and dry or cool.

The most successful treatment for the trouble, when so occasioned, results in *pinching*, the process of pinching off the ends of the fruit-bearing shoots when flowering begins. Also the annular incision may be adopted, which consists in ringing out with an appropriate tool, a band of the outer bark on the fruit-bearing cane or shoot just below the point where the bunch stem joins the shoot. Nipping off the end of the long bunches will also aid in keeping the remaining fruit on, and cause it to ripen large and fine.

The foregoing disposes of those enemies most common to our vineyards in the past, with the exception of the phylloxera, which, though most formidable of all, has been discussed on at sufficient length before.

J. H. WHEELER,
Chief Executive Viticultural Officer.

CASTOR-OIL AS A LUBRICANT.—A correspondent of the *English Mechanic* writes as follows in a recent issue: "The Asiatic wire-drawers have very long ago used this oil in preference to any other kind. Their dexterity is surprising, the wire for the Trichinopoly chains of gold and silver being like hair, and every good workman draws his own. A man made me a plate for the fine gauges from a flat rasp of English steel, which I still possess. He drew copper, zinc and brass equally well. This oil, being one of the cheapest in India, is used to soften harsh leather shoes and ropes. The fresh leaves of the castor-oil tree, too, are gathered, bruised and rubbed in the hand, then stuffed tightly into stiff European boots, male or female, and so remain all night; the leather then becomes quite supple. For feeding large drills I like this oil mixed with a soft soap."

SHEEP AND WOOL.

The Wool Industry.

We are on the eve of another wool season, and naturally the probable character of the market becomes important not only to growers, but also to manufacturers and dealers in woolen products. The statistical situation of wool the world over favors high prices, but then the sentiment is against a higher range of values; and as the latter has been instilled into bull operators by bitter experiences, statistics go to the wall and sentiment controls. But then wool is not the only article of production that time has cheapened, for, without an exception, everything from the metals, everything dug from the bowels of the earth to the products of the soil, is selling throughout the world at a very much lower range of values than obtained from one to two decades ago. View it in any light we may, discuss it from any standpoint chosen, and still the conviction is forced upon the unbiased close observer of passing events in the commercial world that the changed relations have been brought about by the more general introduction of steam on land and on water in transporting goods at lower rates. The cheapening of the telegraphic service, with lines reaching out in all directions and into every civilized country, and last, though by no means least, the absence of war, has tended to make production outrun destruction. With cheaper, quicker and better telegraphic and also transportation service, time and distance are annihilated and the successful forming of corners are rather costly experiments for the promoters, consequently trade is left more to its own bent; and, being without proper support, prices naturally tend to lower values until they correct themselves by consumption outgrowing production. This remedy the near future holds out for the wool trade. The population of the world is estimated at 1,392,000,000. Of these it is safe to claim that not much more than one-third are important consumers of wool. To arrive at a satisfactory conclusion regarding the future of the industry it is necessary to obtain from the most reliable sources the production of wool and its consumption. According to the United States Bureau of Statistics, the production is as follows in its raw state and after cleaning:

	Raw, lbs.
Europe.....	584,000,000
Asia (India and Caucasus).....	100,000,000
Africa.....	75,000,000
North America.....	346,000,000
South America (excluding Brazil).....	340,000,000
Australia.....	430,000,000
Total.....	1,875,000,000
	Clean, lbs.
Europe.....	400,000,000
Asia (India and Caucasus).....	50,000,000
Africa.....	45,000,000
North America.....	168,000,000
South America (excluding Brazil).....	120,000,000
Australia.....	220,000,000
Total.....	1,003,000,000

By the above table it will be seen that the loss in weight by cleaning is very large in Asia and North and South America, which necessarily shows that there is something radically wrong in the sheep husbandry in those particular sections of the globe. South America does not manufacture woolen goods, so the only consumers of wool for manufacturing purposes are the United Kingdom, the continent and North America. The Messrs. Schwartz, who are a recognized authority, place the production and imports of the three great consuming (manufacturing) areas as follows:

	Production, lbs.	Imports, lbs.	Total, lbs.
In 1887.			
United Kingdom.....	134,000,000		
Continent.....	450,000,000		
North America.....	346,000,000		
Total.....	930,000,000		
In 1887.			
United Kingdom.....	258,000,000	392,000,000	
Continent.....	580,000,000	1,030,000,000	
North America.....	104,000,000	450,000,000	
Totals.....	942,000,000	1,872,000,000	

According to population, the United Kingdom is the largest consumer of wools, using over 300 per cent more than North America and about 50 per cent more than the continent. Germany is the largest consumer on the continent, owing to wools coming in free of duty. To obtain a better and more distinct impression of the situation, we give the following statistics for ten years past:

Yrs.	Population.	Consumption, lbs.	Per head, lbs.
1878.....	357,000,000	1,514,000,000	4.25
1879.....	361,000,000	1,522,000,000	4.22
1880.....	366,000,000	1,633,000,000	4.46
1881.....	370,000,000	1,627,000,000	4.40
1882.....	374,000,000	1,711,000,000	4.58
1883.....	378,000,000	1,727,000,000	4.57
1884.....	383,000,000	1,820,000,000	4.75
1885.....	387,000,000	1,830,000,000	4.73
1886.....	391,000,000	1,911,000,000	4.89
1887.....	395,000,000	1,872,000,000	4.74

As will be seen by the above, the consumption per head has not only increased, but there is an increase in the number of consumers. Judging the future by the past, it can be confidently asserted, even without wars, that within the near future the consumption of wool will be in excess of the production, when a much higher range of values will follow,—
S. F. Herald of Trade.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

True Patriotism.

Following is the address delivered by Bro. J. W. Mackie at Tulare County Grange picnic, May 9th:

"Dulce et decorum est pro patria mori."

So sang the Roman poet. It is sweet and glorious to die for one's country, and so sings every true American. Yet sweeter far and better still it is to live for one's country, to live exemplifying the spirit of those principles underlying its institutions and history which makes the country of our birth worthy of our best life and most heroic death.

We are patriots when we identify ourselves with our country, when its interests are our interests, our private interests being always subservient to the common weal of all.

I am addressing Americans in the most favored State in the Union:

"Land of the West—beneath the heaven
There's not a fairer, lovelier clime;
No one to which was ever given
A destiny more high, sublime."

But my accent prevents the possibility of my concealing the fact that my native land is Scotland, and I would not conceal it if I could. And like all of my countrymen, I have an inordinate pride in my native land. If there exists the monstrosity—a Scot ashamed of his country—it will be a fellow unworthy of Scotland, unworthy of any country, and peculiarly unworthy of America.

I repeat, I am proud of Scotland.

"O Scotia! my dear, my native soil!
For whom my warmest wish to heaven is sent,
Long may thy hardy sons of rustic toil
Be blessed with health, and peace and sweet content."

But I am addressing Americans, and though I know that Scotland stands high in American esteem, yet it is not of Scotland nor Scottish patriotism that you expect to listen to, nor what the Grange desired when they selected "True Patriotism" as the subject of this essay, and your humble servant to prepare it. What purpose did the Grange have in selecting a Scot instead of a native son of the Golden West?

From Bruce to Burns, from Wallace to Scott, is there anything in Scottish history, in Scottish struggles for independence, that can suggest a reason? In her long list of heroes and martyrs to the principles of civil and religious liberty is it to be found? From Knox—Knox! Ah, here let us linger a moment, for with the name of Knox there comes the echo of a reason justifying the wisdom of the Grange. Knox and the school of Geneva; had they never existed, Presbyterianism and Puritanism would never have been known, consequently there would have been no historic Mayflower, nor Plymouth Rock, nor Pilgrim Fathers, and—the very supposition makes me sad—there never would have existed that most glorious document ever penned by man, that inspired instrument, the Declaration of Independence; and sadder yet to suppose, there never would have existed that nation, in spite of all its shortcomings, the greatest, grandest, most devoted to freedom and the best interests of mankind the world has ever seen, the United States of America.

So I interpret the action of the Grange to mean a complimentary acknowledgment of America's indebtedness to the Calvinism of the sixteenth and seventeenth centuries for her existence as a land of the brave and a home of the free.

There is much in the history of Presbyterianism and Puritanism that is inconsistent with our more modern ideas of individual and national liberty. We are apt to condemn them for the harsh lines which they drew around individual conduct, and laugh at their blue laws; but let us never forget that Presbyterianism taught the Scotch Covenanters, who had inherited a spirit of defiance to English interference in their government, to add to it a more determined defiance of not only England, but also Rome and the whole world, if need be, in the maintenance of the right to worship God and govern themselves as their consciences dictated. The same spirit, springing from the same source, animated the Puritans of England, and was carried over and landed at Plymouth Rock in the Mayflower. And of such were the Revolutionary Fathers. But the acknowledgment of indebtedness reaches even farther than this. In the Presbyterian and Puritan churches representative government was introduced and the vote of a congregation or a synod became a higher authority than the word of a

king, or even the legal enactments of Parliament. So it came to pass that Puritan education in Massachusetts tended to breed contempt for a king and a respect for the will of the people. There is much that is human and imperfect, much that is worthy of condemnation, in Puritan history, but let us forget all these necessary evils in the greater good they have so nobly and bravely bequeathed to us.

But the Grange has gone still further by her selection to-day. By it she has declared to the world that the patriotism she inculcates knows no geographical lines. The patriotism of the Grange means those eternal principles of liberty, justice and truth which only are worthy of preservation and which alone entitle a nation to respect; to that devotion of life and property which is incumbent upon every true patriot. So the Grange hails with delight, extends her sympathetic hands and welcomes as compatriots every defender of these eternal principles which we are proud to call American, wherever they may be found. And every innovator, every sacrilegious hand that would dare limit the meaning of the spirit of American institutions, that would lower the dignity of the people, is, in the eyes of the Grange, a traitor and an enemy, no matter what his position or in what clime he may live.

So I to-day, as a Granger, as a citizen of the United States of America, with the stars and stripes wrapped around my heart and floating over my head, see only in my adopted country a greater Scotland, a larger development of all that I hold dear and all that I love in my native land. And I further interpret the action of the Grange to mean a whole-souled invitation to every man and every woman of every country who have in them the spirit of American institutions, to make their home in this land and be assured of a hearty welcome.

This brings me face to face with a subject which at present is agitating the people of the United States of every shade of political opinion, namely: foreign immigration. I do not believe that there exists to-day a true American who objects to foreign immigration on the basis of antipathy to foreigners, as such. But America is justified in objecting to criminals, paupers and imbeciles of foreign lands becoming a part of her population, becoming a tax on industry and a hindrance to progress, to intellectual and moral advancement. I, much as I love Scotland, and because I love Scotland, desire no countryman who is not a representative Scotchman to be ever seen in America. The United States has no more use for European or Asiatic crime or imbecility than the Colonies had for British tea in 1773 or British and Hessian soldiers in 1776.

If Europe has more crime, pauperism and imbecility than it can manage well, let Europe adopt proper means to avoid producing such undesirable conditions. At any rate, the United States has a surplus of her own, has no use for the imported article, and is busy, with the help of the Grange, doing all she can to do away with home-made poverty and crime, and will do more as her knowledge widens and the influence of the Grange becomes more extended.

As a foreign-born citizen, permit me a few words on citizenship. I have always thought American citizenship altogether too cheap. It is not a mark of merit. It signifies neither intelligence nor morality, it is only a question of vitality. Anything of the male persuasion landing in the United States and able to live five years can become a citizen; any male born here who manages to live 21 years is a citizen. Both parties, in my estimation, should prove themselves men worthy of the founders of this republic before being intrusted with a voice in its government. And then, think of it, you exclude your mothers, wives, sisters and sweethearts, who have so bravely and so often proved their patriotism in perilous times, from this precious boon of the ballot, and actually throw it away on the worthless. The women of America should become revolutionists in this matter, and demand their God-given right of which they are deprived by their protectors (?).

One word to Young America: Esteem the stars and stripes as the most precious legacy ever bequeathed "from bleeding sire to son." Love the old flag, cherish it, defend it, and be always worthy of it. Let its emblematic colors, with their meaning, sink deep into your heart, the red, the white and the blue. The red signifying love; the white, purity; and the blue, truth. Love, purity and truth, which you love and defend when you love and defend your country's flag. Let no enemy at home or abroad touch a single star or stripe; hold it inviolate as you have received it, and never permit it to be used as a cover for wrong-doing. So shall your flag, that grand old flag, be respected abroad and loved and revered at home.

The Grangers' Bank

The refitting and enlargement of the Grangers' bank in this city, to which we alluded in the *RURAL* of March 31st, have been completed, and the institution is now going forward with its business with greatly improved facilities. The change gives the bank twice the room it has had hitherto, and this includes a second vault, an exact duplicate of the original one. Doubling the floor-space gives plenty of room behind the counters for needed desks, etc.; it gives the public another entrance to the bank and abundant space outside the rails; it gives the manager a good-sized room, which has long been seriously needed, and it also affords a large room for storage of samples, papers, etc. To one familiar with the old accommodations, and seeing the new, it is a wonder how the enlargement could have been postponed till now.

The new counter-guards and screens are as handsome as anything we have seen of the kind. The framework is of walnut, well polished, ornamented with brackets of burnished brass in scrollwork, etc., the whole producing a most agreeable effect upon the observer, either when viewed in detail or in perspective. The design is very beautiful and appropriate.

The Grangers' bank of San Francisco has just passed its 14th birthday, as it was incorporated in April, 1874. At the opening of the institution the directors secured the services of A. Montpelier, who had been for ten years previously teller and cashier at A. Borel's Swiss-American bank. Mr. Montpelier's experience and financial talent were a great acquisition to the new banking institution. He served the first year as receiving teller, the following two years as cashier and teller, and in 1878, just a decade ago, he became cashier and manager, which position he has held ever since with manifest success. His services in building up a better estimation of agricultural security, and of making money accessible to farmers at more favorable rates than they have had before, and in promoting the interests of the institution intrusted to him, have all been frequently mentioned in our columns. His 24 years of experience in banking business in San Francisco are enthusiastically devoted to the important work he has in hand.

In his management of the bank Mr. Montpelier has had the advantage of good assistants who have conscientiously carried out his system. Mr. Frank McMullen has been secretary and teller ever since December, 1875, Mr. George Fair has been head bookkeeper since 1878, and the assistant bookkeepers, corresponding clerks, etc., have also held their places for several years. It seems fitting to mention these things as the enlargement of the bank gives occasion.

The following circular has just been issued and contains many interesting statements:

The bank was organized in April, 1874, and has been doing a legitimate, conservative and prosperous business ever since.

Its subscribed capital is.....	\$1,000,000
Its capital paid up (six installments levied).....	600,000
Its reserve fund and paid-up stock.....	58,840
Dividends paid to its shareholders since organization.....	525,000

Its stockholders, over 300 in number, are well-to-do farmers from all sections of the State and capitalists of this city and elsewhere, whose combined wealth the assessors' books will show to be over fifteen million (\$15,000,000) dollars. This ought to be ample guarantee to the depositors and patrons of the bank for their safety.

Our line of current accounts is now quite large, including farmers, wool-growers, wine and fruit-growers, country merchants, produce and commission-houses, grain-dealers in the city and country, merchants generally, corporations, the Produce Exchange Call Board depositors and others.

You are cordially invited to visit our newly enlarged office, which is centrally located, and we confidently expect to add soon quite a number of customers to our present ones, and will be pleased to serve the interest of all as heretofore. Yours faithfully,
ALBERT MONTEPIER, Manager.

The location of the Grangers' bank is on the corner of California and Battery streets, and is worth a visit from those who come to view our city and its institutions.

Temescal Grange and Harvest Feast.

Brother J. V. Webster being present on Saturday evening, May 5th, was an extra occasion for this Grange. Although living at Creston, San Luis Obispo county, with his wife, son and daughter, they are all good members still of Temescal. He has always proved one of its true and faithful charter members from its organization in June, 1873. Having served as Master and Secretary of the State Grange and worked long and prominently in all our leading Grange movements, his counseling and advice is looked to with favor and confidence. Any Grange may expect a good meeting when Brother Webster participates, and Temescal had a profitable and interesting evening.

Brother Webster was in excellent spirits and delivered one of his best speeches, the subject for discussion being Taxation.

Worthy Master Goodenough, who, by the way, is making an excellent presiding officer of Temescal Grange, and other brothers and sisters, followed Brother Webster with well-timed remarks.

The next meeting of Temescal Grange occurs on Saturday, May 19th, at 10 o'clock

A. M., when the Fourth Degree will be conferred upon two young men, and a Harvest Feast will be given. It was voted to invite Eden Grange and all Patrons in good standing. It is hoped there will be a full meeting and many present from Haywards, Contra Costa county, and other parts of our Grange field.

Tulare Grange Picnic.

EDITORS PRESS:—I inclose copy of my little effort at the picnic on the 9th. I presume the *Tulare Register* is on your list of exchanges, and you will there find an account of what took place better than I can now give. I can only say at present that the day was very enjoyable. The presence of Bros. Overhiser and Flint was a most agreeable surprise. We made the acquaintance of Lucerne Grange, and there is a great probability that we will pay them a visit in the near future. I am sorry to say that I did not see any brothers or sisters from Buena Vista Grange. Yours fraternally,
J. W. MACKIE.

List of Grange Picnics.

Magnolia and Grass Valley, at Indian Springs, May 25
Bennett Valley Grange, May 26
Sacramento County Granges, at Beach's Grove, May 22
Watsonville Grange, at Porter's Grove, May 26
Secretaries are requested to send in dates of picnics yet to be held as soon as possible.

GRANGE SOCIAL.—Valley Grange will give another of its pleasant socials on Friday evening, May 25th, at Pacheco. Good music has been engaged for the occasion. These socials are largely attended, and are the source of great enjoyment to the participants.

MARCH GRANGE is to have a reunion on the 26th inst., at which time Bro. Pilkington of Santa Cruz is expected to be present. A Harvest Feast will be one of the features of the day.

BRO. DANIEL FLINT, W. L. of the State Grange, will attend Grass Valley Grange picnic on the 26th. Grass Valley will have a right royal good time as well as the W. L.

Great Railway Consolidation.

It is announced from Sacramento that a grand consolidation of all the railroads of the Southern Pacific system has just been effected, and the company thus formed will be henceforth known as the Southern Pacific Railroad Co. Its articles of incorporation were filed in the Secretary of State's office this week, and under the new regime, will embrace the following companies: The San Jose & Alameda Railroad Co., the Pajaro & Santa Cruz Railroad Co., the Monterey Railroad Co., the Monterey Extension Railroad Co., the Southern Pacific Branch Railroad Co., the San Pablo & Tulare Railroad Co., the San Pablo & Tulare Extension Railroad Co., the San Ramon Valley Railroad Co., the Stockton & Copperopolis Railroad Co., the Stockton & Tulare Railroad Co., the San Joaquin Valley & Yosemite Railroad Co., the Los Angeles and San Diego Railroad Co., the Los Angeles & Independence Railroad Co., the Long Beach, Whittier & Los Angeles County Railroad Co., the Long Beach Railroad Co., the Southern Pacific Railroad Extension Co., and the Ramona & San Bernardino Railroad Co. The capital stock of this immense system is \$142,990,000, and the following are its directors: Charles F. Crocker, Timothy Hopkins, Charles Mayo, W. V. Huntington, N. T. Smith, J. L. Willcott and A. N. Towne.

Another Consolidation.

Articles of incorporation have been filed in the office of the Secretary of State of another great railroad corporation. It is entitled, Association, Incorporation, Amalgamation and Consolidation of the Northern Railway Company, the Winters & Ukiah Railway Company, the Woodland, Capay & Clear Lake Railroad Company, the West Side & Mendocino Railroad Company, the Vaca Valley & Clear Lake Railroad Company, the San Joaquin & Sierra Nevada Railroad Company, the Sacramento & Placerville Railroad Company, the Shingle Springs & Placerville Railroad Company, the Santa Rosa & Carquinez Railroad Company, the Amador Branch Railroad Company and the Berkeley Branch Railroad Company. The name of the corporation is the Northern Railway Company, and the estimated length of the roads is 699.69 miles. The principal place of business is San Francisco. The directors are Leland Stanford, Charles F. Crocker, W. V. Huntington, Timothy Hopkins and N. T. Smith. Capital stock, \$26,175,000, of the par value of \$100 each.

NEBRASKA STATE FAIR.—We have received from R. W. Furnas, secretary of the Nevada State Board of Agriculture, the regulations and premium list for their 22d annual fair, which is to be held on the new and commodious grounds at Lincoln the second week in September. Friday and Saturday, September 7th and 8th, will be preparation days, and the exhibition proper will open Monday morning, the 10th. The State Horticultural Society will make its fall fruit exhibit at the same time and place.

A Harvest Scene in California.

We give herewith a view of a California wheat-field in which there are shown 10 Osborne steel-frame self-binders as they appeared at work last season on the ranch of Mr. A. H. Washburn, owner of the Yosemite stage lines, near Madera, Fresno county, California. Mr. W. adds that of an intelligent and progressive farmer to his various other callings, and after investigation has concluded that the self-binding reaper gives the best results in harvesting his wheat crop. As a result of this conclusion, he operated ten self-binders last year, as the engraving shows.

The best mode of harvesting has always been an interesting question to the farmer; and when we say best, we mean that affording the best and most profitable results, all things considered.

It is an undeniable fact that in the earlier history of the grain export trade of California our wheat stood No. 1 in grade in the English markets. Of late years it has been deteriorating in quality, until now it holds the unenviable position of fifth or sixth quality, and it is claimed

state, thus avoiding the shelling by winds and other causes, and the liability to grain-field fires is lessened, which is no small matter itself.

In years past the extensive grain acreage of many of our farmers made it impossible for them to harvest their crops with the reapers then in use, but since the self-binders have attained such perfection it is claimed this trouble no longer exists, as the same number of men and teams attached to self-binders will harvest more grain than an equal number with headers, as Mr. Washburn and others have demonstrated, and the quantity and quality of grain secured will compensate for any difference in the cost of harvesting. Besides this, the straw left from the bound grain, being cut green, retains moisture and nutriment, making a good quality of stock feed, while the headed straw is comparatively worthless.

Besides this, in some sections of our State the self-binder is being extensively used and growing in favor for cutting hay, and for this purpose has received the indorsement of many leading horsemen, notably Senator L. J. Rose of Los Angeles, E. W. Chapman of Fresno county, W. H. Forse of Ukiah, and many

Possessing their own rolling-mills, the Osborne Co. were first to substitute steel for the clumsy and cumbersome wood frames yet used by most of the other manufacturers. The cast parts being mainly of malleable iron, particularly the binder gearing, road-wheel and other important parts, thus securing lightness with the greatest possible strength. The drive-wheel is made in sections, with very wide face, thereby securing lightness of draft. The entire frame of the machine is made of angle steel, while the finger-bar is made of extra-thick double-angle steel, which cannot sag or warp, thereby always securing easy play for the knife, which has a short pitman, and has a direct connection with the crank-head. The bottom is secured by a steel-protecting plate, riveted to the finger-bar and bottom of platform, which can be raised or lowered at will, leaving a stubble from three inches to two feet, according to the length of straw, or notion of those using binder, thus allowing the shortest or tallest grain to be handled, as the elevators are five feet wide. The binding attachment is automatic, leaving the bundles of uniform size, the whole making one of the most perfect and

The Rose Show.

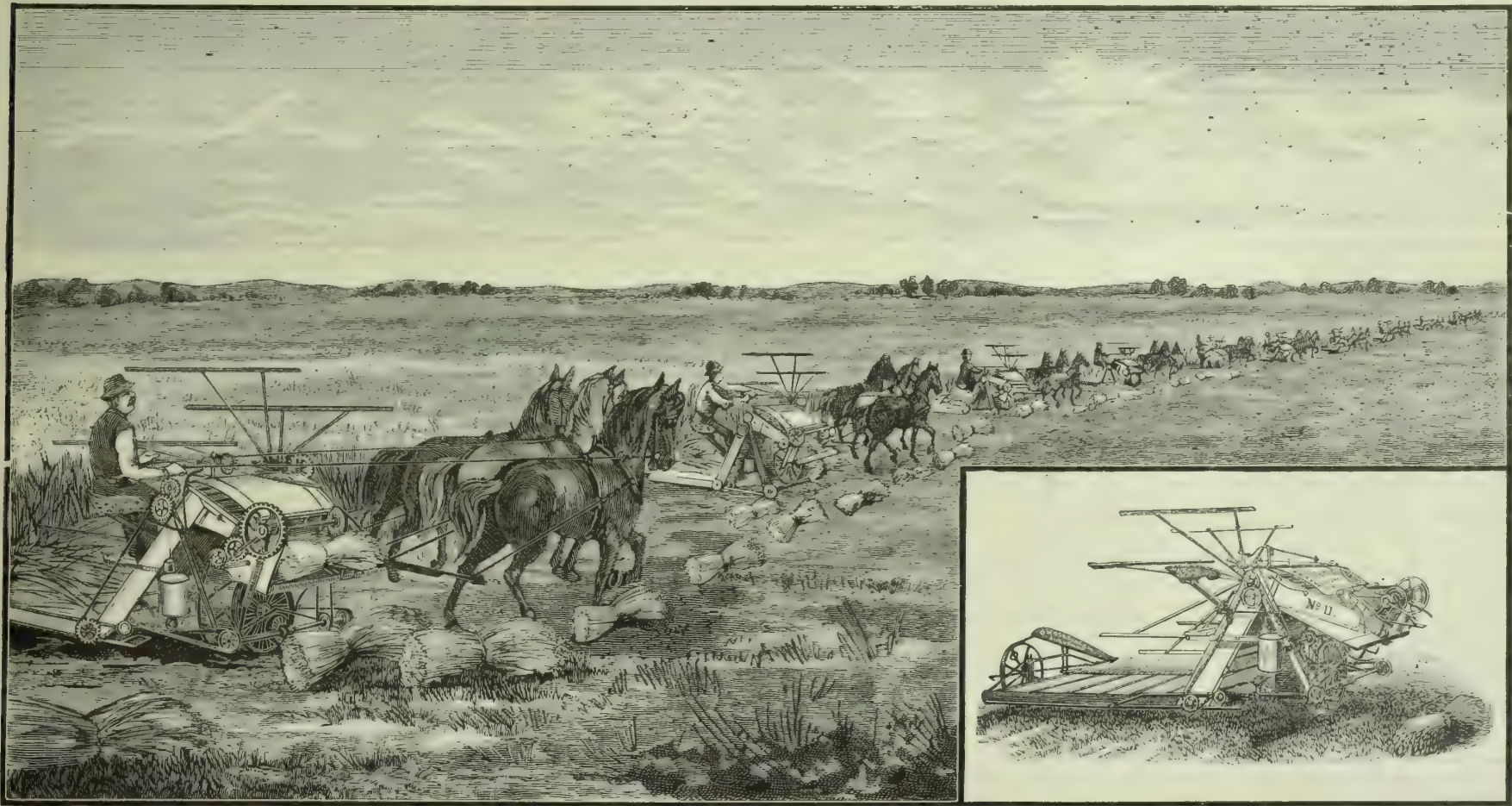
With unstinted supplies of foliage and blooms, arranged by many tasteful and nimble hands, the ladies interested in the success of the Woman's Exchange had turned the store under the Grand hotel into an embowered flower-garden on the occasion of their rose show the latter half of last week.

While roses were predominant and gave name to the display, other flowers were to be seen in abundance on every side. Near the entrance was a little grove of palms and ferns from the conservatory in Golden Gate park, and in the middle a picturesque group of magnolias, loquats and other exotics from the garden of the famous florist, M. Poyal. John H. Sievers also made an excellent display of rare orchids.

Mrs. Wm. T. Coleman sent a magnificent stand of flowers from her conservatory at San Rafael—Marechal Niel, Bon Silene and La France roses, magnolias, passion-flowers, cinerarias, etc.

Another beautiful stand was furnished by two other San Rafael ladies, Mrs. Lewis Gerstle occupying one side and Mrs. Louis Sloss the other. This output consisted mainly of roses fringed with ferns and crowned with a ridge of maiden-hair in pots.

Dr. Charles Brigham displayed more than 60



THE WHEAT HARVEST IN CALIFORNIA—SCENE ON THE RANCH OF A. H. WASHBURN, FRESNO COUNTY.

that the decline in grade has been in the same ratio as we have substituted heading for reaping and binding grain, thus sacrificing quality and quantity of grain to facility and dispatch in harvesting it. While the mere question of cost per acre was formerly on the side of the header, since the advent and success of the self-binder this is claimed to be no longer the case.

A report made by a committee of the Liverpool Board of Trade some years ago went into this question of harvesting quite fully, and very strongly recommended binding wheat instead of heading it. All practical farmers well know the risks of heading. First, all grain must stand uncut until fully ripe and dry before a header can be started. It is thus exposed to north winds, which shell so much, the birds more than collect their tribute, and the cutting process shells more. It is waste and loss on every hand, and the longer it stands the greater the loss. Besides this, mustard, wild oats and noxious weeds ripen and go to seed, fouling the land, and are difficult to separate in thrashing, thus depreciating the quality of the grain.

Nor is this all. Every miller knows the difference between headed grain and that cut at the proper stage with the self-binder; the former is dark, hard, shriveled and shrunken, and weighs less, making more bran and less flour; while that cut with the binder is a plump and full kernel and weighs more. Many risks are avoided by using binders, as cutting can be done earlier, while the grain is in the dough

others, all of whom use the Osborne binder. The advantages claimed for binding hay are that it dispenses with raking and leaves the hay clean and wholly rid of dirt, sand, grit, clods, etc., which is unavoidable when a mower is used and raked in the old way. which is claimed as injurious, particularly to young horses; the hay tied in bundles cures sweeter and better, without bleaching, retaining all its nutritive qualities, while the bundles are compact and very convenient in hauling, storing and feeding. Add to all this the fact that the twine used for binding costs less per acre than raking and cocking does, and the growing sentiment among our horsemen in favor of binders for cutting hay is easily understood.

The low price of grain for the past few years compels a change from the old careless, wasteful modes of harvesting; and every advantage must be taken by our smaller farmers to reduce expenses, and do as much of this work as possible without extra help. Space will not permit us to treat this topic as fully as we would wish, but it is a matter worthy of attention, and we should like to hear from our grain-growing readers concerning the conclusions they draw from their experience in the use of different methods of harvesting. The machine here-with illustrated is claimed to be the best of its class. Being made almost wholly of steel and malleable iron, it combines great strength with lightness and durability, and is a model of beauty in design and simplicity in mechanism.

complete machines ever invented, and one which is comparatively indestructible.

The "Osborne Steel-frame Self-Binder" is manufactured at Auburn, N. Y., by D. M. Osborne & Co., one of the pioneer houses in this line, whose factories cover upward of 20 acres of ground. Their products are limited in sale only by the range of civilization itself. For upward of 30 years they have continued, enlarging from time to time, from a modest beginning to the most extensive establishment engaged in this line of business. They now have over 1600 names on their pay-roll. In the manufacture of their machines they use every day 60 tons of cast-iron, 15 tons of malleable iron, 40,000 feet of lumber and nearly three tons of brass. Such an establishment is a fitting monument to the energy, perseverance and business capacity of its founder, D. M. Osborne.

This enterprising firm has branch-houses in all the leading agricultural centers of the world, the California branch being located on Bluxome street, San Francisco, and under the management of Otis M. Goddard, who has been connected with the company nearly 20 years.

The mill of the Pacific Lumber and Wood Co., near Truckee, was burned on Monday. Incendiarism is charged, as it had been threatened that unless the two Chinese cooks were discharged there would be a fire.

ACCORDING to the Nevada papers the water in Lake Tahoe is lower than ever.

varieties, including some of the rarest and most beautiful roses in the State.

An exhibit in charge of Mrs. H. E. Highton was much admired for its rare and varied beauty. Some of the roses were so large as to be easily mistaken for cleverly made clusters instead of single blossoms.

A very attractive collection of ferns and wild flowers from the glens and meads of San Mateo county was shown by Mrs. Nat. Brittan of Redwood City.

One of the most extensive exhibits by a single person came from the gardens of Mrs. E. T. Crane of San Lorenzo. It embraced a vast variety of roses grown (as a card informed the visitor) on bushes that had not been irrigated for more than three years.

Mrs. Albert Miller of Oakland, Mrs. C. D. Holman of Santa Cruz, Mrs. J. C. Flood of Menlo Park, and many other ladies sent notable contributions. There were, as usual, numerous booths, where flowers, candy and refreshments were sold for the benefit of the Exchange.

Every evening 10 electric lamps made the hall as light as noonday, and Noah Brandt's orchestra, under the direction of Henry Heyman, added the charms of music to those of floral fragrance and beauty.

A great crowd attended the closing Saturday evening when Jos. D. Redding conducted an auction sale of plants; and it is understood that the show financially has been a decided success.

FARMERS' INSTITUTES to the number of 82 were held in Wisconsin last year, and 279 practical topics were discussed. More than 100 lecturers and specialists imparted instruction, and the State appropriated \$12,000 to help the thing along.

SALT LAKE citizens subscribed \$12,000 for advertising the resources of Utah Territory.



(Original.)

A Woman's Sphere.

BY CALLIE L. BONNEY.

A woman's sphere—to love, to serve, to trust,
Perchance in vain
To give the treasures of a loyal heart
And reap but pain.

And yet how oft what seemeth lost to us
Is sweetly ours;
And e'en the cypress wreath may bud and bloom
In fairest flowers.

A loyal love must find its own at last.
If earth deny,
Know that a recompense secure is thine
In starry sky.

And do not deem love's faithful service lost—
Reward awaits.
If not on earth, then know 'tis thine for aye
Beyond the gates.

The Downfall of Parson Squeels.

It had been an early frost, and already the leaves had unfurled their slender stems from the giant oaks and scarlet maples and drifted down in rustling masses. The trees stood grim and gaunt in the streaming moonlight that peered cautiously through their twisted limbs, penetrating every crevice and crack, save where a clump of pines stood huddled close together, as though guarding some hidden treasure.

Something made the dead leaves crackle—a breeze, perhaps, and the noise disturbed a fat hen roosting on the topmost bough of the tree. With a flutter of wings and a frightened cackle she flew down from her perch and hesitatingly stood, first on one leg, then on the other, till she had fully satisfied herself that no harm was meant; having done so, she returned to her place, and for a time all was still save an occasional cluck.

"Dat dat fool hen!" muttered a dark figure now stealing from behind the hedge. "Ef she don't heish dat racket, reckon Marse Tawn'll come out arter dis nigguh wid de shot-gun—en why so? We is de chilun of de earf, en de people of His pasjer, en de rich man got to feed us outen he plenty—dat's B'ble talk dat is, de Lawd made me an He made dat tukkey. I 'longs to mysef, en tukkey he 'longs to hissef, den wharfo' cyarn't me en dat tukkey jine han's?" And Parson Squeels looked questioningly at the diamonded maples whose dead boughs shook and rattled approvingly. "Sides, dat ole gobbler's a gittin' p'intedly survivr'us, en hits jos' a race twixt me and Mister Fox, en 'pens w'io gits dah fus'."

Shifting thus the weak voice of conscience with potent arguments, Parson Squeels grasped the lowest bough of the tree and agilely swung himself from limb to limb, noiselessly as a cat, till his long muscular fingers grasped the unfortunate gobbler by the throat; not a squawk did he utter, only a hoarse rattle; then his long neck hung lifeless across the parson's wrist. In a moment Abraham Squeels, with his prey tucked safely under his arm, was skirting along close to the hedge to avoid the moon's clear beams.

Far off a dim light flickered across the waste of dismantled corn-fields, and the stacks of fodder looked like sentinels at their posts—at least they looked that way to Parson Squeels, who glanced cautiously from side to side, and saw in every stick and stone an accuser ready to wrest the turkey from him.

"Um! dabs a light at Sis Randy Styles'! I see p'intedly fared of I go past dat way dat 'oman gwine 't see me en she gwine 't spicion somepin when she see dis hump a stickin' out er my coat hits a poor secret whut don't leak out we'n de wimmin gits a holt—dah now! dey done pit out dat light en I see blegged ter make tracks fur home. I done stole dis yah turkey f'um de fox, he, he, he! I ain't 'prived nobody er dis fowil 'cepin Mister Fox, 'case w'en de Tankagibben turkey done gone f'um de roos' hit's a sho' sign dat de fox done payed a visit."

As Brother Squeels hastened home, no warning voice whispered that as he passed the cabin, now wrapped in darkness, his worst enemy was stealthily watching him—looking through the one pane of glass in the window otherwise stopped up with a bad quilt and an old hat, a pair of sharp eyes glared upon him, and just as he shifted the weighty turkey from one arm to the other, the moon glided from behind the clouds and rested on the parson's anxious countenance.

"Cha'ty be a waitin' fur me, en she gwine be p'intedly proud 't have dis fine fowil. Hi Cha'ty!" as he reached the door of his small, neat cabin, "open det do' pretty brief, 'case my arm's sho'ly wored out!"

The door creaked open a quarter of an inch till Charity had satisfied herself that it was her liege lord who knocked, then it swung back on its hinges, revealing the hospitable

glow from the blazing logs. "Um! You done 'prise me, Ab'm! who done sont me dat turkey? Gib it hyar, 'case I got ter pick hit w'ile dis water's a bil'in'; somehow's 'nudder, I spicioned somebody gwine to sen' me a turkey en I see had dis water a bil'in' sence sun down."

"Stop right dar, Cha'ty!" as she was about to pop the fowl into the iron pot. "I's gwine to hab dat turkey cooked like dey uster 'fo' de wah." "How's dat?" "Wai, yer see dey leabs de feeders on en dey jis wraps up de turkey in a piece o' brown paper wid wet clay daubed roun' hit en bakes him in de hot ashes wid a fat bacin' rind inside er him fur ter flaber. You niggahs down on de Mississippi dunno nuttin' bout good cookin'—Huuccum I ter know so much?—I 'uz de cook w'en Marse Phil went a campin' out 'fo' de wah. Now gimme a string t'wel I hangs dis byird out on de nail at de warnut tree."

Brother Squeels, followed by his dutiful wife, swung the turkey over his arm, and crept cautiously round the walnut tree feeling for the nail which projected from its gnarled trunk; a faint sound among the leafless branches made them both start; a screech owl flew on the topmost limb, uttering a shrill hoo-hoo-hoo-hoo.

"Sign somepin gwine't happen w'n de squinch owl fly ober de house," muttered Brother Abe as he tied the turkey's legs together and left him waving to and fro in the darkness, while he carefully closed and fastened the door, shutting out the cheery glow from the fire which streamed across the path.

Parson Squeels had arduous duties before him on the morrow, and, as he toasted his toes in the hot ashes, looking meditatively down into their red depths, he heaved a mighty sigh which Sister Charity construed into a desire for a "leete somepin warm;" reaching up on the row of shelves in the corner, she brought down a jar of brandied peaches and a jug of black-berry wine.

"Dat squinch owl never meant nuttin', he jes' now flewed over Sis 'Randy Styles' cabin, en I reckon he wuz callin' for her, 'case she sholy is cantankrus en no denial ob dat."

"You know what I gwine ter do to-morrer, Char'ty?" questioned the parson gloomily.

"Yer gwine s'pell Sis Styles from de church."

"Well, w'en I 'uz out dah a stringin' up de turkey 'peared like I heard somethin' say, 'Be cyarfal, Abe Squeels, Sis Randy Styles kin hoodoo,' en dat squinch owl cum by en say, meanful like, 'hoo-doo—hoo-doo—hoo-doo!'"

"Go way, Ab'm, you sholy is childish! Git ter baid, case yer got ter put on yo' biled shirt in de mawnin' airly, en git radey fur de church."

"Sho nuff," assented Abraham, as he lay down between the blankets and was soon snoring resonantly.

Sister Randy Styles was surely cantankerous. She had systematically refused to give one cent toward buying the parson a frock-coat and an easy-chair; she had refused to come to the altar with the rest of her colleagues and deposit thereon a half-dollar in obedience to a request from the parson for a "leete change," and lastly she had left the church in the midst of the sermon, because, she said, "Brer Squeels didn't know nuffin' bout de Bible nohow!"

This last insult was too much for the mild parson, and it was determined at a meeting of the board that Sister Randy Styles should be suspended. Early on the Sabbath morning Brer Archie Ransom's boy hurried to the little whitewashed meeting-house to ring the first bell for church.

The bell was a newly acquired luxury and the pride of each individual member's heart, hence it was customary to ring on five different occasions before churchtime. On this morning in particular it was to be tolled from 9 till 11 o'clock, to give Sister Styles time to make her peace with God and man and repent of her evil ways.

Slowly and laboriously the boy pulled the rope down nearly to the ground, then let the cord slip slowly upward through his fingers; but no joyous peal clanged out on the soft November air. Only a muffled sound came from the bell. Again he pulled the rope, again the mournful thud, thud; and once more with trembling fingers he put out all his strength in one tremendous jerk, but with no better success.

Archie Ransom's boy was speechless with wonder not unmixed with alarm, and bethinking himself of all the tales of malicious spirits he had heard, he suddenly took to his heels, not stopping till safe beside his father's fire.

Parson Squeels had put on his "biled" shirt, and, astonished at the lateness of the hour, he walked briskly down the road to inquire into the meaning of it all, leaving Charity to prepare dinner. A little knot of men and women stood in the path talking eagerly, and as Abraham Squeels approached they dropped their voices, but made room for him in their midst.

"You people done furgot hits de Sabba' day, isn't yer?" he demanded. "Whyn't yer toll dat bell fur Sis Styles?"

No one spoke and Abraham looked wonderingly at their awe-struck faces.

"Is yer seed sperits? 'Pears like you is all moughty curus!"

"Sperits done tuk de bell away," some one ventured to explain.

"How do you know dat?" the parson asked anxiously, looking from one to the other.

"Case Brer Ransom's boy done pulled en' pulled en' 'peared like somepin kotch a holt er dat bell en' hit couldn't ring no ways."

"En hit ain't gwine't let go hits holt s'long ez Randy Styles say no!" came a mocking voice, breaking the silence that had fallen upon them all. As with one accord they looked up like frightened rabbits, they encountered the gleaming eyes of Sister Randy Styles herself. Her strong arms rested confidently on her hips and a scornful smile parted her lips, displaying two rows of dazzling teeth; her coarse black hair was combed up under a bright-hued head handkerchief, and anger or excitement had flushed her yellow face, tinging it with an orange glow.

"No! dat bell sharn't toll fur Randy Styles, but she can come 'thout dat, 'en Abe Squeels, ef yo' hab anyting ter say, be quick 'bout hit 'fo' I gits rade-y ter go! Come, Abe Squeels, ef yer ain't feared!"

The taunt had the desired effect, and the whole congregation filed into the church, headed by Sister Styles, who took her seat on the front bench, while Brother Squeels opened his book of laws and turned to Article 17, which provided that no member should speak disrespectfully of the rector under penalty of being expelled.

"En so, bredderin, I is 'bleeged ter state dat we fin' dis 'oman guilty, en she ain' no ways fittin' ter b'long ter dis church, whar we is all we'y partic'lar; we has sot oswers fur zumples ter dem leete chilun," pointing to the assembly of boys in the back of the church, who showed their white teeth approvingly.

"We cyarn't hab nobody 'mongst us whut'll backslide fum dey 'gagements, en I moves dat Sis Randy Styles farfets her seat in de amen corner, en w'en she feel de spirit movin' her ag'in she must git low and meek like a leete chile en den she'll be dipped en washed tiwel she am white ez snow. Air de committee all agreed?" turning to the elders on either side, who solemnly held up their right hands.

"Is de gemmen ob de committee done hed dey say?" demanded Sister Styles in a hard, determined voice.

"Yer lazy, backslidin' cowards, is yer done hed yo' say—stan' back—Randy Styles mus' hab her turn! stan' back, I say! she ain't got no liver, but she's free, en her tongue's free! You's all agreed, is yer—you ain't got de spunk ter git up en 'fen' fur a lone 'oman whut ain' done nuttin' but stood by her rights! You gwine take 'way her seat in de amen corner, is yer? You's been a covitin' dat seat a long time, yer sneakin' hypercrats! You helt up yo' right han's, did yer, you beeg mouf apes?"

Wal, I ain't gwine ter say nuttin' ter you, Dick Gheens, en you, Archie Ransom, but you, Abe Squeels—you, I mean!" pointing her long yellow finger at the trembling parson. "I see gwine t' see 'fo' I gits throo ef Randy Styles won't spel you 'etid o' you spellin' Randy Styles!"

"You ain't nuver 'oused me ob stealin' yet, is yer?" turning to the congregation. "Whut you all tink gwine t' happen w'en de parson takes robbin' de hen roos'? Not but whut I see seed many a hon'es man whut 'll some time er 'nudder git de rich white man's fatter' turkey—dat ain't de question—but de parson whut's tuk keer en 'vided fur by de flock, whus his bizness a holpin' 'bisse' to de bes' when de mo' zervin' has ter go empty handed. Humph, whut you all gwine say now?"

A groan of approval came from the wondering flock.

"You all done axed wharfo' dat bell won't toll fur Randy Styles; en I tell yer dat de sperits done cotched a holt, en somepin done clum up dar en fastened hits ef outer dat bell, en hit ain't gwine t' let go t'wel Abe Squeels done fessed up to dat turkey he stole las night! Ya'as yer better!" as the parson's back face turned gray. "You white-livered raskil, I ain't done wid you yit."

"You's all 'spended Randy Styles 'case she do' wanten to gib whut she done wuke fur ter help 'sport a beeg, lazy nigguh, en what yer gwine t' say when she tells yer dat he up en stole a turkey offen Marse Tawn Bowman's hen roos'? Ya'as, when us honest, hard workin' niggars cyarn fin' a turkey nowhars, he gets de fines' en fatter' f'um de top er de roos' en fatches hit home en hangs hit outside er his do'! I ain't been talkin' wid sperits fur nuttin', en las' night I dreamt I seed Abe Squeels a trabblin' long de road wid a tukkey underneaf he awm; den somepin say ter me dat tukkey gobbler cyarn res', en he gwine ter clime up dah in de bell so'at nobody cyarn come ter chu'ch ter see Randy Styles 'spended. Don't you folks b'lieve me? Sen' yo' boy up in de steeple, Brer Ransom, en who gits dat tukkey fus' kin hab him fur ter roas', 'case I 'low Abe Squeels ain't gwine ter ax fur none o' dat fowil!"

A stifled titter swelled softly through the church and Sister Styles stood solemnly pointing to the altar as Brother Ransom's boy triumphantly returned with an enormous gobbler hanging by the feet. Abraham Squeels had retreated farther and farther from Sister Styles' accusing finger, and as all eyes were turned upon Brother Ransom's boy the pastor sprang lightly through the open window, while Sister Randy Styles took the front seat in the amen corner; the bell once more clanged out a joyous peal, and the whole church joined in the weird, sweet hymn—

"Swing low, sweet cha'yit,
Come cyar me home!"

—Oregonian.

THE OSTRICH-FEATHER trade of South Africa is so depressed that the feathers which formerly sold for \$125 now bring only \$7.50, and the value of the birds has declined accordingly.

(Original.)

William Brown of Oregon.

[These lines were first published in *Punch*, but they have been changed so much in their migrations through the American press that the author begs to republish them here as first written by him.]

They called him Bill, the hired man,
But she, her name was Mary Jane,
The squire's daughter; and to reign
The belle from Ber-she-be to Dan
Her little game. How lovers rash
Got mittens at the spelling school!
How many a mute, inglorious fool
Wrote rhymes and sighed and dyed—mustache!

The hired man had loved her long,
Had loved her best and first and last;
Her very garments as she passed
For him had sympathy and song.
So when one day with sudden frown
She called him "Bill," he raised his head,
He caught her eye and faltering said,
"I love you; and my name is Brown."

She fairly waltzed with rage; she wept;
You would have thought the house on fire.
She told her sire, the portly squire,
Then smelt her smelling-salts and slept.
Poor William did what could be done;
He swung a pistol on each hip,
He gathered up a great ox-whip
And drove toward the setting sun.

He crossed the great backbone of earth,
He saw the snowy mountains rolled
Like mighty billows; saw the gold
Of awful sunsets; saw the birth
Of sudden dawn upon the plain,
And every night would William Brown
Eat pork and beans and then lie down,
And dream sweet dreams of gentle Jane.

Her lovers passed. Wolves hunt in packs,
They sought for bigger game; somehow
They seemed to see above her brow
The fork sign of turkey tracks.
The teter-board of life goes up,
The teter-board of life goes down,
The sweetest face must learn to frown;
The biggest dog has been a pup.

O maidens! pluck not at the air;
The sweetest flowers I have found
Grow rather close unto the ground
And highest places are most bare.
Why, you had better win the grace
Of one poor cussed African
Than win the eyes of every man
In love alone with his own face.

At last she nursed her true desire.
She sighed, she wept for William Brown.
She watched the splendid sun go down
Like some great sailing ship on fire,
Then rose and checked her trunk right on;
And in the cars she lunched and lunched,
And had her ticket punched and punched,
Until she came to Oregon.

She reached the limit of the lines,
She wore blue specs upon her nose,
Wore rather short and manly clothes,
And so set out to reach the mines.
Her right hand held a Testament,
Her pocket held a parasol,
And thus equipped right on she went,
Went water-proof and water-fall.

She saw a miner gazing down,
Slow stirring something with a spoon;
"O, tell me true and tell me soon,
What has become of William Brown?"
He looked askance beneath her specs,
Then stirred his cocktail round and round,
Then raised his head and sighed profound,
And said, "He's handed in his checks."

Then care fed or her damaged cheek,
And she grew faint, did Mary Jane,
And smelt her smelling-salts in vain;
She wandered, weary, worn and weak.
At last, upon a hill alone,
She came, and there she sat her down:
For on that hill there stood a stone,
And, lo! that stone read, "William Brown."

"O William Brown! O William Brown!
And here you rest at last," she said,
"With this lone stone above your head,
And forty miles from any town!
I will plant cypress trees, I will,
And I will build a fence around,
And I will fertilize the ground
With tears enough to turn a mill."

She went and got a hired man,
She brought him forty miles from town,
And in the tall grass squatted down
And bade him build as she should plan.
But cruel cowboys with their hands
They saw, and hurriedly they ran
And told a bearded cattle man
Somebody builded on his lands.

He took his rifle from the rack,
He girt himself in battle pet,
He stuck two pistols in his belt,
And mounting on his horse's back,
He plunged ahead. But when they showed
A woman fair, about his eyes
He pulled his hat, and he likewise
Pulled at his beard, and chewed and chewed.

At last he gat him down and spake:
"O lady dear, what do you here?"
"I build a tomb unto my dear,
I plant sweet flowers for his sake."
The bearded man threw his two hands
Above his head, then brought them down
And cried, "O, I am William Brown,
And this the corner-stone of my lands!"

JOAQUIN MILLER.

Farming for Women.

Among the new industries of women, farming is steadily and deservedly growing in favor. In the four States, Iowa, Kansas, Minnesota and Nebraska, there were, according to the census of 1888, 2379 farms owned and cultivated by women, and the number has very largely increased since that time. In Dakota, a young woman physician, in the leisure of a slowly growing practice, has homesteaded and is carrying on a farm, and two young women of sixteen in the same Territory are very successfully engaged in stock farming, while in California and Florida a very considerable number of women are profitably engaged in the culture of oranges and other fruits. The reversal by the Secretary of the Interior, in 1886, of the decision of the Commissioner of the General Land Office, declaring that women who had made homestead entries forfeited, by marriage, their right to complete the same, has doubtless tended to increase the number of women farmers, and by drafting off women to the new States and Territories may indirectly tend to relieve the Eastern States of their surplus female population, and of some of the perplexing problems incident thereto.

This is altogether a move in the right direction. Farming is entirely a suitable, dignified and profitable occupation for women. The prejudice against their employment in agricultural labor, which arose from the brutish and degraded condition of the peasant women in some European countries, and of the women of barbarous tribes, has been gradually dying out. It has come to be understood that the degradation of these women is the result of other conditions than the mere fact of out-of-door work, and it has come to be recognized that only the superintendence of the labors of a farm and its financial management are duties eminently suited to woman's best powers, but that the details of its work are by no means beyond her physical powers. The use of machines in large farming makes much possible to women which might otherwise be beyond their strength, but even the more arduous labors of pioneer farming, the felling of trees and fencing of land and breaking of sod, have recently been performed with entire success by young women of no less education and refinement than strength and courage.

Horticulture and floriculture are especially adapted to women, and market gardening is a truly ideal occupation for women whose education in practical finance is sufficiently thorough to make them equal to the management of a business which requires a large capital and involves many risks, but the labors of which are admirably fitted for women, and the profits of which, under intelligent management, are enormous and seldom failing.

One circumstance that renders farming pre-eminently desirable as an industry for women is that its demands are in no manner incompatible with their duties as wives or mothers. Nearly every occupation of equal dignity and profit has its fixed days and hours, and any irregularity in meeting its demands is disastrous; but the exigencies of farming permit of such flexibility of plans and arrangements as leaves ample room both for the ordinary and extraordinary demands of home and domestic life. Especially is this true of tree planting and forest culture, an industry which has yet to be developed in this country, and which is especially a woman's business, since women rather than men have a genius for minute care and for patient waiting, and find it more easy to live sparingly and self-denyingly while waiting for future returns.

Too much emphasis cannot be laid upon the gracious influences of the contact with nature, the free out-door life, the active exercise of farming. No more wholesome correction of the narrowing tendencies of women's lives, the minute economies, the petty carefulness, the anxious consideration of minor laws and traditions, inevitable in most of them, can possibly be found. A marked improvement, not only in the health but in the moral tone of American women, would be sure to follow upon their adoption on any considerable scale of this industry in its various branches.

Up to the present time, women farmers are found almost exclusively in the West or extreme South. Why should not New England women take up farming, and take it up right here, in their homes and on the farms which their fathers and brothers are abandoning for more remunerative work elsewhere? The problem of the industry of New England women is only more perplexing than that other problem of the rapid deterioration and abandonment of New England farms and homesteads. Granting that there is "not money enough" in a worn-out New England farm for an active and ambitious young man, there may still be enough for a woman, to whom a home in a settled country among refined associations, with the privileges of cultured society, churches, schools and libraries, is worth more than a chance of future riches. All over New England, especially in Maine and New Hampshire, are houses, large, roomy, luxurious even, in comparison with the city quarters of poor folk, standing deserted in the midst of worn-out farms, which, turned into timber lands, or even cultivated as farms, would give a home and health and happiness to the hard-worked, almost starv-

ing, widowed mothers of unruly city boys, who are growing up to be the pest and the problem of their time, but who, transplanted to such country homes, would be redeemed to usefulness and manhood. Or let it become an acknowledged and understood fact that the women of a family are fully competent to carry on the farm, leaving the men free to seek occupation in the neighboring towns and cities, and there will no longer be the pressing need of breaking up dear associations, and leaving ancestral homes, to seek in the Far West that livelihood which the old farm is inadequate by itself to give.—*Louise Seymour Houghton in Lend a Hand for May.*

YOUNG FOLKS' COLUMN.

Little May.

(Written for the RURAL PRESS by AUNT SUSIE.)

"Please, mamma, can I go down to the Falls to play, and can I take my new parasol?" asked a little girl named May. Her mamma said she could, so she started off, a very happy little girl.

She had on a fresh pink cambric dress, and a broad hat, and didn't at all need the pretty little blue parasol her aunty had given her, but she was so proud of it, her mamma let her take it. She walked some way from the house and at last came to a lovely brook that ran along in such a merry way for some distance; then it came to some large rocks, but, instead of thinking them too large to get over, it just gave a leap and dashed along, and made such a merry noise, and such lots of snow-white foam as it fell from the rocks to the ground, and because of this it was called "Little Niagara," and the boys and girls used to have nice times wading in the clear water, and sailing little boats, and I am sorry to say, thought it was fine fun to watch the little boats go to destruction over the Falls. I wonder why it is children love to destroy things?

Well, May watched the pretty pebbles in the stream, and picked out some that were worn round and smooth by the constant motion of the water, and carefully stepped from one large stone to another, and in that way crossed the stream several times, and gathered some of the sweet flag-root that grew all along in the water. By that time she was tired of the brook and went into a field near by, when, first thing she knew, she tripped and fell, and went right down on her pretty parasol, and, of course, broke the handle. She picked up the pieces and looked at them in despair, tried to use it with the broken handle, but found she couldn't. Then somehow it came to her mind to ask God to mend it. She was a very religious little girl and never forgot to say her prayers, so with a very happy heart she climbed over the stone wall and knelt down in a corner out of sight from the road with an instinctive wish to be alone, and in the simplest words possible asked God to please mend the parasol. When her little prayer was ended she climbed back over the wall, fully expecting to see the parasol mended, but to her utter astonishment there it still lay in pieces. It was impossible for her little heart to understand why God hadn't mended it, and with many tears and sobs she picked up the pieces and walked slowly home, and went to her mamma's room and said:

"I broke my parasol, mamma, and asked God to mend it, but He didn't, and I don't think I shall ever say my prayers again."

Her mamma felt quite shocked, and explained to her that no one would expect God to do such things. It took some time to convince May that she must say her little prayer even if God had not mended her parasol, and when night came she knelt down by her mamma's knee as usual and repeated her evening prayer.

In the morning she found her parasol mended, and exclaimed: "O mamma! God did mend it, after all."

Her mamma told her again she mustn't expect such things of God, much as He loved little girls, and told her her papa mended it, and that she couldn't use it for a few days.

In the house where May lived was an old-fashioned kitchen with stairs almost in the middle of the room, and May and her sister used to play tag round them till Kate, the Irish cook, was nearly crazy with the noise, but she loved the children very much, and was very patient with them.

May's sister's name was Sue. One day the children were playing, and dodged each other round the sides of the stairs, and raced till they were so excited they hardly knew what they were doing, and gave such awful yells. Poor Kate was tired out, and exclaimed: "Sowsan, will ye shtop?" and took hold of her as she raced by, but she might as well have tried to "shtop" the wind. Sue was going at such speed, she just took poor Kate right along, and she stumbled and so both went down. Such a laughing and kicking before they finally got straightened out. When they were once more standing, Kate said, "Och, murder! sure an' it's me bones that be broke. I'll niver catch hold of ye agin when ye are racing loike that. Sure an' it's the doctor's bill I'll be having to pay for me cracked bones!" But she soon found she was all right, and forgave the children as she had hundreds of times before. She

scolded them one minute and petted them the next, calling them "me own darlints" in the true Irish way.

The children taught her to read and write, and she was very proud and happy when she sat down to write her first letter. She wanted to say, "Sure an' I've got me wishins," but May told her a better way to express her thanks to them for teaching her to write.

May and Sue had a large attic to play in, and each had a dolls' house up there. May loved to be alone, and wanted her house way off from Sue's, but Sue was a more social little girl, and didn't want to be alone, but wanted her house close to May's, and when May insisted upon having hers "way off," poor little Sue cried, and sobbed out: "No bo—body would th-think I was your—your little sis—sister, to see me—me—way off—here."

May hesitated a moment, then said by way of consolation: "Nobody comes but those who know you are my sister; and if anybody should, I'll tell them," and she went about her play with a perfectly clear conscience; but poor little Sue never was as happy as she would have been if their "houses" had been close together.

Well, May often went to "Little Niagara," but she didn't take her parasol again. She used to gather great bunches of wild flowers and put them in a big vase at home, and as soon as she was old enough she studied botany, and in that way knew a good deal about flowers, and loved them all the more.

DOMESTIC ECONOMY.

SOUFFLE OF LEMON.—Proceed as usual for soufflé, by using the rind of two lemons free from pith in the milk instead of vanilla.

SOUFFLE OF RICE CREAM.—Use ground rice instead of the common flour, finishing the same as omelet soufflé, and using any of the flavors desired.

HAM CROQUETTES.—One cup of ham, two cups of potatoes, one cup of bread-crumbs, one tablespoon of butter and one egg. Make in balls, roll in bread-crumbs and fry in hot lard.

GRAHAM GEMS.—Take one egg, two teacupfuls of sour milk, a tablespoon sugar, a teaspoonful soda, a saltspoonful of salt and enough graham flour to make a somewhat stiff batter. Bake in greased iron gempans.

COCOANUT COOKIES.—Three cups of sugar, one cup of butter, one cup of sweet milk, two eggs, one cup of grated cocoanut, two teaspoonfuls of baking powder, flour enough to make a dough; roll out, cut in shape and bake.

FRIED EGGPLANT.—After peeling the eggplant, cut in slices one-half inch thick, pepper and salt them and lay one slice upon the other, leaving them to stand 10 or 12 hours. Drain off the liquor, dip in flour and fry brown.

OYSTER PIE.—Make two rich crusts, bake them in a pan with a cloth between to hold up the upper crust. Stew the oysters; lastly, beat in two eggs and a spoonful of cracker crumbs. Lift the top crust and pour the oysters in.

CUSTARD PUDDING.—Make a border of paste on the dish and fill up with custard, grate a little nutmeg on the top. Any kind of fruit pudding with a custard may be made in the same way, by placing them in the custard and sifting some fine-powdered sugar over before going to bake.

WAFFLES.—To make good waffles, take one pint of buttermilk, one teaspoonful soda, one tablespoon of melted butter, one teacup of flour, the yolks of four eggs and a small pinch of salt; beat the whites separately to a stiff froth and add them the last thing. Have the waffle tins well greased and very hot, pour in the batter and bake brown. When taken up, spread with butter and keep warm.

MARROW PUDDING.—This pudding may be made in various ways, but it is best with half a pound of ladies' fingers cake, and a quarter of a pound of beef marrow chopped fine, a quarter of a pound of currants well cleaned, half an ounce of candied lemon peel, a little nutmeg, a tablespoonful of powdered sugar, a saltspoon of salt, and half a wineglassful of wine or brandy. Put these on a dish and fill up with custard, having previously put a border of paste on the rim; about half an hour will do it.

PARSLEYED POTATOES.—Peel, quarter and wash as many potatoes as required, boil quickly in salted water until just tender, strain at once, and let them steam for a few seconds over the fire; add a liberal piece of butter and let it melt over the potatoes. Then strew over them some finely-chopped parsley, cover, and taking the handle with one hand and holding the lid down with the other, shake the saucepan so that the potatoes turn over a few times, then dish at once. This is an excellent way of preparing old potatoes.

OMELETTE SOUFFLE.—Break six eggs, place the yolks in one basin and the whites in another; add to the yolks three tablespoonfuls of powdered sugar, one-half tablespoonful of flour and a little vanilla essence. Beat well together, whip the whites, beginning rather slowly at first, increasing by degrees until it forms a stiff froth; then add the yolks, very gently beating up the whites as you add them. Have ready a silver or plated dish (for want of either use tin), and butter it well; place the mixture on it and put it into a hot oven. Look that it rises; if so, run a knife round it, sift some sugar on it, place it in the oven again, and serve, when well raised, immediately.

GOOD HEALTH.

For Fat People.

Intemperance in diet, indulgence in the excessive use of alcoholic drinks, too little bodily exercise in the open air—these are the more important of the causes which bring on corpulence, says a recent writer. As muscular exercise increases the production of flesh, inaction leads to an excessive deposit of fat. Alcohol acts in a manner precisely similar to that of fats, sugars and starches. It interferes with the destruction or combustion of the fat-producing materials, prevents them from undergoing combustion, as it is more easily destroyed by oxygen than they are. Certain diseases, such as any interference with the formation and development of the red blood corpuscles, the oxygen carriers, increase the disposition to the deposit of fat. The oxygen may enter the lungs, but without these carriers it is unable to reach the tissues where combustion ordinarily takes place.

The dangers of corpulence are many fold. All diseases accompanied by high fever are apt to follow an unusually malignant course in fat persons. The heat developed in these affections cannot be so readily lost by radiation or conduction as in the lean. The cold bath, the cold pack, and all forms of cooling measures fail to really reduce the temperature, and the fever is, in itself, a serious source of danger. The skin is constantly bathed in perspiration on slight exertion or when the external temperature rises. Hence, skin diseases are common and often intensely annoying among the corpulent. The breathing is interfered with by the accumulated fat, so breathlessness on exertion is common among them. The frequency of perspiration leaves the surface exposed to chilling influences which cause coughs, colds, bronchitis and pneumonia. The overloading of the heart with fat interferes with its action, so that palpitations and sudden faintness from partial failure of this organ to do its duty are not infrequent. The extra weight that has to be carried entails muscular exhaustion on exertion, such as is not felt by the thin person. The discomforts and dangers of obesity would fill a much larger catalogue, but it is not necessary to enumerate them all here.

The treatment of corpulence must vary with the cause. No rigid rules can be framed that will serve in all cases. If there is a strong hereditary tendency to it, a radical cure cannot be expected—only an improvement can be promised, and even this cannot always be secured. The prevention of it should be undertaken when a young person shows a strong tendency to put on an excessive amount of adipose tissue. One of the first things to be done in this direction is to regulate the diet. Immoderate indulgence at the table must be rigidly forbidden, yet the food must be in sufficient amount to secure all that the body requires for its needs. No starvation should be countenanced. Fatal weakness of the heart or permanent disorder of the digestion often results from irrational restrictions of diet. The temporary thinning is usually followed by a marked increase in the corpulence beyond what existed before the "Tanner plan" was adopted. A much better plan is to avoid exciting the appetite by too great variety of food. Prince Bismarck's physician succeeded in curing his patient by the very simple plan of making the meal consist of only one kind of food, of which he should eat as much as he pleased, and no drink of any kind to be taken at meals or until two hours afterward. By this means no unnatural appetite was encouraged, and the patient ate only what the necessities of the system really demanded. The diet should contain an abundance of albumen, little fat, and still less starch or sugar, when an earnest effort is being made to reduce corpulence or provide against its making its appearance. Some fats have to be taken, or the albuminous foods will not be digested or appropriated by the system. If signs of disordered digestion appear, the diet must be modified from time to time by the addition of articles which are usually forbidden. It is better to incur some of the prospective discomforts or even dangers of obesity than to ruin the digestion in the attempt to avoid them.

REMEDY FOR POISON OAK.—DON'T EAT THE LEAVES.—A correspondent of the *Morning Call*, who has suffered terribly from poison oak, was cured in a few days by using as a wash a decoction of wormwood leaves, made quite strong. The weed grows abundantly where poison oak abounds, so we find the poison and its remedy growing side by side. The correspondent further adds: "I hope no one will try that foolish idea of eating the leaves, for I should have tried it myself had I not seen a child, whose parent made it eat some, suffering in great agony, and narrowly escaping death."

REMOVING MOLES.—The fair sex owes still another debt to the scientist. A lady who had a mole on her shoulder and who, from this reason, was unable to display her otherwise fair and attractive corporeal possessions, has had an electrical operation performed with perfect success. The mole was perforated with electric needles in every direction. After a week the mole, which had been burnt to a black mass, fell off and left the skin in good condition. The new skin shows hardly a trace of discoloration, and she now wears the most fashionable ball-dresses with impunity and success.



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W. B. EWER.

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Agricultural Implements.—D. M. Osborne & Co.
Agricultural Implements.—J. W. Fleming, Oakland.
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See Advertising Columns.

The Week.

Local showers have been reported this week from most localities in the upper half of the State. Some announce that the moisture is enough to be of appreciable benefit in helping the late grain to fill its heads, but we imagine that in the most cases the shower has been too light to be of much account, or the grain too far advanced to be benefited. However, on the whole, it is much better for every sort of growth to have a cool, moist air than a drying blast from the north, so we accept the small favor as a comparative blessing.

A significant indication of the drouth is the fact that field and forest fires have begun thus early in Yuba and San Joaquin counties. It will be wise to use extra precautions against fires this year and to make extra efforts to save everything eatable by stock, because of the high feed values which are likely to prevail.

The question of freight rates eastward for fruit is under consideration by the Railway Managers' Convention, which is in session as we write, but no indications of results are yet discernible.

High Wages in the United States.

There is much discussion at this time as to the causes of our great prosperity, our high wages, our vastly increased wealth and our ability to pay taxes. Some are disposed to credit it all to the protective tariff; others think it arises from our financial policy and National banks; and there are not a few who affect to believe that the National debt is a great blessing, has spurred us up to increased industry that has made two dollars where we had one to pay.

All these theories are sheer mistakes. The tariff may have been a small factor in some directions. The National banks have done nothing but what the Government could just as well have done without them. The credit of the Nation is not one jot better for having all the banks behind it.

The real cause lies here in these few facts: We are but 60,000,000 of people to 3,000,000 of square miles of land; we cultivate only the first quality of soil; we cut only the best of timber; we work only the richest mines, and only the choicest fisheries; our labor is all skilled and lively; it is aided by the best machinery.

Now here are advantages on every turn that no other nation in the world presents. They have the effect of making the product of the day's labor from four to ten times what it is elsewhere. As compared with India the facts stand thus: Two hundred people to the square mile; tenth rate land cultivated by poor lifeless slaves, with no mechanical appliances; mines worked down to zero; fisheries the same; scrubby timber out for lumber. Result: The daily product not one-tenth of what it is in the United States, and more particularly in California.

England stands between these two: People to the square mile 300; twelfth-rate land cultivated; labor less skilled and energetic; mechanical aids equal to America; inferior mines worked; inferior fisheries; inferior forests; better market for farm product. Result: The labor and skill being about equal to that of the United States, the product would be the same but for the need to work poorer land, mines, fisheries, etc.

The Indian labor counts 1; the English counts 5; the American 8 or more. In fact, while this holds as to farm produce, the figures run up to 100 in some mechanical works.

Now this increased product must go to some one. Either the landlord, the worker, or the trader must reap the profit, or it must be divided among them all.

In India, as the people are numerous, and inferior land, etc., are worked, the owner of the superior soil, timber, mines and fisheries reaps large rents. As the people are numerous, and labor abundant, the worker and his wages are reduced to the lowest terms. The middleman picks up but little where wages are so low and surplus product so small.

In England, as the poorest soil, etc., is cultivated, the landlord reaps a great revenue from the rent of all that is above the poorest. A mine that would pay \$1 a day in India would be a treasure. In England it would just pay wages. In America it would not be worth a cent. In California no one would look at it.

It is seen that in India and England the landlord takes the lion's share of all, because 200 to 300 to a square mile make cheap labor and ready market.

In America he cannot, because first-class land alone is wanted. Few people keep wages up, and compel him to go abroad for consumers. Should he aim to advance his rent, the farmer would take second-rate land. But the product is there; the 8 to 1 of the Indian and 5 of the Englishman. Who gets it?

The workman gets a large portion of this product. There can be no doubt of that. His wages are better, and he can buy more with them than the Englishman, and far more than the native of India, but yet not the whole—not much more than one-half. The rest goes into commerce, and is gobbled up by merchants, transportation companies, syndicates, trusts, and other devices.

No people on earth have so much to gamble on, and no people gamble so much. Our entire system has become one of speculation, closely allied to mere gambling. Among no people are there so many that escape toil, live by their wits and permit themselves to tread the ragged edge of crime so near the brink.

These classes are absorbing too large a share of the national product. The successful leaders become millionaires in a decade, and in a lifetime pick up a hundred millions.

This is in itself positive proof that labor is not protected with a paternal care by the Government. Corporations, trusts and syndicates have had too much license. They are concentrating our immense production in a few hands, and really threaten the life of the Republic and the liberty and happiness of the people.

Every child born in the Republic has a right to find all the advantages that naturally arise from our free condition, open to it on arriving at maturity. It will have a right to work only the richest soil, mines, fisheries, etc. To do so with the best appliances and the highest skill, and to take the product for the toil, subject to fair rent and reasonable profits.

But trusts and corporations are preparing drag nets to intervene and take all the profits to themselves. They are aiming to monopolize the soil, transportation, the markets; to fix the price of labor on the bedrock, to put the price of the product on the top shelf, and gobble all the margin to themselves.

Not any tariff, but these natural resources have been the cause of our prosperity. Not high tariff, low tariff, or no tariff at all, can take them from us; but these trusts and syndicates may. They are fast seizing the reins of power and fastening round the Government itself, like a dreadful nightmare. Their aim is to absorb all the wealth of the country, and its liberties will not be secure when that is gone.

We have need to call the attention of our Government to their work, to devise means to counteract their schemes, to save the natural resources of the country for the whole people, and secure liberty and the Republic forever, by making every man feel that he has a country in which he can live like a man, and worthy of his love and devotion.

J. Lusk Co. Assigns.

The failure of W. T. Coleman & Co. has been followed by the assignment of the J. Lusk Canning Co. of Temescal. This is not, of course, A. Lusk & Co. of San Francisco. The Temescal cannery managers affirmed up to Friday last that the Coleman failure would not affect them. The liabilities do not exceed \$200,000, it is thought, but the entanglement of accounts with Wm. T. Coleman & Co. make it a matter of doubt. The company has large contracts yet to fill, and it has made many contracts with orchardists for the delivery of fruit. They hoped to make a profit of \$30,000 from the apricot season alone.

It is unfortunate to have these things transpiring just at the opening of a fruit season, but it is altogether likely that other arrangements will be made both to can the fruit and market it so that no loss will ensue. The apricot crop is so small that it will take care of itself, and probably before the peach crop comes on the trouble of the springtime will be forgotten. It is reported that a new firm has already arisen from the ashes of W. T. Coleman & Co., and it is suggested that the new firm will resemble the old one when the trouble blows over. Of the truth of this we know nothing, but we do not anticipate that any great or permanent hardships will result from the present occurrences.

Mechanics' Institute Fair.

At a meeting of the Trustees of the Mechanics' Institute, held last Tuesday night, many letters were read from county officials in different parts of the State, saying that their counties intend to make exhibits at the forthcoming exposition, and asking about space, freight rates, etc. Trustees Stump, Bassett and Hopps were appointed a committee to obtain information regarding freights and special rates for the benefit of intending exhibitors.

It is understood that on all branches of the S. P. in the State, perishable articles intended for the fair will be carried free, and non-perishable returned free.

In view of the fact that a larger number of county exhibits may be looked for this year than ever before, General Agent Stout recommends the removal of the Union hotel on Hayes street, and the erection in its place of a middle annex to the pavilion as increased room is needed. The matter is under advisement.

Irrigation in the Sacramento Valley.

An extended distribution of irrigation water over some parts of the Sacramento valley seems likely to be secured at an early date. The short rainfall of this year is stimulating enterprises in this direction, and the prospect of great demand for small farms with abundant water supply is inducing land-owners to take more than usual interest in securing water. The movement is noticeable all the way down from Shasta to Colusa county. One of the enterprises has just been put in shape at Red Bluff. The scheme involves a plan for tapping the waters of the Sacramento a few miles above the town and bringing it in canals down to where it may best be utilized. It is thought that \$15,000 will cover cost of ditching. Red Bluff citizens have organized to see the scheme through. J. L. Kimball has given \$2500, and Mrs. J. S. Cone, General N. P. Chapman, H. Cadwalader and others have made liberal donations.

This irrigation plan was suggested at the recent mass meeting held in Red Bluff under the auspices of the State Board of Trade. The speakers then reminded the citizens of the valuable water supply that was practically going to waste at their very doors—a water supply, it was said, which, if in Los Angeles or the San Joaquin valley, would have been made use of long ago. Perhaps the most potent exhortation was that of M. M. Estee, who is reported to have spoken as follows:

The speaker rode over Fresno county 18 years ago. It was then a sheep pasture; dry, barren plains, not fit for post-holes. No pamphlets were issued, no real estate circulars flooded the country, no conventions and long speeches to boom the country; but men got together, put up money and built a 45-mile ditch—30 feet wide and 5 feet deep—took the water out of Kings river and irrigated the barren, parched earth. Then the land was for sale, and in 10 years that land has increased in value 500 per cent. The Fresno land was no better, the climate was no better, than the land and climate of Tehama, and here you have scenery that is unsurpassed in the world. "What has made this wonderful change?" said the speaker. "Water, water, water," responded Mr. Estee. Here you have one of the most beautiful rivers in the world flowing past your doors—going to waste on to the sea—which ought to be utilized to irrigate your great, broad plains lying west and south of your beautiful town. Dig a ditch and take out the water. Irrigate these lands and grow alfalfa, fruit, vegetables and general diversified crops, on 10, 20, and 40 acre tracts. You must not depend on rain, although you have an average of 24 inches a year and grow good grain and all kinds of fruit without irrigation, but with it your land can be made a veritable paradise.

In Lombardy the rainfall is 32 inches annually, and still that people irrigate their lands, and a small territory, not larger than Tehama county, supports a population of 4,000,000 souls. "Stop pastoral life," said Mr. Estee, "and commence diversified farming; you will make more money on a 40-acre lot than you do now on 160 acres."

This is quite different from the "no-irrigation" doctrine which has been widely proclaimed, but it is not necessarily untrue. The use of water is to be determined by the locality and the nature of the crop. There is no doubt that water is a good thing and plenty of it, but it must be intelligently used.

MOQUELAMOS GRANT.—Dispatches from Washington, 14th instant, announce that the Supreme Court has decided the Moquelamos land case in favor of the claimants under the railroad title and against the settlers. At least 500 or 600 families are affected by the decision. The litigation has been going on for 20 years, and many lives have been lost in the fights that have taken place between the claimants and the settlers. The lands lie in the foothills of San Joaquin and Calaveras counties and have become very valuable.

SILKWORMS AT WORK.—About the time this paper is printed, a number of the silkworms at the new rooms of the State Board of Silk Culture will probably be busily at work spinning their cocoons. The rooms—at the corner of Market and Fourth streets—will be open to the public from 11 A. M. to 3 P. M. daily, Saturday excepted, and opportunity given visitors to observe the worms in different stages of development and to witness the operation of reeling.

THE Governor has appointed John Evans and N. D. Combs directors for Agricultural District No. 25.

Dealing in Futures.

We have received from Washington an interesting pamphlet containing the argument of Hon. B. A. Enloe of Tennessee before the House Committee on Agriculture, concerning the constitutional power of Congress to prohibit dealing in "futures" in agricultural products. This is a subject to which we have frequently alluded, and we have already mentioned the fact that there was a proposition before Congress looking to a prohibition.

The chief point in argument on the subject seems to be whether there is any power under the Constitution of the United States to interfere with any bet or gamble or trade between two individuals; but Mr. Enloe takes the ground that all dealings in futures have the effect of interference with interstate or foreign commerce. In one place he says:

The obstruction of a navigable stream over which commerce is carried would not be tolerated for a moment. The stoppage of the trains on any railroad handling interstate commerce would not be permitted to pass unnoticed. Transportation is only an incident of commerce; trade is the very essence of it.

Can it be true that the Constitution gives Congress the power to regulate only that part

tions. The fictitious trades afford the richest part of the harvest, and they represent every year many times the aggregate of any and of all of the products that are made the subject of speculation.

These fictitious trades frequently result in the looking up of the great bulk of the crop of the particular kind embraced in the speculation, which is thus withheld from the commerce of the country at the will of a combination of speculators, interrupting for an indefinite period the free and natural interchange of commodities among the States and with foreign nations.

We have during the last year seen the lamentable effects of too great speculative disposition in the conduct of business. The collapse of the grain corner of the Nevada bank, and possibly the failure of W. T. Coleman & Co., may be traced to transactions which approach nearer to produce gambling rather than to commerce. It is claimed that such efforts aid producers by creating a quick demand for their produce, which the speculator is compelled to make extra exertions to dispose of, etc., but we incline to the belief that such advantage to producers is mostly fanciful, and that any temporary advance is more than counterbalanced by subsequent reaction and depression. We admire energetic, enterprising

East Oakland.

There are few places in the world which combine so many excellencies as a place of residence as East Oakland. The wonderful mildness and evenness of its temperature, the remarkable healthfulness, the scenic and varied beauty of its surroundings, the high intelligence of its population, its educational advantages and proximity to colleges and good schools are among its superior advantages.

Referring to the pleasant glimpse of Fruitvale avenue, given on this page, we may remark that the streets of East Oakland are paved with macadam which makes a very smooth bed. The wooden sidewalks are rapidly giving way to cement walks, which are more cleanly and certainly more handsome. The rows of trees on either side of the streets in the spring and summer give the place a very charming and picturesque appearance. The drives along the broad highway known as the San Leandro road, the Redwood Canyon road to the north of Haywards and Laundry Farm, the Piedmont road along the head of Lake Merritt, and the Hays Canyon road to Moraga valley, not only place East Oakland in close proximity

QUERIES AND REPLIES

Taking Out Larvæ of the Bee Moth.

EDITORS PRESS:—In answer to a recent inquiry I would say, get your bees under control, then with the point of a penknife pick out the cocoons of the moths. You can detect by the glazed webs. The Holy Land bee or the Black Italian resist the moth better than the small brown bee. They fight better than smaller bees, and under difficulties are stronger and more competent to be equal to the occasion. Keep your colony strong both as to number of workmen and well to do in supplies. "Poor folks" are more easily discouraged.—GEO. KAY MILLER, Tempe, Arizona.

Esparcet or Sainfoin.

EDITORS PRESS:—I have seen an extract from the Carson Appeal relative to a forage plant from Germany, called Esparcet, which George Rammelskamp, who has for 14 years been the foreman of the Suto Tunnel ranch, in Nevada, says is the principal fodder plant of Germany; that it grows rank and quick, will do without irrigation, seeds down rapidly, and is perennial, and will grow on the worst land that can be found in Nevada. Have you any information regarding it? Please investigate and let your readers know if it is of value.—E. W. MORSE, Bonny Doon.

The plant is usually called Sainfoin, and is well known, probably, to our English readers. On the experimental grounds at Berkeley, it



[GLIMPSE OF FRUITVALE AVENUE (FROM SAN LEANDRO ROAD), EAST OAKLAND.]

of commerce which is the incident, and not the very essence of the thing itself?

If the power exists to regulate that which is an obstruction to the incident, that which obstructs the transportation and exchange, does it not exist in a greater degree to regulate and prevent certain kinds of illegal and unnatural trading, which in effect interrupts and obstructs the freedom of commercial intercourse and breaks down the natural laws of trade. If this power does not exist in the Constitution, then we should make haste to amend the Constitution, so that it will give Congress the power to crush out this pernicious system of trading.

Mr. Enloe seems to have a very good idea of the fundamental wrong in gambling in food and other agricultural products, and we trust he may enforce it upon the legislators. The following is his review of some of the evils of the practice:

The buying and selling of "futures" is a species of speculation which injures not only the unsuccessful trader, speculator, or gambler, as you may choose to call him, but when the products of the soil are the subject-matter of the transaction, it injures both the producer and the consumer, and it seriously interferes with the regular and legitimate exchange of these commodities through the established channels of commerce. Combinations representing millions of dollars of capital are formed. They break the market by flooding it when the producers would sell, and they force it up by withholding their accumulations from the market after the producers have parted with the great bulk of their crops. These are the actual transactions where delivery is actually made, but the actual transactions constitute only a small part of the business of one of these combina-

and progressive trade and those who succeed by it, but we apprehend nothing but evil from commercial gamblers.

A GRAND RABBIT-DRIVE is planned to come off near Pixley, Tulare county, on Friday, June 1st. The corral is to be set on Section 13, Township 23, Range 24. The wings will be each two miles long. Teams are to meet at 12 m. on the Hamlin ranch, six miles southwest of Pixley. There is a large artesian well at this place and teams can be well watered before starting. The start will be made at 12:30 sharp. R. T. Priest will be Grand Marshal, with Sam Hesse, Louis Keser, Will Hughes, M. F. Pixley, Sam Woods, Alma Hall and others for aids. The drive will be over about eight miles of ground and will conclude about 4 p. m. Free lemonade in a big wagon during the drive, and after it a barbecue also free. The large barn of Mr. LeClaire on Deer creek is to be floored for the free dance, which will take place in the evening.

FREE TRADE IN A NUTSHELL.—The Ukiah Press puts it tersely, thus: When the sheep-farmers of this country ask what they are to do with their flocks, if they are compelled to stop raising wool by the abolition of the wool tariff, they are told: "Kill your sheep for mutton and buy foreign-made cloth." That is an epitome of the whole free-trade doctrine. Kill your industries and buy everything in England.

to many beautiful suburban towns, but are unsurpassed in beauty and picturesqueness.

No more charming places for residences can be found in California than are now awaiting occupation in Highland Park and Fruitvale.

The Baptist College is in Highland Park, and undertakes the complete education of boys and girls, and for the latter department has absorbed the Perry Seminary for young ladies. H. E. McCune is President of the Board of Trustees, Rev. J. H. Garnett, Sec., and C. C. W. Dearborn, Treas.

AMERICAN HORTICULTURAL SOCIETY.—We have received from Secretary W. H. Ragan (Greencastle, Indiana,) a bunch of advance sheets of the forthcoming report of the society, which will contain the proceedings at the California meetings, and a review by Dr. Ridpath of the various excursions, receptions, etc., which the Eastern visitors enjoyed during their stay in this State. The sheets indicate that the report will be of much interest. They are furnished only to members of the society, and all may become such by sending Mr. Ragan the annual membership fee of \$2.

SENDS FOR SPUDS FROM SUTTER.—The Marysville Appeal says that Francis Channon, Sr., who used to live at Live Oak, but is now a resident of Illinois, writes to have some Sutter county potatoes sent him, as he deems them much better than any other kind.

did not do noticeably; possibly it is better adapted to interior conditions. We know little of the plant except what Mr. Rammelskamp says of it, but we would advise its trial on a small scale.

Ants and Watermelons.

EDITORS PRESS:—Can any reader of this valuable paper tell me what will keep ants from eating watermelon vines?—CONSTANT READER, Visalia.

THE rooms of the State Board of Trade have been honored during the past day or two with visitors from many distant places, among which may be mentioned St. Petersburg, Belgium, North Wales, London, Liverpool and the Canadas. Eastern visitors still throng the rooms, and nearly every State in the Union has been represented this week. The letter mail containing inquiries has from 30 to 50 letters daily.

IRRIGATING GRAIN-FIELDS.—The Visalia Times remarks that grain has been irrigated to advantage only in those places where it could be done by seepage. Our farmers have found out that it does not pay to flood grain. It takes the strength out of the land, and so bakes the soil that the grain is thin and generally single-headed.

THE Improvement Association's building at Sacramento, for the exhibition of the products of Northern and Central California, has been completed, and the 21 of June has been selected as the opening day.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

LIVERMORE VALLEY HAY.—*Herald*, May 10: The volunteer hay is very light this year, compared with the expectations and prospects of two months ago. Yet it is generally worth cutting and will be excellent in quality. There will be very little wheat in this vicinity this season. Nearly all will be cut for hay. Many barley-fields, too, will go down before the mower. It is therefore very probable that we shall produce more hay this year than last, or than ever before.

Contra Costa.

POTATOES WELL KEPT.—*Martinez Item*, May 15: J. D. Dixon of Pacheco was in town yesterday exhibiting potatoes raised on his ranch last year. He had three varieties that were dug last October which yielded about 100 sacks per acre. They are as crisp and sound to-day as when taken out of the hill. Potatoes raised on the same ground took the first premium at the Contra Costa Fair last fall. They are certainly marvels for keeping qualities.

Fresno.

HOGWALLOW LEVELER.—*Fresno Republican*, May 4: V. J. Fuller of Centerville, some three months ago conceived the idea of building a machine to be propelled by horse-power, which would level hogwallow land in a thorough and expeditious manner. The greatest difficulty to be overcome was that in this character of land the mounds are not all the same size or height; therefore a machine to work successfully must be completely under the control of the operator, for in some places only a few inches of dirt would need to be moved, while at other points it would have to be excavated to a depth of from two to three feet. With the ordinary scrapers or land-levelers, numerous trips across single mounds are necessary to remove the surplus dirt into the depressions. With Mr. Fuller's machine, propelled by six horses, a strip of land four feet in width can be leveled as fast as the horses can work. The machine has the general appearance of a header, and in front are a number of large revolving wheels upon which are fixed huge knives, on the principle of a planing machine. These knives shave off a slice of earth about one inch in thickness and to any depth required to 30 inches, and as they revolve at considerable speed, throw dirt either back between the driving wheels, or into a mammoth scoop if it is desired to carry the dirt any distance. A piece of hogwallow land melts away very rapidly into a smooth and level tract as this machine passes back and forth over it. Mr. Fuller has applied for a patent on his invention, and will make arrangements to have a number of them built at an early day.

CHAMPION STRAWBERRY.—*Fresno Republican*, May 11: There stands on the writer's desk an ordinary drinking glass, and in it, filling it completely, is a strawberry. This magnificent product of Fresno's prolific soil measures nine inches in circumference, is of the Crescent variety and was grown by G. W. T. Carter, about two miles from the postoffice, northeast of the city. The berry sent to this office is not the only large one Mr. Carter has picked, but being perfect in form and "sound as a dollar," he sends it to us and wants the locality that can raise a "bigger" strawberry to come to the front.

Los Angeles.

A ROSE HEDGE.—*Alhambra Cor. Times*, May 11: A pretty sight is the rose hedge forming the entire front boundary of Mrs. Ida Halstead's ten acres. Mrs. Halstead conceived the charming idea a few years since, and has contended womanly against gophers, stray stock and dry months, until she is at last rewarded with a fence decorated by nature in such exquisite taste that even the modern artist cannot complain.

ANOTHER FLORAL TRIUMPH.—*Santa Ana Herald*, May 12: The second Flower Festival, given by the ladies of Santa Ana and Tustin, closed Saturday evening in a blaze of glory. The ladies, who worked faithfully in their labor of love, deserve great credit for their arduous endeavors. The financial result was highly satisfactory and will place the funds of the free library in good condition.

Monterey.

FINE ORCHARD.—*Salinas Index*, May 3: Paul T. Romie's beautiful place of 19 acres is situated just outside the city limits, on the road leading to Hilltown. He purchased the land of Spencer Childers in the fall of 1881, and the next spring planted a cypress hedge all around the tract to protect it from the wind. He then planted fruit trees of the choicest varieties, as follows: 1200 apple, 300 pear, 250 plum and prune, 50 cherry, 40 apricot, 100 peach and 25 quince trees, a quarter of an acre of raspberries, 2000 currant plants, blackberries, etc. The raspberries are of the Cuthbert variety, and Mr. Romie estimates that he will have at least 2000 baskets of them this year. His 2000 currant bushes will average one box each. He dries his own prunes, and they are splendid—almost like huge raisins. The apricots and peaches are fully equal in quality and yield to those of Santa Clara county, while the apples and quinces cannot be excelled anywhere. Mr. Romie thinks that figs can be grown here as well as in any other portion of the State. The tall cypress hedge, which is kept neatly trimmed, protects the trees from wind and

frost. The soil is inexhaustible, being of the richest character 50 feet below the surface. Mr. Romie keeps his place free of weeds and in fine order all the time. Plenty of water is found seven or eight feet below the surface, but it is not of the best. He struck an abundant supply of pure artesian water at a depth of 86 feet. It is well worth a visit to the place to see the neatly-kept grounds, with their wealth of beautiful roses and other flowers, showing the result of well-directed labor.

PROLIFIC COW.—*Salinas Index*, May 10: Charley Louis of Blanco has a wonderful cow. She was five years old on the 4th of this month and has had seven calves. When two years old she gave birth to twin bull calves which were bought by Harvey Abbott; at three years of age she had twin heifers, one of which was bought by E. Hetherington and the other by W. H. Crowe; when four years old she gave birth to a single heifer calf now owned by Chas. Bardin; and a few days ago she again had twins, a heifer and a bull.

Nevada.

BEDROCK RECLAIMED.—*Nevada City Herald*: J. B. Ducray is demonstrating what can be done by work in this section of the State. He owns a tract of 35 acres of land just in the northern outskirts of town. The land consists of barren bedrock, the soil having been mined off many years ago. He has about four acres of the tract under a high state of cultivation, and has this spring added to the cultivable area two acres more. His method of preparation is as follows: He builds dams in the little ravines passing down through the tract, and as they fill up to the required level, with the debris washed down from above, by a system of wing-dams he spreads the material over the surrounding bedrock until he obtains a sufficient depth of soil. The two acres made this spring was from the debris which was washed out of the town water-works' reservoir, which that company has been enlarging and deepening. The two-acre tract is now as level as a house-floor, and has a soil composed of a mixture of bedrock and decomposed vegetable matter. Mr. Ducray's place is well worth a visit, as it will conclusively show what work will do in transforming what has heretofore been regarded as utterly worthless lands into the loveliest garden spots. Such lands need little or no irrigation, as the bedrock is a great storehouse of moisture, and vegetation growing there is almost tropical in its luxuriance. Mr. Ducray has two acres of clover, which was seeded in 1862. It has never been cultivated nor seeded since, and has never had fertilizers put upon it. The crop now ready to cut is a luxuriant growth. There has been no decline in the yield during all that time, which shows its permanent character and the natural richness of that kind of soil. One peculiarity of this ground is its natural warmth, for frosts seldom occur there. Probably the bed next to the surface absorbs enough heat during the day to ward off the cold in the night time. This fact shows the adaptability of such lands to the cultivation of grapes and fruit at this altitude. The owner of this place has about two acres planted in vines and fruit trees. Others have made improvements upon similar land in this vicinity. The late G. S. S. Getchell filled in the washed-out and abandoned tract on Gold Run creek, opposite his place, and the made soil has produced good crops ever since. Felix Gillet, by his enterprise and labor, has changed his location on Barren hill into a virtual paradise, and others, whose places are not now recalled, prove what work and patience will accomplish here.

Placer.

A NEW CHERRY.—*Auburn Republican*, May 9: I. Meyer of Lincoln brought to this office on Monday a branch of a new variety of cherry, which he has originated at his Virginia-town ranch. The tree is now four years old and is a seedling from the Royal Ann. The fruit this year was ripe on the 1st of May, and it is remarkable for the small size of the pits. The specimen branch shown the reporter contains over 100 cherries in a space of about two feet.

San Benito.

THE HORSE MARKET.—*Hollister Advance*, May 11: The horse market, as established by the Board of Trade, is a grand success. From a small beginning, in less than four months, the sales of a single day have footed up over \$5000. Above 40 horses were sold at the market. Saturday. The heaviest buyers were "Doc," Forester of S. F., who purchased 20 head, and R. G. Sneath of the Jersey Farm, who bought 10 fine animals for his milk-routes. Several others bought single animals. There is some little expense attached to these horse markets that has heretofore been borne by the members of the Board of Trade. In the first place, lists of all animals registered during the month, and up to the Monday preceding the market, are printed and sent to horse dealers all over the State. Then again, on market day, lists of all the horses registered, with the names of the owners, have to be printed and distributed to those in attendance. To meet this expense, it is proposed in future to charge a small registration fee. This has been fixed by the Board of Trade at 25 cents for each animal. Those who have animals for sale should register early for the next market day, the first Saturday in June.

San Bernardino.

ABUNDANCE OF WATER.—*Valley Echo*: Chino ranch boasts the largest flowing artesian well in the State. They have one well there that

flows 125 inches of water and is but 225 feet deep. A few wells like that would irrigate considerable land in good shape.

ORANGE SHIPMENTS.—*Press and Horticulturist*, May 12: As the orange shipments for the season are drawing to a close, the packers are sending them forward rapidly. The shipments Saturday were eight carloads, and five yesterday. The different packers are getting pretty well closed out for the season. Following is a review of the orange shipments from Riverside for the current season:

Shipments.	Cars.	Boxes.
December.....	18	5,271
January.....	54	15,559
February.....	143	40,860
March.....	203	57,558
April.....	193	55,243
May.....	47	13,332

Total to date.....658 187,814

SHIPMENTS IN FORMER YEARS.

Crop of 1880-81.....	Carloads.
" 1881-82.....	15
" 1882-83.....	42
" 1883-84.....	45
" 1884-85.....	50
" 1885-86.....	459
" 1886-87.....	506
" 1887-88.....	375

COLD-STORAGE ORANGES AND LEMONS.—On the 17th of March D. W. McLeod picked some of his choice Riverside Washington Navel oranges and placed them in cold storage on the 22d of that month. On the 24th of March they were shipped to Chicago, where they arrived on the 3d of April. A few days since a gentleman took a basket of that same fruit and brought it to California in a Pullman car over the Santa Fe line. At Barstow he shipped them to Riverside by express, where they arrived on the 7th of May. Mr. McLeod, the grower of the fruit, started for Philadelphia on the evening of the same day, and took with him some of that same fruit for testing. Some of the oranges were brought to the Press office yesterday and sampled. They were not quite as fine as when they left the orchard, but they were in good condition and had not deteriorated in flavor. Before they get through their travels they will have gone over 10,000 miles. We also learn that some Riverside lemons, picked early in December, kept in cold storage till the 24th of March, were shipped to Chicago, arriving there in excellent condition. The rind was as thin as any foreign lemons in the market, and had a handsome straw color. They were favorably commented on by a dozen of the largest fruit-dealers on South Water street. Three weeks after being received and placed on exhibition in a show-window they were in excellent condition, notwithstanding the mercury had gone to upward of 80° on several days in succession.

San Diego.

A MODEL FARM.—*San Jacinto Register*: Last Friday we took a flying trip to the "model farm" of Col. Allen and Capt. Ferguson, about 1½ miles from the postoffice, on the county-road to Florida. They have just completed a rabbit-proof wire fence around the entire orchard. The farm consists of 150 acres, 20 acres being planted to peaches and 91 acres in barley. The orchard is in a fine condition, as the owners make it a rule to cultivate it every six weeks. The trees have a healthy green color, and for its age it is one of the finest orchards in the valley. Around the house everything is as neat as a pin. The major is a great gardener, and on every hand may be found flowers, climbing roses, vines, etc. After an elegant dinner the colonel showed us over the house, which contains four hard-finished rooms, each elegantly furnished. The kitchen stands back some 20 feet from the main building. The barn is large and well built, able to hold 20 or 30 tons of hay. A veranda runs the full length of the south side of the house, where, on an afternoon, one can sit and see in the distance Florida with her white-painted houses glittering and shining in the sunlight. To the left of Florida may be seen the snow-capped mountains towering above the clouds and the bright green valley below. While we sat there in silent meditation we could not help thinking of the possibilities and probabilities of the future of such a farm, of such a country, with such a soil and with such a climate.

Solano.

JAPANESE HELP.—*Winters Express*, May 12: The question of help is agitating the fruit farmers in this section. Since the stoppage of Chinese immigration, small though the decrease in number has been, labor has been getting scarcer and higher-priced each season, until now the question, "How shall we gather our fruit?" stares producers directly in the face. A number of growers—notably the Brink Bros. and G. W. Tissell—have employed Japanese and are satisfied with the experiment so far as they have gone. However, the supply is inadequate to the demand. The schoolchildren, all that can work, will probably be given employment in the several districts, and with this help the producers may be able to get along this season.

Shasta.

EDITORS PRESS.—The past winter has been remarkably dry. The oldest resident cannot recall a spring when the ground was so dry as at present. The only effect on the crops here, however, is that they must be irrigated earlier than usual. As compensation there have been no late frosts. There is considerable activity in the construction of irrigation ditches and other

improvements. Campers in search of health or a fine summer climate are beginning to arrive from the valley, while bands of sheep are passing to the higher mountains. The streams are full of trout, which afford sport to those so inclined. The yield of strawberries is something remarkable; a few rods square will supply any family. Potatoes form the standard crop for purposes of sale, being very productive and of the finest quality. There is another food product grown here that surpasses in flavor anything I have ever tasted elsewhere in California, viz., garden corn. Usually in this State, and especially in the cities, "roasting ears" are not thought much of because they are nearly tasteless, but in this soil and climate they are of such flavor and sweetness as to charm all who are mundane enough to like something good to eat.—P., *Shingletown*, May 10th.

Tehama.

THE OSTRICHES ARRIVE.—C. A. P. telegram from Red Bluff, May 14: This town is highly elated over the arrival of Dr. C. J. Sketchley and his ostriches from Los Angeles. They reached here last night and were conveyed to their Sacramento valley home to-day. This evening the citizens tendered a grand reception to Dr. Sketchley.

WOOL MARKET.—*Red Bluff Sentinel*, May 12: There seems to be a deadlock in the wool market. The wool-buyers to the number of eight or ten are caucusing in the Tremont hotel, while the wool-growers are quietly sitting on the sidewalk waiting for developments. Major Ward, who appears to be the "king-pin" among the growers, says J. S. Cone wrote him from Boston, unless Cone & Ward's wool brought a fair price to bale and ship it to Boston. The Major says he has sold \$21,000 worth of wethers and has enough money to pay the bills of the firm; consequently honors are easy. It is also whispered among the producers that unless the "bears" step up a notch, all the Tehama county wool will be baled and shipped direct to the Boston market.

Tulare.

CROP PROSPECTS.—*Visalia Times*, May 10: The outlook for grain-farmers in Tulare county is better than in any other county in this part of the State. In the upper part of the valley they will get barely enough for seed and feed, while here there will be a considerable quantity of grain and hay for exportation. The cool weather and moist winds of the past few days have had a surprisingly stimulating effect upon the grain. Many fields, which not long since presented the appearance of a total failure, have revived and now give promise of a fair yield. In numerous instances the stalks are green and full, and, though the soil is very dry, there will be sufficient moisture in the stalks to make good heads. Of course, much still depends upon the weather. A north wind would soon dry up these green stalks and effectually blight the grain. Present prospects, however, indicate that a considerable percentage of the crop will be saved either in the form of hay or grain. We can safely say that the summer-fallowed land will produce nearly a half crop. In the entire county there will be a large amount of grain hay. Comparing the present season with that of 1877 we have much to congratulate ourselves upon. The alfalfa-fields throughout the county are in a thriving condition, and there will undoubtedly be a very large yield of alfalfa hay. With the exception of the apricots the fruit crop will be large.

FEED PLENTY.—Sheep-raisers report feed abundant, both in grass and short grain. Very few sheep will be driven into the mountains this year, if those farmers having "short" grain are disposed to sell it at reasonable prices. Oak trees on the plains and in the hills are loaded with young acorns, and in case they are not affected by "blast" the crop will be large. This fact is cheering to hog-raisers.

Yuba.

SUN-DRIED VALLEY APRICOTS.—*Marysville Appeal*, May 11: Hugh Jones says that the sun dried apricots of this part of the State are fully equal to the best evaporated fruit produced anywhere, while the sun dried fruit of the bay and coast counties, on the other hand, is much inferior in color and quality to the evaporated. He has learned that San Francisco experts find it difficult to distinguish between our sun-dried apricots and the best evaporated apricots. The superiority of the sun-dried fruit is due to the absence of fog and dew, and also to the rapidity of the process. These advantages for drying are worth much money to the district. Mr. Jones says apricots will be a light crop this year.

NEVADA.

CLEVELAND BAY COLTS.—*Reno Gazette*, May 8: The first Cleveland Bay colts ever foaled in Lander county, and probably in the State, made their appearance at Leopold Steiner's ranch last Friday. The sire was the magnificent stallion Hamlet, purchased by W. D. Jones of Austin from Jesse Harris, the well-known Cleveland Bay importer of Colorado.

IRRIGATION PROJECT.—*Silver State*: The waters of the Owyhee empty into the Snake river, a tributary of the Columbia. They are not utilized for irrigation purposes, but flow to the ocean. It is said that abundance of capital can be had to build an irrigation canal from the river to Paradise valley, in the lower end of which there is a large body of rich land which requires only water to make it as productive as any in the State.

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GREAT ARTESIAN BELT, KERN COUNTY.

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Artesian Belt Land AT LOW FIGURES.

The southwest quarter of Section fifteen, Township twenty-three, Range twenty-four west, one-hundred and sixty acres of rich level land, near the center line of the Artesian Belt in Tulare County, five miles northwest of Alila, on the S. P. R. R., is offered for sale at the exceedingly low price of fifteen dollars per acre. Address, "Landowner," Box 2361, San Francisco P. O., or to the care of this paper.

FOR SALE OR EXCHANGE.

Ranch of 200 acres on Coquille River, Coos County, Oregon; 40 acres bench land 160 acres bottom, 80 acres under cultivation; 1 1/2 miles from Coquille City, one-half mile from steamer landing. An abundance of fine spring water on place. Price, \$1500 cash, or will exchange for California property in vicinity of San Francisco Bay. For further particulars apply to

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To some one who will summer fallow and cultivate well, will be furnished free water and use of 160 acres of good land (S. E. Sec. 13, T. 21, R. 23) within 9 miles of Tulare, S. W. Forty acres formerly plowed. Land on all sides cultivated and pastured. Water for irrigation (if needed) free. Also (without water) 640 acres (Section 13, T. 23, R. 24), four miles westerly of Tipton and S. P. R. R., all in Tulare County and the Artesian belt. For particulars call on **E. M. DEWEY,** 7 miles S. W. of Tulare, or **A. T. DEWEY,** 220 Market St., San Francisco.

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DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

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DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

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The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. One hundred and seventy-five acres have now been sold on this basis, starting at \$150 per acre. The price is now \$175 per acre. The price will be advanced to \$200 per acre as soon as the second 100 acres is sold.

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For the balance of the season I will sell Eggs for hatching at \$2.00 for 13 from my best imported and home-bred L. Brahmas, P. Cochins, Langshans, P. Rocks, Wyandottes, Brown and White Leghorns and B. B. R. Game Bantams. I will also sell one pen of L. Brahmas (5 hens and a cock), and one pen of P. Cochins for \$18 each. One pen of Langshans, one pen of Brown and one pen of White Leghorns for \$15 each. I will sell my Axford Incubator, 100-egg capacity, for \$15, or will trade for two small out-door Brooders in good repair.

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HORTICULTURE.

Sun-Scalding of Trees.

EDITORS PRESS:—For some years past rather mysterious dying off of young trees has come under my notice. Especially was this the case two years ago. These trees were standing on well-drained soil, and the theory that bad drainage or unseasonable development was the cause could not be applied to them; moreover, they were perfectly healthy below the root-collar. In almost every instance where I examined them a minute beetle of the family *Scolytidae*, and seemingly closely allied to the pear-blight beetle of the Eastern States (*Xyloborus Pyri*: Peck) is found tunneling through the tree. Its work was, however, different from that of the *Xyloborus*, as it is confined to the trunk or main branches, making straight passages right through the tree, and not tunneling around the branches as the blight beetle is said to do.

This year again there has been considerable complaint of trees dying off, complaints coming both from Santa Clara and Santa Cruz counties especially, but in every instance all the facts of the case could not be laid before me. About a week ago, however, I discovered in a five-year-old orchard a number of young apple trees, which had started out vigorously, suddenly showed signs of wilting. Examination proved that the bark on the southwest side was turning black, and that a state of fermentation of the bark tissue clear to the albumen had set in. In cutting off the bark a sour smell was very distinctly noticed, and in nearly every instance the minute passages of the small borer, looking like holes made by a pin, were visible.

Here then was a distinct case such as that reported so often, but in a stage where its true cause, viz., sun-scauld, seemed to be clear for the following reasons:

1. All the trees were standing in the hottest portion of the orchard, a southwesterly slope.
2. The trees were invariably damaged first on the southwest side, the decomposition spreading from this point. Generally, at the time of my examination, only a strip varying from one-third to one-half of circumference of the tree was affected.
3. All of the trees affected were of one variety (*Esopus spizenburgi*) which was the last to leaf out, and at the time of the hot wave in April completely leafless.

Physiological Reasons for the Damage.

During the rise of the sap in the spring, a great deal of sugar is carried in solution. By the intense heat burning the bark, portions of the tissues are destroyed, the passages becoming clogged, and fermentation naturally sets in from this cause. The minute beetle is attracted, its borings no doubt helping to spread the decomposition, which spreads very rapidly. To prevent the total destruction of the tree, prompt action is necessary.

Remedy.

The only remedy which can have any success is:

1. The partial or complete cutting down of the tree to a few main branches, the cutting back to be done in proportion to the damage on the main trunk.
2. The removal of all portions of the affected bark clear to the wood, and to a point where the tissues are not discolored, and the covering of the denuded portion of tree with grafting-wax.

Preventives.

From the foregoing it seems clear that the damage might be prevented by the proper shading of the trunk, or covering it with a white-wash which would reflect the heat. For this purpose a mixture of whale-oil soap, say one-half pound to the gallon added to the white-wash, would be advisable. The shading may be done by placing of shakes on the southwest side. It will be remembered that the damage is accomplished during a time when the trees are leafless and consequently low, of which I have always been an advocate. Stemmed trees would not prove exempt.

I would add that cases of sun-scauld have come to my knowledge from all over the State, and that all kinds of trees have suffered, especially, however, apples, apricots and prunes.

W. G. KLEE,
State Inspector of Fruit Pests.
220 Sutter street, S. F.

Queer Growth on a Peach Tree.

EDITORS PRESS:—I have discovered in my peach orchard what is to me a freak. Perhaps some of your readers have run across something of a similar nature.

When pruning my orchard last winter, I noted a sucker from a Salway peach, the bark of which was of a bright lemon color. It showed fruit buds in their proper places, and I determined to fruit it. The flowers were pure white, and this was to me surprising, having been among peaches all my life, and never having seen a white peach blossom before.

The fruit is well formed now, and much resembles the Lemon cling in shape. Have I struck something new? Perhaps you or some of your readers can inform me.

Los Gatos, Cal. W. H. THOMPSON.

THE DAIRY.

Dehorning Cattle.

EDITORS PRESS:—The practice of dehorning cattle appears to be growing in all parts of the country, and while I do not admire the practice, I am willing that those who desire to rob the cattle of those appendages which Nature, in her wisdom, bestowed upon them may do so. It is only a matter of taste, I suppose. However, before the practice becomes general, would it not be well to inquire what effect the dehorning of a dairy bull will have on his progeny? May it not affect his nervous temperament to such an extent that it will show itself on his calves? We are told that the breeders of race-horses take every possible precaution with their stallions lest the colts should be inferior, and what is true of the horse may also be true of the bull, and especially of those kept for use in dairy herds. I know that in some of the dairy sections of the Northwestern States, the practice of dehorning cattle is followed to a certain extent, but the practice has not been in vogue long enough to show whether the result will prove injurious to the bulls as sires or not. Until this matter is definitely settled, would it not be well to call a halt, so that if there are injurious effects they may be remedied before the matter is carried too far? All who are at all familiar with dairy cows are aware of their peculiar temperament and fine organism, and if these are in the least affected, the quantity and the quality of the milk is also affected. Can any of the readers of the PRESS tell from personal knowledge what effect the dehorning of bulls will have on their potency as sires?

R. P. MCGLINCY.

San Jose, May 14, 1888.

An Inside View of the Dairy Market.

The Grocer and Country Merchant of this city, which is well informed on the commercial side of California products, discourses on the dairy situation as follows:

The complaints of dairymen over the unprofitableness of the business, and their avowals that the industry was in danger of being irreparably injured if some protection was not afforded against free importations of butter and butter substitutes from the East, are still well remembered, utterances to this effect having been quite recent. Prohibiting the manufacture or importation of imitation butter was accomplished several years ago, but this did not appear to have the desired effect, for as late as last summer prices for California butter were about as low as at any previous period. Choice to select fresh dropped about a year ago to 18@20c, but it did not long remain at these prices, or producers might well have had good cause to be dissatisfied, for there is no doubt that it is impossible to turn out first-class butter profitably at these figures. Before the season was over, however, fresh butter sold up to 55c per pound, and firm as well as profitable prices were realized for pickled roll and solid packed. A more favorable opportunity for making money in the butter trade had not occurred in a decade. The dairymen who were in a position to take advantage of the situation pocketed the profits without even a sigh for the consumers who had to stand the expense, or an expression of relief at the agreeable turn in affairs. The dairymen cannot well be blamed on this score. Human nature is much the same everywhere. Consumers do the growling when prices go high, but when values are at a lower level than the cost of production, they generally fail to appreciate the benefit they are receiving. Most of the butter produced last season was out of dairymen's hands, however, before the late winter months when the high prices were realized. Neither did jobbers profit to the extent they might have done, as much of the stock held by them had passed into third hands before values advanced to any marked extent. The experience of last season, and a somewhat unfavorable year for the heavy production of butter, on account of green feed not being abundant, with perhaps fewer cows than last season, have combined to turn many dairymen into speculating in their own product. About all the dairymen who are sufficiently forehanded for the purpose are busily engaged in packing and are awaiting a high market next fall, upon which to unload. Some of them are reported to have already refused 30c per pound for pickled roll, and others are quoted as expecting to realize 40c or more. But there is no certainty of these extreme views being realized. Neither is it certain that those most sanguine would accept 40c were it tendered to-day. With an early autumn, dairymen may see fit to unload at lower figures than are now obtainable. Very close to 30c is at present being realized for select fresh butter, as between packing, shipping and consumptive demand, there is hardly enough offering for current requirements. At current rates this industry is certainly paying handsomely to the producer. Even Oregon dairymen, who complained last season that they could not compete with California butter, will now have a chance to recuperate.

The importation of cheap Japanese peppermint oil has had a depressing effect on the farmers of Wayne county, N. Y., and this year they will not plant more than half a crop.

Crops at the South.

EDITORS PRESS:—I saw it stated in the estimate made by the *Call* newspaper some time ago, that Los Angeles, San Bernardino, and San Diego counties would have a full crop of wheat and barley this year. I noticed afterward in the *Chronicle* that a reporter of that paper had interviewed Mr. Sloss, member of the State Board of Equalization, on the subject of the crops in these three counties, and he estimated them at half a crop, provided more rain fell, which has not happened. The fact is that the crops will be considerably less than half that of last year in the counties named, and that so large a proportion of both wheat and barley is being cut for hay, that the proportion of grain to that of last year will be about 40 per cent. The rains held off until late last winter, and when they did commence they were so heavy and continuous that farmers did not commence seeding until six weeks later than usual. Then the weather was so unusually wet and cold that the grain did not come up well, and much of that sown when the ground was so wet and cold did not amount to anything. In some localities on light soil the crops are much better than on the low land and heavy soils. Ventura county will have more than half the crop of last year.

The writer has just returned from an extended trip as far north as Portland, Oregon, and as far as his observation extended, and from information gathered from farmers along the route, he is led to estimate the entire crop of California at less than 40 per cent of the crop of 1887. On the other hand, the outlook for the fruit crop was never so good.

Los Angeles, May 12, 1888.

FERTILITY RESTORED.—The *Courier* says that a few years since a gentleman began farming an 80-acre tract in the Petaluma valley. The land is adobe and had been planted in grain continuously for 18 years. He took extra care in preparing the land and sowing the grain. His crop averaged only ten bushels to the acre. Now this same land had in former years produced as high as 50 or 60 bushels to the acre, and though the stratum of rich soil was several feet deep, he knew something was the matter. In all the 18 years it had been farmed continuously, without rest or fertilization, and it had given out. Though in debt, our farmer bought fencing material and cut his 80 acres into three lots. He then bought between 10 and 15 head of cows and put them on it. By using one lot for pasture for his cows, another for hay, and the third one for grain, and changing about each year, he soon raised the average yield of this land from 10 to 27 bushels to the acre. By this system of farming he not only enriches his land but makes it pay him a handsome profit over all expenses, and he tells us his land is becoming richer and more valuable every year.

THE CREDIT-FONCIER COLONY.—W. L. Zuber, for many years U. S. Vice-Consul at Mazatlan, came up to this city on the Newbern a few days since. From him a *Chronicle* reporter learned that there are a few colonists remaining at Topolobampo, who claim to be getting along very well. They number about 150, and are mostly engaged in agricultural pursuits. The land is good, but they need means to establish themselves as agriculturists. There is an excellent market for their products in the adjacent mining districts.

ADVICES from Island Mountain, Elko county, Nevada, state that notwithstanding the severe cold of last winter, a comparatively small percentage of stock perished. They are now rodeoing through that part of the country.

An Improved Derrick.

No doubt many readers will be interested in the new device which we illustrate herewith. The cut shows a derrick for stacking hay and grain in the field, which is easily moved about and set up in place. To erect the derrick, guys, attached to a plate on top of the derrick post, are fastened to stakes driven in the ground on either side and behind the derrick wagon, while a stake is placed in front of the wagon for another guy. The truck is moved slightly forward, which causes the derrick post to move upward on the forward motion of the truck, the guy in front of the wagon being kept slack until the derrick post is erect when it is made fast; at the same time the truck is stopped and the brake made secure. The derrick frame is raised or lowered by a windlass, the derrick arm being also moved in a horizontal or incline position by another windlass, both of which are mounted near the lower end of the derrick post. The fork rope passes over pulleys on the derrick arm and post, and thence over a pulley being on a link supported by arms to the under part of the truck, and by a link adapted to be secured to a stake driven in the ground under the truck.

"PNEUMONIA."

Why not Call this Terrible Scourge by its Rightful Name?

(New York Telegram.)

Many a strong, well-built man leaves home to-day; before night he will have a chill and in a few hours will be dead!

This is the way the dreaded pneumonia takes people off.

The list of notable men who are its victims is appalling.

It sweeps over the land like a scourge and destroys poor and rich alike.

Everyone dreads it. Its coming is sudden, its termination usually speedy.

What causes it?

Pneumonia, we are told, is invited by a certain condition of the system, indicated if one has occasional chills and fevers, a tendency to cold in the throat and lungs, rheumatic and neuralgic pains, extreme tired feelings, short breath and pleuritic stitches in the side, loss of appetite, backache, nervous unrest, scalding sensations, or scant and discolored fluids, heart flutterings, sour stomach, distressed look, puffy eye sacs, hot and dry skin, loss of strength and virility.

These indications may not appear together, they may come, disappear and reappear for years, the person not realizing that they are nature's warning of a coming calamity.

In other words, if pneumonia does not claim as a victim the persons having such symptoms, some less sudden, but quite as fatal, malady certainly will.

A celebrated New York physician told the *Tribune* that pneumonia was a secondary disorder, the exposure and cold being simply the agent which develops the disease, already dormant in the system, because the kidneys have been but partially doing their duty. In short, pneumonia is but an early indication of a bright's diseased condition. This impaired action may exist for years without the patient suspecting it, because no pain will be felt in the kidneys or their vicinity and often it can be detected only by chemical and microscopical observations.

Nearly 150 of the 740 deaths in New York City the first week in April (and in six weeks 781 deaths) were caused by pneumonia!

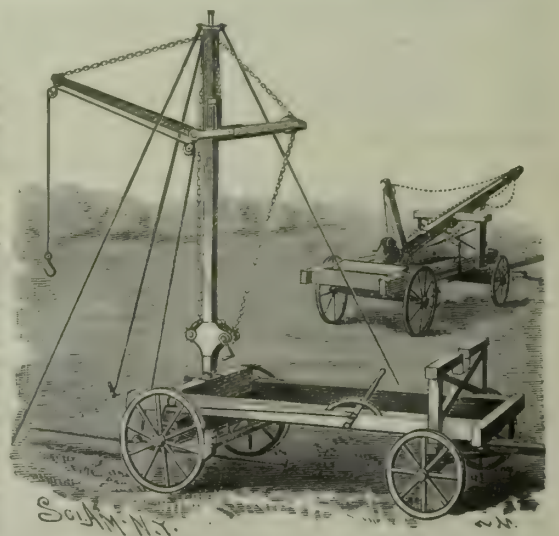
The disease is very obstinate, and if the accompanying kidney disorder is very far advanced, recovery is impossible, for the kidneys give out entirely, and the patient is literally suffocated by water.

The only safeguard against pneumonia is to maintain a vigorous condition of the system, and thus prevent its attacks, by using whatever will radically and effectually restore full vitality to the kidneys, for if they are not sound, pneumonia cannot be prevented. For this purpose there is nothing equal to Warner's safe cure, a remedy known to millions, used probably by hundreds of thousands and commended as a standard specific wherever known and used. It does not pretend to cure an attack of pneumonia, but it does remove the cause of and prevent that disease if taken in time. No reasonable man can doubt this if he regards the personal experience of thousands of honorable men.

When a physician says his patient has either bright's disease or pneumonia he confesses his inability to cure, and in a measure he considers his responsibility ended. In many instances, indeed, persons are reported as dying of pneumonia, heart disease, apoplexy and convulsions, when the real cause of death, and so known by the physician, is this kidney consumption. Thousands of people have it without knowing it and perish of it because their physicians will not tell them the facts! The same fate awaits everyone who will not exercise his judgment in such a matter.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, term of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.



M. A. HEINLEN'S IMPROVED DERRICK.

The team for pulling the wagon can be attached to the lower end of the fork rope. A fork of any improved pattern is attached to the lower end of the rope and the fork and rope are then manipulated in the usual manner. For particulars and prices, address the inventor, M. A. Heinlen, San Jose, Cal.

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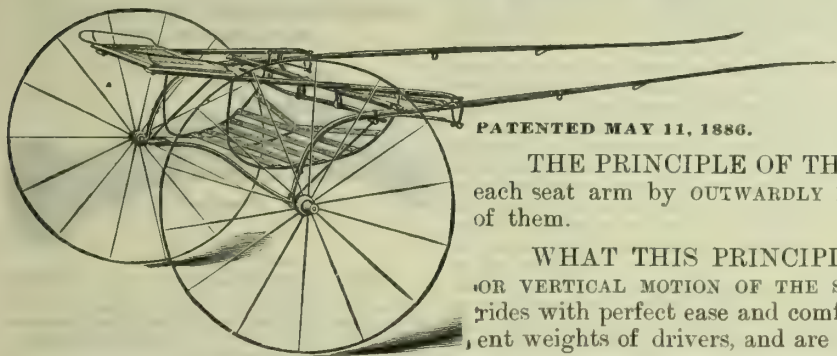
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SPRING WAGONS OF EVERY STYLE.

FINE HARNESS, Etc.



PATENTED MAY 11, 1886.

THE PRINCIPLE OF THE FLINT consists in the spring being attached under the shafts, and connected with each seat arm by OUTWARDLY FLARING SHACKLES which entirely encircle the shafts and WORK INDEPENDENTLY of them.

WHAT THIS PRINCIPLE ACCOMPLISHES.—The weight of the driver in his seat causes NO LATERAL OR VERTICAL MOTION OF THE SHAFTS. It prevents any galling or chafing of the horse. The driver not only rides with perfect ease and comfort, but ABSOLUTELY STEADY. The shafts always balance, regardless of the different weights of drivers, and are not affected by his weight when riding on uneven roads.

CONSTRUCTION, MATERIAL, ETC.—Shafts, Cross Bars, Seat Arms, etc., are of the very best selected, seasoned second growth white ash. WHEELS are of the finest quality Pinneo & Daniels compressed band. SPRINGS, best Swede steel and oil tempered. AXLES, Liggett's double collar interchangeable steel axles. Cane seats, tipped and leathered Shafts, and the best finish and proportions of any cart manufactured.

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NO HUMBUG! NO MISREPRESENTATION!

BUT COLD, UNDENIABLE FACTS!

All farmers familiar with the history of Binders the past three years recall the fact that the Osborne is the only Self-Binder made with AN ENTIRE STEEL FRAME, while our imitators are only such in part—if at all.

BEWARE OF IMITATIONS AND SECURE THE BEST.

Combined with our Steel Frame we have

MALLEABLE GEARING,

Making it light in weight and draft, yet strong in construction. Handsome in design, simple in arrangement. It is easily operated, seldom gets out of order, and is a complete machine in every particular, and works like a charm.

IT WILL HANDLE THE SHORTEST OR TALLEST GRAIN,

As it can be adjusted to cut as low as a Mower, or nearly two feet high. Has 5 foot elevators, and is the only machine built expressly for the Pacific Coast trade.

Our Sales in California in the past three years exceed those of all other Self-Binders combined,

Showing conclusively that the farmers appreciate the many points of excellence possessed by

The World-famous Osborne All Steel Frame Self-Binder,
WITH MALLEABLE IRON GEARING.

Must be seen to be appreciated, so be sure and examine it before buying any other machine.

We also manufacture and carry a full line of Mowers, Independent Reapers, and Combined Mowers and Reapers. The whole comprising the most complete assortment of first-class cutting machines made.

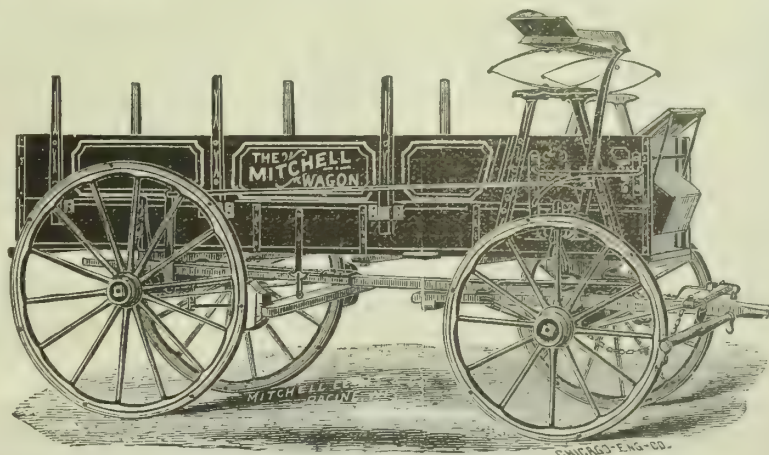
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Wagon in the world. IRON AXLES, TUBULAR AXLES, STEEL and CAST SKEINS always in stock. Buy the Mitchell and have no other.

THE EMPIRE SENIOR MOWER.

A COMBINATION OF STRENGTH AND DURABILITY.

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BURGE & DONAHOO,
General Agents and Dealers in Farm Machinery,
NO. 9 MAIN ST., SAN FRANCISCO, CAL.

ENTOMOLOGICAL.

Hydrocyanic Gas Treatment of Trees.

University Experiment Station, Bulletin No. 79.

In University Experiment Station Bulletin No. 71, it was shown that hydrocyanic acid gas could be used effectively against scale insects; but that the tree suffered by the treatment. In a subsequent bulletin (No. 73), it was shown that the injury to the foliage of citrus trees could be prevented by the use of carbonic acid gas, injected at the same time with the hydrocyanic. The cause of this preventive action was not readily explained and its failure to protect on very hot days, showed that something remained to be done in perfecting the treatment; furthermore, the additional trouble and expense of this improved treatment made it highly desirable to seek for some easier means of saving the foliage.

The investigations here recorded were made from time to time during November, December and January of 1887-8, in order to find out what caused the injury, and likewise to explain the protective action of the carbonic acid used in the later experiments. The general manner of treatment as applied on a large scale, was followed in each operation; and suitable apparatus was devised for carrying out the details. A barrel of about five cubic feet capacity was used as a chamber to replace the tent. A small bellows was used to produce the necessary circulation, and a glass bottle, into which was inserted a closed funnel holding the proper doses, served as a generator. A small Woulffs (three-necked) bottle served the purpose of a "relay," where the gases could be mixed, or material for drying them inserted. The temperature was indicated by thermometers placed in the top of the chamber.

A half-dozen orange branches set in pots, and a dozen well-potted orange seedlings, were used to experiment upon. The former were used to obtain some preliminary measure of the quantity of materials to be employed in the later treatments.

THE FOLLOWING TABLE SHOWS THE ARRANGEMENT OF THE SEVERAL EXPERIMENTS; NUMBERED FOR REFERENCE.

No. of Expt.	Materials Used.	Method of Treatment.	Temp. Deg. Fahr.	Remarks.
1	Not treated.	Wet	59	
2	Cyanide.	Wet	59	
3	Cyanide + Carbonate.	Wet	59	
4	Cyanide.	Dry	59	
5	Cyanide + Carbonate.	Dry	59	
6	Cyanide.	Wet	58	
7	Cyanide.	Wet	59	
8	Cyanide + Carbonate.	Wet	59	
9	Cyanide.	Dry	68	
10	Cyanide + Carbonate.	Dry	67	
11	Cyanide.	Wet	64	Sprayed.
12	Cyanide + Carbonate.	Wet	65	Sprayed.
13	Cyanide.	Wet	100	
14	Cyanide + Carbonate.	Wet	103	
15	Cyanide.	Dry	109	
16	Cyanide + Carbonate.	Dry	106	
17	Cyanide.	Wet	102	Sprayed.
18	Cyanide + Carbonate.	Wet	97	Sprayed.
19	Ammonia determination.			
20	Cyanide.	Dry	59	
21	Cyanide.	Dry	59	
22	Cyanide.	Wet	54	
23	Cyanide.	Wet	59	
24	Cyanide.	Wet	59	
25	Cyanide.	Wet	59	Gas dried.
26	Cyanide.	Wet	64	
27	Cyanide + Ammonia.	Wet	57	
28	Cyanide + Ammonia.	Wet	57	
29	Cyanide + Ammonia.	Wet	62	mixed in chamber.
30	Formic Acid + Ammonia.		50	
31	Formic Acid.		55	

The second column shows the material employed; the third indicates whether they were used in the solid condition (dry), or in solution (wet).

When operating in the "dry" way the salts were used in the solid form, and usually the gas was further dried and freed from ammonia by passing it through strong sulphuric acid. In operating in the "wet" way, solutions of the salts were used and the gas was passed directly into the chamber, except in one or two cases where the gas was subsequently dried. The fourth column indicates the temperature at which the air in the chamber was kept.

In No. 1 an orange limb was used, potted like the others and left untreated to serve as a check. It remained in good condition throughout the time of experimenting.

In the numbers following, the conditions were varied both by changing the manner of treatment and materials used. The doses used were larger in proportion than those used in field-work, in which it was shown that small trees required proportionately larger doses than large ones.

In several cases the trees and the inside of the chamber were sprayed with water, to note the effect of the gas upon wet trees, and also to

*It should be noted that an essential point in the mode of operating, first practiced by me at San Gabriel in the spring and summer of 1887, was the use, at the suggestion of Prof. Hilgard, of a pump or blower for the purpose of mixing the gases generated with the air in the tent, by continuous circulation; thus avoiding injury from the effects of overdoses at some points while leaving others without adequate treatment, as must inevitably happen where no such equalizing apparatus is used. It was doubtless from this cause that experiments previously made by others (understood to have employed hydrocyanic gas) were not satisfactory.

note that of the water upon the gases themselves.

Production and Effects of Ammonia.

It is known that when cyanides are present in generating hydrocyanic gas, more or less ammonia is produced. In the materials used for these experiments, this may have been the case. Furthermore, under certain conditions, ammonia may be produced in the treatment of simple cyanide with acid. Preliminary tests were made to demonstrate these facts, and to study the reactions when applied in various ways, as well as to determine the best mode of using the materials. For the intense scalding effects of ammonia upon the foliage had been noted in my former experiments (see Bulletin No. 71), and it was conjectured that this gas, unintentionally produced, might be concerned in causing injury in cases not otherwise easily explained.

As previously reported, it was found impracticable to use the cyanide of potassium without first dissolving it, and that it was necessary to keep the carbonate of soda well mixed with the cyanide, so that the reaction upon both would occur at the same time. But it was further shown that the alkaline reaction of the gas, due to ammonia, is produced only when the solution, instead of the solid cyanide, is used; rapid addition of the acid to the dry salt, or vice versa, invariably produced an acid gas, while the slow mixing of the two materials in solution invariably produced decided alkalinity, often to a very harmful degree. The amount of ammonia was found to be variable, perhaps largely because a part was masked by the hydrocyanic acid produced during the violent action that takes place when the acid is added rapidly to the solution.

All the experiments with the dry cyanide alone showed but slight injury to the foliage, and a slightly increased injury was noted on the plants treated with the cyanide solution alone. When the carbonate of soda was used with the cyanide in the solid form or in solution, the injury to foliage was in either case very materially lessened. Passing the gas through sulphuric acid produced results similar to those of the carbonate treatment, viz.: immunity to the foliage.

Indications having thus pointed toward ammonia as the cause of the injury, some direct experiments were made with this gas. In the first ammonia-treatment the gas was separately generated and mixed with the hydrocyanic gas from an ordinary treatment, the mixed gases being conducted into the chamber.

The intensely acid action of the gas leaving the hydrocyanic generator at once turned to the alkaline, and so continued in the chamber, thus showing that a certain moderate excess of ammonia was present. Decidedly injurious effects upon the foliage were quickly noted.

In this experiment the ammonia and cyanide gases were mixed in the "relay." In order to leave more of the ammonia free to act upon the foliage, it was injected directly into the chamber, where the two gases were less intimately mixed. Upon circulating the gas, strong alkalinity prevailed in all parts of the apparatus and the atmosphere about the tree was decidedly charged with ammonia. The results were very marked. In a short time the trees wilted; in 10 days all the foliage was crumpled up and later all fell off. Even the wood of the more tender branches was noticeably affected.

As formic acid is often produced during the decomposition of a cyanide, an experiment was made to determine its effect upon foliage. A solution of the acid was boiled and the vapor was conducted into the chamber until a quite decided acid reaction was shown by the test papers. No harmful effect was noticeable. Formic acid and ammonia were next separately introduced, the ammonia being in very slight excess. In this case also no noticeable harm was done.

Influence of Temperature.

It is to be regretted that the normal temperature (50° to 65° F.) during the experiments was much lower than that which would be met with in actual field-work; and therefore the injury done to the seedlings would not be so marked as in the latter case.

An attempt was made to raise the temperature within the chamber up to that of a warm summer's day in the orange districts. The range of temperatures used was 95° to 105° F., but the outside temperature being low, as soon as circulation began, the moisture from the interior of the chamber, given off during the rise in temperature, was partially drawn in and condensed in the tubes during the circulation, and thus absorbed the ammonia as well as part of the hydrocyanic gas.

Notwithstanding this partial removal of ammonia by absorption, the results showed that these high-temperature treatments produced more injurious effects than similar treatments at lower temperatures.

Conclusions.

From the foregoing experiments we are led to believe that ammonia has been the fruitful cause of the injury to the trees subjected to the treatment under discussion. Under this view of the case, the beneficial effects of the use of carbonic acid gas would seem to be due to its power of neutralizing the ammonia, with the formation of carbonate of ammonium, when the two gases come together. And, furthermore, the failure of the carbonic acid to completely preserve the tree during the hot part of the day follows from the easy decomposition, by heat, of the carbonate of ammonium, which does not occur during treatments at lower tem-

peratures. Even the formate of ammonium, produced in a preceding experiment, would be decomposed in a like manner and some ammonia set free to act upon the foliage.

Modes of Preventing Injury.

There are, then, two means of averting the injury to the foliage: First, by the use of the dry salt; second, by the use of proper appliances to absorb the ammonia as it leaves the generator.

In the first case, viz.: Using the dry salt, only a minimum amount of ammonia is produced during a strong reaction. But it was shown that it is quite impossible to handle the dry salt so as to insure complete action of the whole dose; and furthermore, the slowness of the action prevents the rapid injection of the gas into the tent. It should be injected rapidly so that complete circulation of the gas about the tree may be established and the maximum effect produced at once, so as not make it necessary to increase the time of exposure.

In the second case, viz.: the use of the solution, the action is rapid and the injection can take place immediately. But with the use of solution, the trouble from formation of ammonia comes in. This can be obviated by the use of the proper apparatus to absorb the ammonia as it leaves the generator.

The apparatus used in field-work can be so modified that an absorbent of the ammonia may be inserted at the exit of the generator and connected with the general circulation. Such an apparatus can be made of a cylinder filled with loose pumice-stone over which sulphuric acid is poured from time to time. By this means a large surface is exposed for the absorption, and it can be readily so arranged that with slight trouble the surface of the pumice-stone can be re-saturated with sulphuric acid.

This apparatus, if interposed in the tubes through which the general circulation takes place, would interfere with the rapid passing of the volume of air which is to accomplish the agitation within the tent. In order to avoid this obstruction, a secondary circuit may be connected with the general circulation, to be used only when the generator is to be cleared of the last portion of the hydrocyanic gas. The pressure of the gas alone during its evolution is sufficient to force its way slowly into the general circulation. Thus the general circulation and agitation remain independent of both generator and drying-chamber. The secondary circuit carries a volume of air from the blower through the generator and through the drying-vessel and thence discharges into the general circulating pipe. This is accomplished by placing a hinged valve at the exit opening of the blower into the circulating tube in such a manner that the current of air may be passed either forward or backward by reversing the motion of the blower. The air may be forced by the backward movement through the secondary circuit.

By the application of either of the above methods the use of carbonate of soda can be avoided, and the work somewhat simplified. There will be far less residue in the generator, so that several treatments may be made without emptying the latter. Beside this there will be a decrease in the expense through the omission of the carbonate and the correspondingly less amount of sulphuric acid required. It will be necessary to demonstrate by further experiments whether the use of the cyanide alone will be so effective against the scale as when combined with carbonic acid. The best results of field experiments have accompanied the joint use of carbonate and cyanide, although it is maintained that the cyanide alone will produce as fatal effects upon the insect.

Some tests were incidentally made to note the effect of the gas upon the scale insects *Aspidiotus* and *Lecanium*. Branches of laurel and acacia infested with these scales were placed in the chamber during the treatment of trees at higher temperatures. The effect in some instances was complete, while in others 90 per cent of the insects were killed and the remaining 10 per cent still showed faint signs of life and may have survived the treatment. Under the proper treatment this gas remedy will undoubtedly prove as effective on these scales as upon the white scale, against which the remedy was originally intended to be applied.

Berkeley, May 5, 1888. F. W. MORSE.

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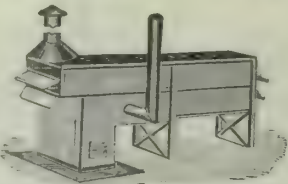
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NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 2, 1886.

Dr. J. Koenig—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.85 "
Insoluble Phosphoric Acid.....	2.33 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

Berkeley, Nov. 20, 1886.

Dr. J. Koenig, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,

E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—is in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

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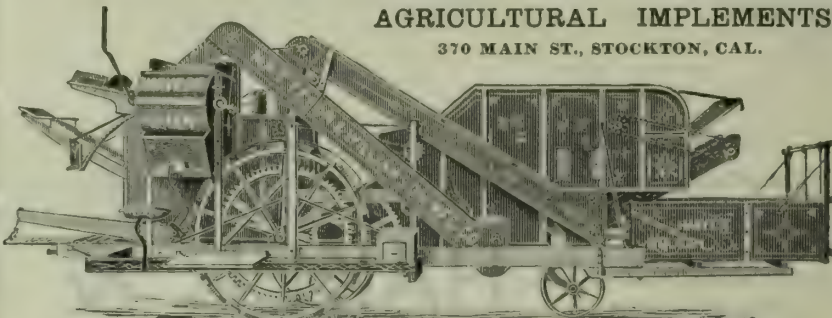
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This Scraper is the best implement in the market for

Making Levees,

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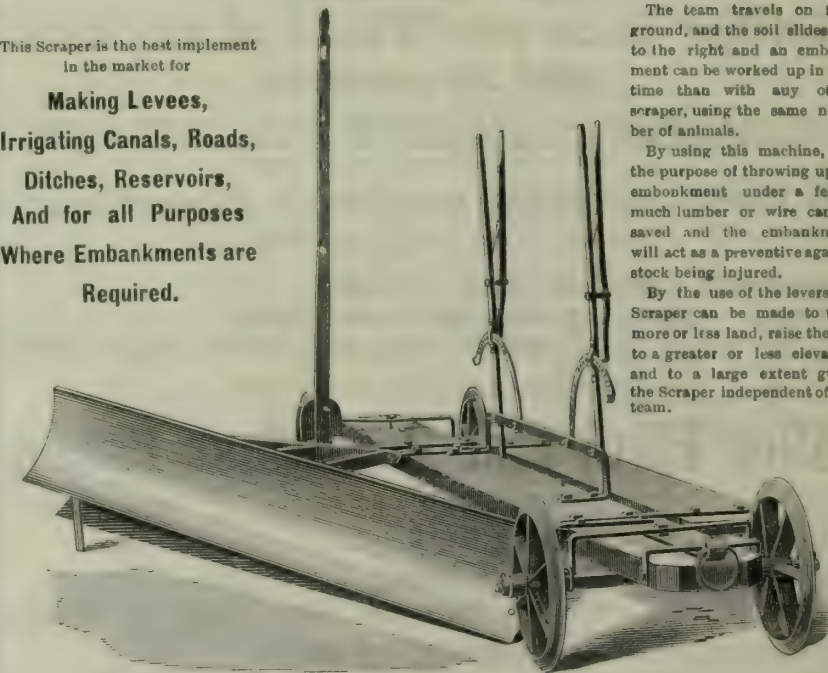
Where Embankments are

Required.

The team travels on firm ground, and the soil slides off to the right and an embankment can be worked up in less time than with any other scraper, using the same number of animals.

By using this machine, for the purpose of throwing up an embankment under a fence, much lumber or wire can be saved and the embankment will act as a preventive against stock being injured.

By the use of the levers the Scraper can be made to take more or less land, raise the soil to a greater or less elevation and to a large extent guide the Scraper independent of the team.



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News in Brief.

LIVERMORE is now illuminated by electric lights.

Two large schooners have sailed from Seattle for halibut fishing.

The death of Dom Pedro, Emperor of Brazil, is momentarily expected.

HEAVY frosts in Illinois and Michigan have done great damage to vegetation this week.

THE San Francisco Free Library, which now contains 70,000 volumes, will soon be removed to rooms in the New City Hall.

PACIFIC COAST Senators are endeavoring to have the appropriation of \$200,000 for improving Oakland harbor raised to \$500,000.

THERE are 53 fruit distilleries in Sonoma county, the new bonds for which are now being issued by the revenue officers of this district.

THE Governor has appointed John T. Doyle of San Francisco a member of the Viticultural Commission, vice M. M. Estee, failed to qualify.

THE U. S. Fish Commission steamer Albatross has arrived in San Francisco. Investigation of Pacific Coast fishes will now be made.

THE total loss at the Goldendale, Or., fire Sunday, it is said, will reach \$200,000. Many families are left destitute, and are in need of assistance.

A. J. BRYANT, Ex-Mayor of San Francisco, fell from the Oakland ferryboat last week and was drowned. It was at first thought he had committed suicide, but a jury has decided that the death was the result of an accident.

A TREE that was cut down near Whatcom, W. T., yielded 35,000 feet of lumber, which at \$7.50 per thousand, makes the tree worth \$262. The Whatcom Reville says that timber lands in the county will average ten such trees to an acre.

W. J. PILCHER, one of the half-interest swindlers who defrauded the Oregon rancher F. M. Parker out of his estate, has been sentenced to one year in the county jail and to pay \$5000 as a fine. If this is not paid he will remain 15 years in jail.

NOTWITHSTANDING the alleged scarcity of water, the Boca Mill Company has just completed the most successful log drive that has been made by them for many years. The last log came down the Little Truckee river last Sunday evening, and the pond is estimated to contain nearly 6,000,000 feet of saw lumber.

THE El Dorado County Society will hold its 14th annual reunion at Placerville on May 25th. Placerville was known as Old Dry Diggins until September 25, 1849, when three murderers were lynched, and it was afterward called Hangtown. In January, 1850, the Legislature termed it Placerville.

ON Friday night of last week train robbers attacked the train at Agua Seres, a small town on the Sonora road, 12 miles south of Nogales. They killed the conductor and fireman, and badly wounded the express messenger and others. Two of the robbers have since been captured, and rewards have been offered for the others.

At the station of Fountain, Colorado, some freight cars which had broken loose from a train collided with a passenger train standing at the station. A car full of naphtha was ignited, and in turn 17,000 pounds of dynamite on another car were exploded. Five persons were killed and 25 injured. The damage to the town is \$60,000, and to the railroad company double that amount.

THE summer immigration from the canton of Ticino, Switzerland, direct for California, is now under full headway. During the past three or four weeks large numbers have arrived in this city. They are mostly young men and there is not a pauper immigrant among them. Upon arriving in this city the great majority depart for the interior to work in the dairies or on ranches.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING MAY 8, 1888.

382,402.—RECEIVING TABLE FOR CYLINDER PRINTING PRESSES—F. W. Baltes, Portland, Ogn.

382,639.—CHURN—H. Doty, San Jose, Cal.

382,424.—ROTARY VAPOR ENGINE—Robert Hewson, S. F.

382,664.—HAY PRESS—E. Prengel, Oakland, Cal.

382,441.—WAD PRINTING MACHINE—Prentiss Selby, Oakland, Cal.

382,445.—REVOLVING SHOW CASE—C. H. Tully, Middletown, Cal.

382,575.—CABLE RAILWAYS—E. J. Weston, S. F.

15,439.—TRADEMARK—Merriman Manufacturing Co., Oakland, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

THE BUFFALO SAVERS.—A carrier-pigeon, bringing news from the buffalo-hunting expedition at the headwaters of the Canadian river in Texas, reached Garden City, Kansas, on the 14th. Two small herds of bison had been seen, and three or four calves lassoed.

THE VETERINARIAN.

Serious Swellings.

EDITORS PRESS:—Two of our cattle are afflicted with some disease, concerning which I wish you would ask your readers to contribute their observation and experience.

On a four-year-old bull, about a year ago, a large swelling commenced to form in the head of the neck back of the jaw and a little to one side, which assumed in time large proportions, getting to be of the size of a child's head. After I had made several applications of iodine, and repeated poulticing, the place which had been hard commenced to soften, and I finally lanced it, and after a short time the discharge of the matter contained in it took place, this being black, thick and of extremely offensive smell. The place healed up, and to my surprise, after a short time, commenced swelling again lower on the jaw; this latter place, after repeated treatment, bursting and discharging matter as at first. It occurred again for the third time, and now there is a calloused swelling left under the jaw which may swell again.

The second case is a three-year-old heifer affected in much the same way, excepting that now the diseased place appears to have become a permanent tumor, there being in the center of the place a continual discharge of the most offensive matter, with a large calloused tumor formation on each side of this place of discharge.

I was formerly of opinion that the cause of these places on both the bull and cow was the working in through the inner membrane of the throat of seeds of fox-tail or wild oats. Although I still think this may be the cause with the bull, I cannot accept the case of the cow in the same light.

The bull has always been in first-rate condition and he has evidently had no great pain, but has fed naturally and easily all the time. The cow, however, has fallen off very much in condition during the course of the disease, and now appears to suffer great pain.

I hope readers of the RURAL can shed some light on these cases. SUBSCRIBER.

(Original)

Books and Authors.

BY CALLIE BONNEY.

MEN, PLACES AND THINGS. By William Mathews, LL.D., author of "Getting On in the World," "The Great Conversers," "O atory and Orators," etc. Three hundred and ninety-four pages; \$1.50. Mailed, postpaid, on receipt of price by the publishers, J. C. Briggs & Co., Chicago. Contents: The Character of Napoleon I., William Wirt, Bulwer and Dumas, The Weaknesses of Great Men, The Greatness of London, The London Pulpit, The House of Commons, The Queen of Watering-Places, The Advantage of Ugliness, Worry, Courage, Oysters, Cynics and Cynicism, The Extremes of Dress, The Tricks of Types, Literary Quotation, The Value of Fame, and other essays.

The varied and interesting contents of this volume, bearing the evidence of much careful thought and research, will please many, while here and there a reader will find statements which challenge strongly his opposing thought. The ardent admirers of Napoleon, for example, will hardly take kindly the assertion "that he aggravated to a disease the traditional bias of the French nature to war, and therefore despotism; that he corrupted its morality by a successful course of spoliation; that he violently perverted education to serve the cause of tyranny, and converted religion into an engine of despotism," etc. Nor will the worshipers of Bulwer's wonderful powers accept the statement "that he was not a genius," "never reached the pinnacle of excellence and fame," "that as a novelist, on the whole he hardly ranks in the very first class, his verse lacking that mysterious something called poetry;" and that he possessed dramatic genius "only in a moderate degree." All this will meet, and justly, strong opposition.

The papers on "Worry and Courage" are to the point, and in the latter essay an amusing anecdote is told of the inborn courage of Nelson. That when a boy, having ramblled late one night, his mother said to him on his return: "She wondered fear did not drive him home." "Fear!" he replied; "Who's he? I don't know him."

In "Cynics and Cynicism" the author regards "Cynicism as one of the chief vices of our times," in which he is undoubtedly correct; and in "Literary Quotation" he considers "a man's style of expression should be as characteristic and inseparable from him as his clothes." But for further sentiment and opinion we must refer the reader to the author.

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To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, if requested the following articles (while this notice continues), at the very greatly reduced figures named at the right:

- 1.—The Agricultural Features of California, by Prof. Hilgard, 138 large pages, illustrated, cloth, with colored maps (full price \$1).....\$0 25
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- 5.—Kendall's Treatise on the Horse and Diseases, 89 pages, instructive illustrations.....05
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- 7.—Any of Harper's, Frank Leslie's and most other first-class U. S. periodicals, 15 per ct. off regular rates.
- 8.—Pacific Coast and Eastern Dailies, Books and Periodicals, except special publications, we can usually give 10 to 15 per cent off advertised retail rates.
- 9.—March of Empire, by Mallie Stafford.....25
- 10.—Life Among the Apaches, 322 pages, stiff cloth.....25
- 11.—\$1 worth of choice seeds, to be selected from a list of 107 flower and 82 garden seeds, as previously published, or which list we will send on application.....25
- 12.—Dewey's Pat. Newspaper Fileholder (18 to 36 in.).....25
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- 14.—Webster's Dictionary, 634 pages, with 1500 illustrations; very handy and reliable.....50
- 15.—Architecture Simplified, 60 pages.....05
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- 18.—How to Tell the Age of a Horse.....05
- 19.—Percheron Stud Book—French—bound in leather, 192 pages (full price, \$3).....1.00
- 20.—What Every One Should Know; a cyclopedia of valuable information; 510 pp.; cloth; (full price \$1).....50
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- 25.—The Taxidermist's Manual; illustrated, 64 pp.....10
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HOLLISTER'S FLORAL FAIR.—The ladies of Hollister held a highly successful floral fair in Well's opera-house, May 4th and 5th. Among the more noticeable features was the "Frigid Zone," a pavilion of snowballs, 10 feet square and high, roofed with a huge white floral umbrella, where young ladies dispensed ice-cream soda. On the table arranged by Mrs. N. C. Briggs the center-piece was a schooner, with mainsail set, made of snowballs and loaded with pansies. Its halcyards and stays were of smilax, and the vessel rested on a sea of moss and ferns. One of the most striking designs was the new courthouse, built (chiefly by Mrs. A. Leggett and Mrs. F. E. Dalzell) of white roses, with cornices of red roses, and the dome of marigolds. The structure was fully 10 feet high, and was illuminated from the interior, the light streaming cheerfully through the windows. About the courthouse were ample grounds, with graveled walks, lawns, fountains and statuary. The Advance states that, after paying expenses, there was left about \$150 for the Presbyterian church.

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Remedies for their Extermination.

By MATTHEW COOKE.

Late Chief Executive Horticultural Officer of California. Illustrated with over 750 wood-cuts and 25 pages of classified illustrations. This book is designed for the use of orchardists, vineyardists, farmers and others interested in the subjects treated. It is designed to convey practical information concerning some of the species of insects injurious to the industries of cultivators of the soil, and those interested in earth produce generally. Price \$4, postpaid. For sale by DEWEY & Co., publishers, 220 Market St., San Francisco.

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JOHN G. H. LAMPADUS—Santa Barbara Co.
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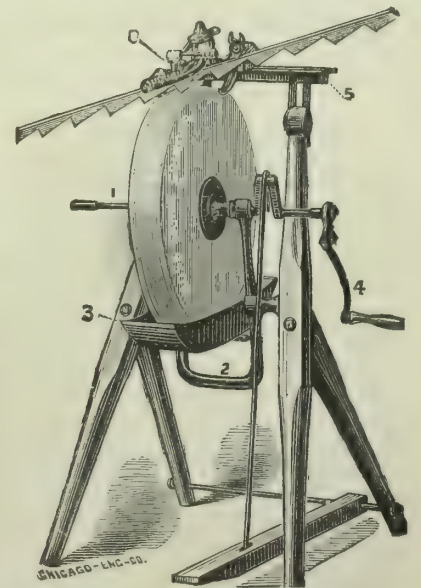
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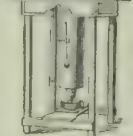
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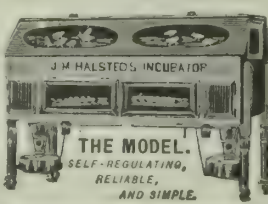
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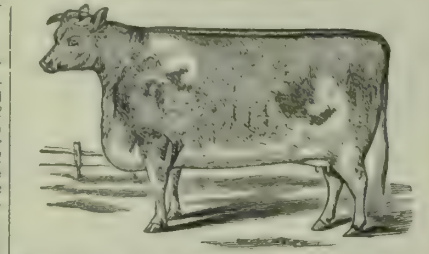
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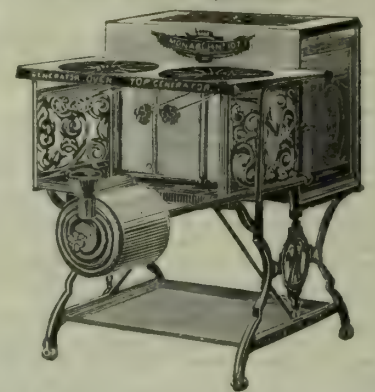
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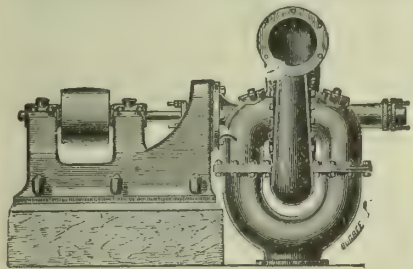
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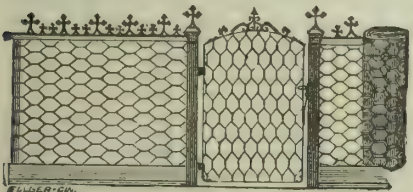
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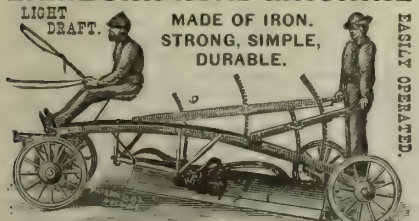
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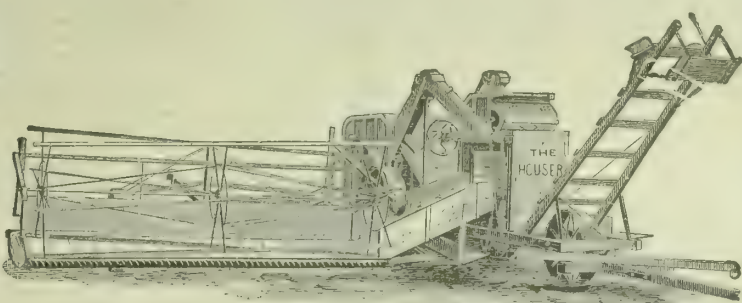
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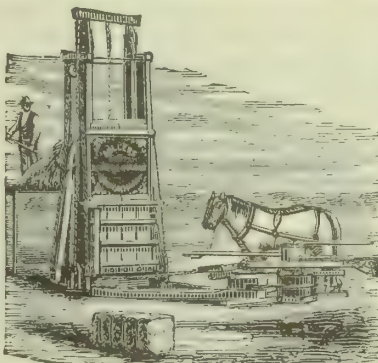
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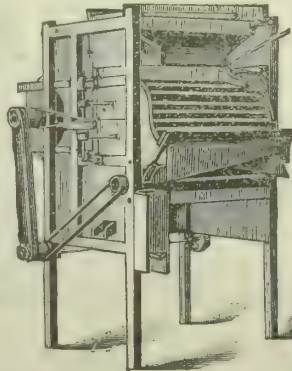
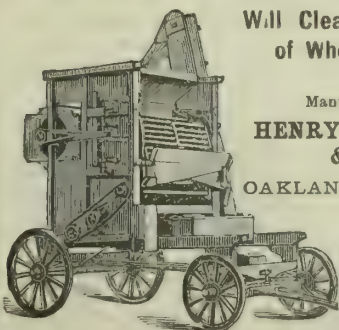
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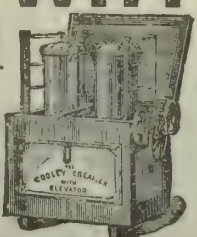
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, May 16, 1888.

The weather the past week has been of the best for grain crops, although a large portion of the land seeded has been so dried up that the crops died out, and consequently the land is being summer-fallowed. Fruits are ripening rapidly, and receipts are increasing. Vegetables are also coming in in larger quantities. The European and Eastern wheat markets have ruled strong throughout the week. The following is to-day's English cable:

LIVERPOOL, May 16.—Wheat—Quiet. California spot lots 6s 7½d to 6s 10½d; offcoast, 34s 6d; just shipped, 34s 9d; nearly due, 34s 6d; cargoes off coast, quiet; on passage, quiet but steady; Mark Lane wheat, firm; French country markets, firm; wheat on passage to Continent, 496,000 qrs; wheat and flour on passage to U. K., 2,261,000 qrs; wheat and flour in Paris, steady.

Foreign Review.

LONDON, May 14.—The *Mark Lane Express*, in its review of the British grain trade, says: The English wheat trade is slow and previous rates are difficult to sustain. Foreign wheat is quiet. In London prices have been maintained, but in Liverpool they are a fraction cheaper. Flour is cheaper. Corn in Liverpool is 1d dearer. Oats are in demand at an advance of 3d. Linseed is weak and prices have declined 6d. To-day there was a better demand for wheat, and both English and foreign rose 6d. Flour is 6d higher. Oats are 6d@1s higher.

Crop Prospects.

WASHINGTON, May 10.—The report of the Department of Agriculture says: Low temperature and deficient rainfall, with drying winds and some frost, have reduced the condition of the winter wheat in the Central States. On the Atlantic Coast the plant has nearly held its own. On the Pacific Coast only medium development is reported. In the Southern States the changes are slight. The report shows a decline of 4 points. The standing is: New York 16, Ohio 12, Michigan 12, Indiana 6, Illinois 7, Missouri 2, Kansas 3. The general average is reduced 9 points, from 82 to 73. Winter rye remains very nearly as in April, the average being 92.9, instead of 93.5. The condition of winter barley is 88.6, promising a medium crop. Spring seeding has not advanced as well as usual, cotton seeding being especially late.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Day.	Cash.	May.	June.	July.	Aug.
Thursday.....	98½	97½	94½	96	94½
Friday.....	98½	97½	94½	96	94½
Saturday.....	102½	101½	98½	98	97½
Monday.....	102½	98½	98½	98½	98½
Tuesday.....	102½	98½	96½	96½	96½

The closing prices for wheat have been as follows, at Chicago:

Day.	Cash.	May.	June.	July.	Aug.
Thursday.....	84½	82½	83½	84½	83½
Friday.....	84½	82½	83½	84½	83½
Saturday.....	87½	84½	85½	86½	85½
Monday.....	87½	85½	85½	86½	85½
Tuesday.....	86½	86½	87½	88½	87½

CHICAGO, May 16.—Wheat—87½c for cash, 88c for June, 89c for July and 88½c for August. Corn —57½@57¾c for June.

NEW YORK, May 16.—Wheat—\$1.01½ for cash, 99c for May, 97c to 97½c for June, 97½@97¾c for July, 96½c for August and 96½@96¾c for September.

Wool.

NEW YORK, May 13.—Bradstreet's says of the wool market: Consumers throughout the country are restricting purchases even more loosely than usual to their current requirements. With the new clip coming in, caution is natural. Most of the mills are employed on orders for which material is required, and to this extent there is a demand for fiber. Speculative activity and purchasers for future consumption are entirely wanting. Small Texas and California wool or spring clip are beginning to arrive on the seaboard. In the former State staple is accumulating, buyers and sellers appearing for a part in their views. The season in California is late and there has been no buying. The general condition of California product is not so good as last year. According to the *Boston Journal of Commerce*, the prices now obtained for fine wools are the lowest in the history of the country, unless they were lower previous to 1824, from which date quotations are obtainable. Medium wool, however, has not shrunk so much as ruled since 1876. This grade has sold for better prices than fine wool. London sales closed firm, with choice selections ½@1d higher than at opening. A good attendance and active demand are reported from Antwerp sales now in progress, and prices are firm. The wool trade in Philadelphia continues dull and unsatisfactory. Manufacturers buy only for actual wants and apparently lack confidence as to the stability of values. The uncertainty as to the outcome of the tariff discussion in Congress unsettles the market and confuses calculations as to the course of prices on new wools. Dealers are consequently reluctant to operate in the country markets. Sales foot up a total of 4,830,000 lbs against 3,850,000 lbs last week, and 2,890,000 lbs for the corresponding week last year.

California Products at Chicago.

CHICAGO, May 12.—Oranges are a little steadier for the supply shows some decrease. Sales are within the following range: California bright fruit, 53@3.25 ¢ box; smutty, 3.25@2.50; smutty Navel, 54.

Ten-pound boxes of California cherries are selling well at 35.50 ¢ box.

California dried fruits are ruling steady, and no change is quoted. There is a moderate trade in a small way for all descriptions.

We quote: Apricots, sun-dried ½ lb., 10½c@11½c; bleached, prime do, 13c; do, choice, 14½c@15c; do, fancy, 15@16c; evaporated, choice to fancy, 14½@16c; peaches, sun-dried, ½ lb., 11@12c; do

evaporated, unpeeled, 13@15c; do peeled, 20@22c; plums unpitted, ½ lb., 6@9c; do pitted, 10½@11c; prunes, small, ½ lb. 6@7c; fancy large, 9@11c.

Raisins, loose Muscates, 2-crown, ½ box, \$1.35@1.45; do, 3-crown, ½ box, \$1.50@1.65; do, London Layers, ½ box, \$2.25@2.40.

Hops rule firm and there is a moderate business in choice grades. Pacific Coast, choice, 13@14c ½ lb.; common to prime, 9@12½c.

New California potatoes are selling at \$2@2.25 ½ sack, or about \$1 ½ bu.

Miscellaneous.

NEW YORK, May 14.—There are few Pacific Coast goods to handle at this season. New money is seeking a place, but I hear of no settled transactions. There is a moderate business in hides. California has a small showing in the sales. They bring 16c—a pretty full price. In hops, the only movement of account is in cheap grades. Raisins bring \$2.05 for the best 3-crown.

Local Markets.

The closing sales on the San Francisco Call Board were as follows:

Date.	Buyer Season.	Buyer Year.
Thursday.....	\$1.43	\$1.60
Friday.....	1.45	1.61
Saturday.....	1.46	1.63
Monday.....	1.47	1.62
Tuesday.....	1.44	1.62

Date.	Buyer Season.	Buyer Year.
Thursday.....	\$.89	\$1.07
Friday.....	.89	1.06
Saturday.....	.87	1.07
Monday.....	.85	1.06
Tuesday.....	.86	1.06

BAGS—The market is weak and depressed. The demand is almost nil for Calcuttas.

BARLEY—The local sample market has fluctuated considerably, being controlled by receipts and also by transactions on Call. Trading in futures have been active with lively fluctuations, as will be noted by the closing prices in another column. At to-day's Call sales prices were as follows:

Morning Session: Buyer season—100 tons, 89½c. Buyer 1888—100 tons, \$1.06½; 100, \$1.06½; 300, \$1.06½; 600, \$1.07 ¢ ctl. Afternoon Session: Buyer season—100 tons, 87½c; 200, 88c. Buyer 1888—300 tons, \$1.07½; 200, \$1.07½; 900, \$1.07½; 100, \$1.07½; 100, \$1.07½ per ctl.

BUTTER—The market continues to stiffen under a good demand from the trade and also packers. The impression gains ground that the season will be short.

CHEESE—The market is steadier, with a stronger tone noted. The demand is improving.

EGGS—Free receipts of Eastern are against this market. Strictly choice fresh laid are wanted at the expense of off qualities.

FLOUR—The market is very strong. Some millers ask another advance. If wheat continues up, prices for flour must advance.

WHEAT—Shippers are not doing anything—prices too high. Short sellers on Call and millers are the only buyers. The higher markets abroad caused many to buy actual wheat against their sales for future delivery. On Call transactions have been fair. At to-day's Call the sales reported were as follows:

Morning Session: Buyer 1888—400 tons, \$1.62½; 400, \$1.63; 600, \$1.63½; 100, \$1.63½; 100, \$1.63½ ¢ ctl. Afternoon Session: Buyer 1888—200 tons, \$1.64½; 1200, \$1.63½; 400, \$1.63½; 700, \$1.63½ ¢ ctl.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to May 14 '87.	July 1 '87 to May 12 '88.
Flour, qr. sks.....	3,867,276	3,279,379
Wheat, cts.....	11,677,986	7,915,060
Barley, cts.....	2,118,753	2,080,157
Oats, cts.....	130,284	148,405
Potatoes, sks.....	745,627	1,011,912
Corn, sks.....	93,073	211,714
Rye, sks.....	23,362	16,613
Buckwheat, sks.....	5,865	3,054
Beans, sks.....	422,558	381,634
Bran, sks.....	406,683	454,816
Hay, tons.....	93,267	105,855
Salt, tons.....	21,178	15,110
Wool, bls.....	70,251	63,067
Hides, No.....	97,634	95,626
Raisins, 20-lb boxes.....	137,421	111,532
Quicksilver, flasks.....	16,760	27,509
Hops, bls.....	13,402	15,568

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to May 14 '87.	July 1 '87 to May 12 '88.
Flour, sks.....	207,914	332,994
Wheat cts.....	893,766	1,083,214
Barley, cts.....	6,073	75
Oats, cts.....	315,396	251,880
Corn, cts.....	117,804	12,590
Wool, bales.....	9,407	8,012
Bran, sks.....	27,918	63,513
Hops, bales.....	764	508
Hides, No.....	31,008	30,666
Rye, cts.....		5,289
Potatoes, sks.....	141,331	82,360

Cereals.

The *Mark Lane Express* of April 23d says: Changeable and showery weather has characterized the past week. Destructive thunderstorms have occurred in various parts of the country and the rainfall has been considerable. In the southeastern districts yesterday (Sunday), a cold rain from the east continued nearly the whole day, and though ungenial, has imparted welcome moisture to the soil. This morning in London shows no sign of improvement, but it is to be hoped a softer temperature will follow and be maintained. The ready condition of the land has enabled a large amount of seeding to be done, which in the earlier districts it has been far advanced, if not actually completed, so far as grain is concerned. The wheats are making progress, although not very rapid as yet, and the only com-

plaints of defective plant which we have heard are from light land districts. Unless the summer should be early and very forcing, there may yet be a favorable all-round result obtained from the harvest of 1888. Farmers have been too busy to attend to thrashing operations, and supplies of native grain of all descriptions have fallen off materially of late. Country markets have reported a firm trade for wheat, with 6d to 1s further advance in some instances. In London, sellers have held for some improvement, but it is doubtful if more than an occasional 6d has been actually paid.

H. Kains Jackson, in the *London Farmer*, says the weather has become spring like, and, though the political outlook is cloudy, the markets appear to have lost heart within the past few days. The forward offers of wheat are at prices well calculated to dishearten current trade. So far from the forward market inflating prices, it has, for the past two years, at least, been a very depressing influence. At the present moment new-crop wheat from the Argentine Republic is offered for shipment at 30s. 6d., and Chilean on passage at 33s., while samples of these sorts of wheat on spot are at about 32s. and 34s. respectively. Thus, grain to arrive during the early summer presses on grain already in hand, and grain to arrive during the later summer presses on grain to arrive in May and June. The reserves of Russian wheat are expected to be pushed forward in May. As low a price as 25s. has been accepted for wheat, which, as a feeding stuff for stock, outrivals the best maize, beans and peas, while excellent Russian wheat, fit for making good bread, is freely offered at 31s. per qr. The Indian new crop is offered at 23s. for fine white qualities, and 30s. for ordinary red wheat. These prices tend to keep the British wheat average between 30s. and 33s. At present it hugs the lower price much more closely than the higher level.

In France there has been a decided upward movement in wheat this week, most of the country markets quoting 50c to 75c per 100 kil. advance; the small offers from farmers, who are now busy in the fields, and the unfavorable crop prospects in America, added to the growing impression that the home crop will also be a short one this year, have combined to cause this improvement, and to determine farmers to hold for better prices.

The *New York Produce Exchange Reporter* says: The absence of any decided convictions among operators in futures, largely due to the false estimates of supplies of the last crop of wheat in farmers' hands, which so-called commercial papers have published from time to time very conspicuously, these very erroneous estimates have been extensively copied here and in Europe, the public have been misled, and instead of confidence and buoyancy, operators have been in doubt, which has been largely due to these assumptions, which are stupidly incorrect. Many of the large sales for May and June delivery have been made based on these erroneous assumptions of supplies in farmers' hands, and there is a large shortage for this month and June to be covered, and it is very plain this and Western speculative markets have been largely oversold; this would speedily show itself had we our usual export demand. The quantity of No. 2 red likely to reach us this and next month will be small, very conclusively showing that the wheat is not in the country, and that the last winter crop was about what we stated last October and November. With the exception of Ohio and Michigan no other winter wheat State has any surplus to spare, and farmers in these States with the unfavorable promise for the growing crop, will be slow to part with any wheat they may hold.

Advices regarding the wheat crop in Oregon and Washington are favorable, but the outlook will be all of 20 per cent less than that of 1887. In this State, previous bad crop reports are not only confirmed, but are, in some localities, claimed to be worse. There can be no doubt but the crop this year will not give California an exportable surplus of over 400,000 tons, and perhaps not over 375,000. The consumption in this State is increasing by reason of the growing population. The barley crop has not fared so badly as wheat, but still the crop will be all of 25 per cent less than last year, while the consumption is larger. There was not only a lessened acreage seeded, but many more fields have been cut for hay than were cut last year. The quantity of bright brewing barley will be less, but then Oregon will have more, as the weather in the barley-growing sections has been favorable to the production of bright grain. The oat crop in Oregon and Washington will be larger than last year, but in this State there will be very little difference. Eastern advices report a larger acreage seeded to both oats and barley this year.

In wheat the market held strong throughout the week, with sales of No. 1 white shipping made at a further advance. The demand comes chiefly from parties who have sold futures on Call. Many holders of the actual grain have sold against it on Call, generally "buyer." Receipts from the interior warehouses have been quite free, cleaning the stock held by the largest proportion, while depleting that held by the others. The shipping demand is only fair. The advance in prices abroad and the low charters ruling here being in favor of better prices. By reference to the tonnage in port and to arrive it will be seen that there is a decided increase in comparison with the like time in 1887, while the wheat crop prospects are poorer. Millers are meeting with considerable difficulty in having their wants met, owing to the scarcity of choice grades and also high views of holders. Oregon is sending us a lessened quantity.

From *Prime's Crop Bulletin* the following is obtained: The last half of April proved to be even more discouraging in the outlook for winter wheat than at any time on the whole crop, and what we were hoping and longing for, warm weather and copious rains, never came. My average of the winter wheat situation on the 1st of May, from over 600 points, in Illinois is 69, Ohio 71, Indiana 65, Michigan 77, Kansas 89, Missouri 80, Kentucky 70, Tennessee 85, with a general average of 76 per cent. Texas has planted her corn. So has Tennessee and Kentucky. Kansas has commenced. Plowing in Nebraska, but nothing done yet worth reporting in Indiana, Ohio, Illinois, Iowa or Nebraska. The recent advance in corn after a bitter fight to still further depreciate its value, plainly shows that those who thought the crop was not short have changed their opinions very decidedly.

The barley market has fluctuated some the past week, but held generally strong at full figures. Heavy receipts had at times a depressing influence, which

was taken advantage of by the bears to hammer prices down, but each break was quickly recovered, which shows the strength of the situation. The consumption is steadily increasing for both feed and brewing. The cold weather is against the latter going into consumption as largely as at this time in 1887. The stock of better grades of bright barley is not large, but off-colored is in liberal supply.

Oats have ruled weak throughout the week, with only moderate buying reported.

Corn has fluctuated some, but still the market exhibited throughout the week a fair degree of strength. Rye is moving more slowly, but the light supply keeps values from shading much. Buckwheat is lifeless.

Fruits.

Cherries are coming in more freely, but the demand keeps prices steady. It is generally claimed that a lower range of values will rule, with still heavier receipts. Apricots are coming in quite freely, but being Pringle's, canners cannot buy. Canners take strawberries at any price from \$3.50 down. Apples are slow, owing to the quality being poor. Canners expect to start up soon on both cherries and apricots. The suspension of J. Lusk & Co. is being taken advantage of by canners to depress the market for raw fruits by stating that large quantities under contract to that company will be thrown on the market. So far, the writer cannot obtain any positive information on the subject, but it is intimated that the fruits will all be cared for. Crop advices are without essential change. Fruits are ripening rapidly.

Dried fruits are moving very slowly. Buyers take only in small quantity. There is no local demand, owing to the market being supplied with raw. Quotations are nominal.

A sample parcel of Royal apricots was received the past week, as there was of cherry plums; both sold high.

Raisins are slow, but the stock is very light, particularly of choice grades. The prospects are of a promising character for a large yield of raisin grapes.

Feedstuff.

Ground feed has held firm, with a good demand. The character of the buying indicates consumers only taking in a hand-to-mouth way.

Hay holds strong. New is coming in more freely. As a rule the quality is better, the straw not being very coarse. The impression prevails that holders will press the market at an early day, when prices will go off, but will be speedily recovered with shipments held back. The market will be high throughout the season, owing to about no old held over, only a fair crop harvested and an increased consumption.

Live-Stock.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain-fed and one-half from the price of grass-fed, that is, animals running at large).

Bullocks and mutton sheep are pressing markets. The selling pressure is due to holders desiring to sell, owing to short pasture. Hogs, for the same season, are also lower and weak at the decline. Stock hogs are inquired for. Cows are slow. Small work horses are not wanted, but good sized find ready sale. For other kinds of horses the inquiry and prices are the same as heretofore reported.

HOGS—On foot, grain-fed, 6½c ½ lb.; dressed, 9½@9¾c ½ lb.; soft, 5½@6c ½ lb.; dressed, 8½@9c ½ lb. Stock hogs, 4@4½c ½ lb.

BEEF—Stall-fed, 7½@8½c ½ lb.; grass-fed, extra, 7½c ½ lb.; first quality, 7c ½ lb.; second quality, 6@— ½ lb.; third quality, 5@— ½ lb.

VEAL—Choice, 8@9c ½ lb.; fair to good, 7@8c ½ lb.

MUTTON—Wethers, 5½@6c ½ lb.; ewes, 5@5½c ½ lb.; lamb-spring, 7@8c ½ lb.

Hops.

The market exhibits more strength, but the absence of straight parcels of choice is against sellers. That line is irregular and only taken under protest. From the *Mark Lane Express* the following is obtained regarding the English markets:

BOROUGH.—Nearly all the hops that have been pressed for sale have been bought up, principally by consumers, consequently buyers find a difficulty in replacing hops that have been sold during the last fortnight (under positive orders to clear out) without paying a few shillings more money. Choice hops of every description are becoming exceedingly scarce, and the few that remain are held for more money.

WORCESTER.—We have no 1887 hops offering on our market by growers, and stocks in the hands of merchants are gradually being absorbed by orders coming in from consumers. There has been a large trade done during the last few weeks in 1885 and 1886 hops for consumption, and on speculation at the present low values, the general opinion being that hops of these dates, which are fine and in good condition, will pay the most money in the event of a failure in this year's crop, the present prices being unprecedented.

Vegetables.

In seasonable varieties, the market is well supplied. Receipts are increasing, and prices, except for peas, asparagus and beans, are receding. Canners are still taking peas and asparagus. The fine forcing weather will cause freer receipts and a still lower range of values in all varieties.

Onions are weak, under free receipts, and not being sufficiently matured to fill distant orders.

Potatoes are strong at full prices for the better varieties that are of good size, and will do to fill distant orders with. The crop in this State and Oregon will be larger than last year.

Cabbages are steady; a few are being shipped to distant points on orders received.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

1888.	1887.	
On the way.....	431,217	230,849
In port, disengaged.....	41,489	100,547
In port, engaged.....	10,361	7,818

Totals..... 483,067 339,214
To obtain the carrying capacity, add 60 per cent to the tonnage.

Tonnage on the way to Oregon, 15,077; tonnage at Portland, Oregon, loading and to load, 19,114. Total tonnage, 34,191.

Beans are inactive. Poultry, except good roosters, has been depressed, owing to heavy receipts from the Missouri river. Our

market appears to be controlled by shipments from that quarter.

Wool continues slow. Many growers are sending their clips to the East on consignment, where interest and other expenses are less. They believe that the depression is only temporary.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS. Wednesday, May 16, 1888.
Bayo, chl. 2 00 @ 2 25
Peas, chl. 3 40 @ 3 65
Red. 2 20 @ 2 50
Pink. 2 20 @ 2 50
Large White. 3 40 @ 3 60
Small White. 3 40 @ 3 70
Lima. 3 25 @ 3 50
Kid Peas, blk eye 2 00 @ 2 10
do green. 2 00 @ 2 10
do Niles. 2 10 @ 2 20

POTATOES.
New Red. 1 00 @ 1 10
White. 1 00 @ 1 10
Early Rose. 1 00 @ 1 10
Cuffey Cove. 1 00 @ 1 10
Petatsuma. 1 00 @ 1 10
Tomatoes. 1 00 @ 1 10
River reds. 1 00 @ 1 10
Jersey Blues. 1 00 @ 1 10
Humboldt. 1 00 @ 1 10
do Kidney. 1 00 @ 1 10
Peachblows. 1 00 @ 1 10
Ochle. 1 00 @ 1 10
do Oregon. 1 00 @ 1 10
Peerless. 1 00 @ 1 10
Salt Lake. 1 00 @ 1 10
Sweet. 1 00 @ 1 10

ORCHARD CORN.
South'n porton. 60 @ 80 00
North'n porton. 60 @ 80 00

CHICORY.
California. 6 @ 7
German. 7 @ 8

DAIRY PRODUCE, ETC.
BUTTER.
Cal. fresh roll, lb. 22 1/2 @ 27 1/2
do Fancy brands. 22 @ 29
Pickled roll. 22 @ 25
Firklin, new. 22 1/2 @ 25
Eastern. 22 1/2 @ 25

CHEESE.
Ochese, Cal. B. 9 @ 12
Eastern style. 10 @ 13

EGGS.
Cal. ranch, doz. 19 @ 20
do, store. 15 @ 18
Ducks. 15 @ 18
Oregon. 15 @ 18
Eastern. 15 @ 18

FEED.
Bran, ton. 16 50 @ 18 50
Feedmeal. 30 00 @ 31 00
Gr'd Barley ton. 21 00 @ 22 50
Hay. 11 00 @ 12 00
Middlings. 13 00 @ 14 00
Oil Cake Meal. 32 50 @ 34 00
do new process. 28 50 @ 30 00
Straw, bale. 45 @ 65

FLOUR.
Extra, City Mills. 4 00 @ 4 35
do Country Mills. 3 75 @ 4 00
Superfine. 3 25 @ 3 50

GRAIN, ETC.
Barley, feed, chl. 80 @ 90
do Brewing. 1 00 @ 1 15
Chevalier. 1 25 @ 1 40
do Coast. 1 15 @ 1 30
Buckwheat. 1 75 @ 2 25
Oorn, White. 1 40 @ 1 45
Yellow. 1 35 @ 1 40
Small Round. 1 35 @ 1 40

NEBRASKA.
Oats, milling. 1 60 @ 1 70
Choice feed. 1 40 @ 1 45
do good. 1 35 @ 1 37 1/2
do fair. 1 30 @ 1 32 1/2
do Gray. 1 30 @ 1 32 1/2
do Oregon. 1 30 @ 1 32 1/2

WHEAT MILLING.
Gilt edged. 1 48 1/2 @ 1 51 1/2
do Choice. 1 45 @ 1 47 1/2
do fair to good. 1 42 1/2 @ 1 44 1/2
Shipping choice. 1 42 1/2 @ 1 44 1/2
do good. 1 40 @ 1 42 1/2
do fair. 1 35 @ 1 37 1/2

RYE.
Wheat milling. 1 48 1/2 @ 1 51 1/2
Gilt edged. 1 48 1/2 @ 1 51 1/2
do Choice. 1 45 @ 1 47 1/2
do fair to good. 1 42 1/2 @ 1 44 1/2
Shipping choice. 1 42 1/2 @ 1 44 1/2
do good. 1 40 @ 1 42 1/2
do fair. 1 35 @ 1 37 1/2

WHEAT MILLING.
Gilt edged. 1 48 1/2 @ 1 51 1/2
do Choice. 1 45 @ 1 47 1/2
do fair to good. 1 42 1/2 @ 1 44 1/2
Shipping choice. 1 42 1/2 @ 1 44 1/2
do good. 1 40 @ 1 42 1/2
do fair. 1 35 @ 1 37 1/2

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Shipping choice. 1 42 1/2 @ 1 44 1/2
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Shipping choice. 1 42 1/2 @ 1 44 1/2
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Shipping choice. 1 42 1/2 @ 1 44 1/2
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Shipping choice. 1 42 1/2 @ 1 44 1/2
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do fair to good. 1 42 1/2 @ 1 44 1/2
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Shipping choice. 1 42 1/2 @ 1 44 1/2
do good. 1 40 @ 1 42 1/2
do fair. 1 35 @ 1 37 1/2

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

Apples, bx com. 90 @ 1 00
do choice. 90 @ 1 00
Apricots, bx. 90 @ 1 25
Bananas, bunch. 2 00 @ 4 00
Blackberries, ch. 2 00 @ 4 00
Cantaloupes, cr. 50 @ 1 00
Cherries white bx. 75 @ 1 50
do Royal Ann. 1 00 @ 1 25
Cherry plums. 1 00 @ 1 25
Crabapples. 10 00 @ 12 00
Currants ch. 6 00 @ 9 00
Gour cherries lb. 11 @ 3
Figs, black bx. 1 00 @ 1 25
do white bx. 1 00 @ 1 25
Grapes, white. 1 00 @ 1 25
do black. 1 00 @ 1 25
do Rose Peru. 1 00 @ 1 25
do Muscat. 1 00 @ 1 25
do Tokays. 1 00 @ 1 25
Isabel. 1 00 @ 1 25
Wine, Zinfandel. 1 00 @ 1 25
do Mission. 1 00 @ 1 25
Limes, Mex. 3 00 @ 4 50
do Cal. box. 1 00 @ 1 25
Lemons, Cal. bx. 1 00 @ 1 25
do Sicily, box. 4 00 @ 5 00
do Australian. 1 00 @ 1 25
Nectarines box. 75 @ 1 25
Oranges, Com bx. 75 @ 1 25
do Choice. 1 75 @ 2 50
do Navel. 3 50 @ 5 00
do do Com. 2 00 @ 3 00
do do Panama. 1 00 @ 1 25
Peaches, bx. 1 00 @ 1 25
Crawfords, bx. 1 00 @ 1 25
do choice. 1 00 @ 1 25
Pears bx. 1 00 @ 1 25
do choice. 1 00 @ 1 25
do Bartlett, bx. 1 00 @ 1 25
Persimmons. 1 00 @ 1 25
Jap. bx. 1 00 @ 1 25
Pineapples, doz. 2 50 @ 4 50
Plums lb. 1 00 @ 1 25
Pomegranates, b. 1 00 @ 1 25
Prunes lb. 1 00 @ 1 25
Quinces bx. 1 00 @ 1 25
Raspberries dr. 80 @ 1 25
Strawberries ch. 3 00 @ 7 00
Watermelons, 100. 100 @ 1 00

WEDNESDAY, May 16, 1888.
do evaporated. 12 1/2 @ 10 1/2
Peaches. 9 @ 10 1/2
do pared. 20 @ 25
do evaporated. 4 @ 7
Pears, sliced. 4 @ 7
do qtd. 4 @ 7
do evaporated. 11 @ 12 1/2
Plums, evapo'd. 11 @ 12 1/2
do unpitted. 4 @ 7
Prunes. 7 @ 10
do French. 8 @ 11
Zante Currants. 8 @ 11

RAISINS.
Dehesa Clus, fcy 3 25 @ 3 50
Imperial Cabin. 2 00 @ 2 25
Crown London. 2 00 @ 2 25
Layers, fcy. 2 00 @ 2 25
do Loose Mus. 1 90 @ 2 10
catels, fancy 1 90 @ 2 10
do Loose Mus. 1 60 @ 1 90
Cal. Valencia. 1 60 @ 1 80
do Layers. 1 50 @ 1 60
do Sultan. 1 60 @ 1 75
Dried, sacks, lb. 5 @ 6
do outside bars of raisins
sell at from 25 cts to 50 cts less
than above quotations.
Fractions come 25, 50 and 75
cents higher for halves, quar-
ters and eighths.

VEGETABLES.
Artichokes, doz. 75 @ 2 00
Asparagus bx. 75 @ 2 00
do East's choice. 2 50 @ 3 00
Okra, dry, lb. 15 @ 20
do green bx. 2 50 @ 3 25
Parasips, chl. 2 50 @ 3 25
Peppers, dry lb. 8 @ 10
do green, lb. 10 @ 15
Pumpkins pr tot. 1 00 @ 1 25
Squash, Marrow. 1 00 @ 1 25
Lat, ton. 75 @ 1 25
do Summer bx. 75 @ 1 25
String beans lb. 3 @ 7
Tomatoes box. 1 00 @ 1 25
do choice. 1 00 @ 1 25
Turnips chl. 1 00 @ 1 25
Beets, sk. 1 25 @ 1 50
Cabbage, 100 lbs. 1 00 @ 1 25
Carrots, sk. 30 @ 50
Eggplant, 1/2 bx. 1 00 @ 1 25
Garlic, lb. 1 00 @ 1 25
Green Corn, cr. 1 00 @ 1 25
do sweet cr. 1 00 @ 1 25
do large box. 75 @ 1 00
Green Peas, sk. 1 00 @ 1 25
Sweet Peas sk. 1 00 @ 1 25
Lettuce, doz. 1 00 @ 1 25
Lima Beans lb. 5 @ 25
Mushrooms, lb. 5 @ 25
Rhubarb bx. 40 @ 1 00
Cucumbers, doz. 20 @ 50

WEDNESDAY, May 16, 1888.
do evaporated. 12 1/2 @ 10 1/2
Peaches. 9 @ 10 1/2
do pared. 20 @ 25
do evaporated. 4 @ 7
Pears, sliced. 4 @ 7
do qtd. 4 @ 7
do evaporated. 11 @ 12 1/2
Plums, evapo'd. 11 @ 12 1/2
do unpitted. 4 @ 7
Prunes. 7 @ 10
do French. 8 @ 11
Zante Currants. 8 @ 11

RAISINS.
Dehesa Clus, fcy 3 25 @ 3 50
Imperial Cabin. 2 00 @ 2 25
Crown London. 2 00 @ 2 25
Layers, fcy. 2 00 @ 2 25
do Loose Mus. 1 90 @ 2 10
catels, fancy 1 90 @ 2 10
do Loose Mus. 1 60 @ 1 90
Cal. Valencia. 1 60 @ 1 80
do Layers. 1 50 @ 1 60
do Sultan. 1 60 @ 1 75
Dried, sacks, lb. 5 @ 6
do outside bars of raisins
sell at from 25 cts to 50 cts less
than above quotations.
Fractions come 25, 50 and 75
cents higher for halves, quar-
ters and eighths.

VEGETABLES.
Artichokes, doz. 75 @ 2 00
Asparagus bx. 75 @ 2 00
do East's choice. 2 50 @ 3 00
Okra, dry, lb. 15 @ 20
do green bx. 2 50 @ 3 25
Parasips, chl. 2 50 @ 3 25
Peppers, dry lb. 8 @ 10
do green, lb. 10 @ 15
Pumpkins pr tot. 1 00 @ 1 25
Squash, Marrow. 1 00 @ 1 25
Lat, ton. 75 @ 1 25
do Summer bx. 75 @ 1 25
String beans lb. 3 @ 7
Tomatoes box. 1 00 @ 1 25
do choice. 1 00 @ 1 25
Turnips chl. 1 00 @ 1 25
Beets, sk. 1 25 @ 1 50
Cabbage, 100 lbs. 1 00 @ 1 25
Carrots, sk. 30 @ 50
Eggplant, 1/2 bx. 1 00 @ 1 25
Garlic, lb. 1 00 @ 1 25
Green Corn, cr. 1 00 @ 1 25
do sweet cr. 1 00 @ 1 25
do large box. 75 @ 1 00
Green Peas, sk. 1 00 @ 1 25
Sweet Peas sk. 1 00 @ 1 25
Lettuce, doz. 1 00 @ 1 25
Lima Beans lb. 5 @ 25
Mushrooms, lb. 5 @ 25
Rhubarb bx. 40 @ 1 00
Cucumbers, doz. 20 @ 50

WEDNESDAY, May 16, 1888.
do evaporated. 12 1/2 @ 10 1/2
Peaches. 9 @ 10 1/2
do pared. 20 @ 25
do evaporated. 4 @ 7
Pears, sliced. 4 @ 7
do qtd. 4 @ 7
do evaporated. 11 @ 12 1/2
Plums, evapo'd. 11 @ 12 1/2
do unpitted. 4 @ 7
Prunes. 7 @ 10
do French. 8 @ 11
Zante Currants. 8 @ 11

RAISINS.
Dehesa Clus, fcy 3 25 @ 3 50
Imperial Cabin. 2 00 @ 2 25
Crown London. 2 00 @ 2 25
Layers, fcy. 2 00 @ 2 25
do Loose Mus. 1 90 @ 2 10
catels, fancy 1 90 @ 2 10
do Loose Mus. 1 60 @ 1 90
Cal. Valencia. 1 60 @ 1 80
do Layers. 1 50 @ 1 60
do Sultan. 1 60 @ 1 75
Dried, sacks, lb. 5 @ 6
do outside bars of raisins
sell at from 25 cts to 50 cts less
than above quotations.
Fractions come 25, 50 and 75
cents higher for halves, quar-
ters and eighths.

VEGETABLES.
Artichokes, doz. 75 @ 2 00
Asparagus bx. 75 @ 2 00
do East's choice. 2 50 @ 3 00
Okra, dry, lb. 15 @ 20
do green bx. 2 50 @ 3 25
Parasips, chl. 2 50 @ 3 25
Peppers, dry lb. 8 @ 10
do green, lb. 10 @ 15
Pumpkins pr tot. 1 00 @ 1 25
Squash, Marrow. 1 00 @ 1 25
Lat, ton. 75 @ 1 25
do Summer bx. 75 @ 1 25
String beans lb. 3 @ 7
Tomatoes box. 1 00 @ 1 25
do choice. 1 00 @ 1 25
Turnips chl. 1 00 @ 1 25
Beets, sk. 1 25 @ 1 50
Cabbage, 100 lbs. 1 00 @ 1 25
Carrots, sk. 30 @ 50
Eggplant, 1/2 bx. 1 00 @ 1 25
Garlic, lb. 1 00 @ 1 25
Green Corn, cr. 1 00 @ 1 25
do sweet cr. 1 00 @ 1 25
do large box. 75 @ 1 00
Green Peas, sk. 1 00 @ 1 25
Sweet Peas sk. 1 00 @ 1 25
Lettuce, doz. 1 00 @ 1 25
Lima Beans lb. 5 @ 25
Mushrooms, lb. 5 @ 25
Rhubarb bx. 40 @ 1 00
Cucumbers, doz. 20 @ 50

WEDNESDAY, May 16, 1888.
do evaporated. 12 1/2 @ 10 1/2
Peaches. 9 @ 10 1/2
do pared. 20 @ 25
do evaporated. 4 @ 7
Pears, sliced. 4 @ 7
do qtd. 4 @ 7
do evaporated. 11 @ 12 1/2
Plums, evapo'd. 11 @ 12 1/2
do unpitted. 4 @ 7
Prunes. 7 @ 10
do French. 8 @ 11
Zante Currants. 8 @ 11

RAISINS.
Dehesa Clus, fcy 3 25 @ 3 50
Imperial Cabin. 2 00 @ 2 25
Crown London. 2 00 @ 2 25
Layers, fcy. 2 00 @ 2 25
do Loose Mus. 1 90 @ 2 10
catels, fancy 1 90 @ 2 10
do Loose Mus. 1 60 @ 1 90
Cal. Valencia. 1 60 @ 1 80
do Layers. 1 50 @ 1 60
do Sultan. 1 60 @ 1 75
Dried, sacks, lb. 5 @ 6
do outside bars of raisins
sell at from 25 cts to 50 cts less
than above quotations.
Fractions come 25, 50 and 75
cents higher for halves, quar-
ters and eighths.

VEGETABLES.
Artichokes, doz. 75 @ 2 00
Asparagus bx. 75 @ 2 00
do East's choice. 2 50 @ 3 00
Okra, dry, lb. 15 @ 20
do green bx. 2 50 @ 3 25
Parasips, chl. 2 50 @ 3 25
Peppers, dry lb. 8 @ 10
do green, lb. 10 @ 15
Pumpkins pr tot. 1 00 @ 1 25
Squash, Marrow. 1 00 @ 1 25
Lat, ton. 75 @ 1 25
do Summer bx. 75 @ 1 25
String beans lb. 3 @ 7
Tomatoes box. 1 00 @ 1 25
do choice. 1 00 @ 1 25
Turnips chl. 1 00 @ 1 25
Beets, sk. 1 25 @ 1 50
Cabbage, 100 lbs. 1 00 @ 1 25
Carrots, sk. 30 @ 50
Eggplant, 1/2 bx. 1 00 @ 1 25
Garlic, lb. 1 00 @ 1 25
Green Corn, cr. 1 00 @ 1 25
do sweet cr. 1 00 @ 1 25
do large box. 75 @ 1 00
Green Peas, sk. 1 00 @ 1 25
Sweet Peas sk. 1 00 @ 1 25
Lettuce, doz. 1 00 @ 1 25
Lima Beans lb. 5 @ 25
Mushrooms, lb. 5 @ 25
Rhubarb bx. 40 @ 1 00
Cucumbers, doz. 20 @ 50

WEDNESDAY, May 16, 1888.
do evaporated. 12 1/2 @ 10 1/2
Peaches. 9 @ 10 1/2
do pared. 20 @ 25
do evaporated. 4 @ 7
Pears, sliced. 4 @ 7
do qtd. 4 @ 7
do evaporated. 11 @ 12 1/2
Plums, evapo'd. 11 @ 12 1/2
do unpitted. 4 @ 7
Prunes. 7 @ 10
do French. 8 @ 11
Zante Currants. 8 @ 11

RAISINS.
Dehesa Clus, fcy 3 25 @ 3 50
Imperial Cabin. 2 00 @ 2 25
Crown London. 2 00 @ 2 25
Layers, fcy. 2 00 @ 2 25
do Loose Mus. 1 90 @ 2 10
catels, fancy 1 90 @ 2 10
do Loose Mus. 1 60 @ 1 90
Cal. Valencia. 1 60 @ 1 80
do Layers. 1 50 @ 1 60
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VEGETABLES.
Artichokes, doz. 75 @ 2 00
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Okra, dry, lb. 15 @ 20
do green bx. 2 50 @ 3 25
Parasips, chl. 2 50 @ 3 25
Peppers, dry lb. 8 @ 10
do green, lb. 10 @ 15
Pumpkins pr tot. 1 00 @ 1 25
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Lat, ton. 75 @ 1 25
do Summer bx. 75 @ 1 25
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Tomatoes box. 1 00 @ 1 25
do choice. 1 00 @ 1 25
Turnips chl. 1 00 @ 1 25
Beets, sk. 1 25 @ 1 50
Cabbage, 100 lbs. 1 00 @ 1 25
Carrots, sk. 30 @ 50
Eggplant, 1/2 bx. 1 00 @ 1 25
Garlic, lb. 1 00 @ 1 25
Green Corn, cr. 1 00 @ 1 25
do sweet cr. 1 00 @ 1 25
do large box. 75 @ 1 00
Green Peas, sk. 1 00 @ 1 25
Sweet Peas sk. 1 00 @ 1 25
Lettuce, doz. 1 00 @ 1 25
Lima Beans lb. 5 @ 25
Mushrooms, lb. 5 @ 25
Rhubarb bx. 40 @ 1 00
Cucumbers, doz. 20 @ 50

WEDNESDAY, May 16, 1888.
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Peaches. 9 @ 10 1/2
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do evaporated. 4 @ 7
Pears, sliced. 4 @ 7
do qtd. 4 @ 7
do evaporated. 11 @ 12 1/2
Plums, evapo'd. 11 @ 12 1/2
do unpitted. 4 @ 7
Prunes. 7 @ 10
do French. 8 @ 11
Zante Currants. 8 @ 11

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Dehesa Clus, fcy 3 25 @ 3 50
Imperial Cabin. 2 00 @ 2 25
Crown London. 2 00 @ 2 25
Layers, fcy. 2 00 @ 2 25
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catels, fancy 1 90 @ 2 10
do Loose Mus. 1 60 @ 1 90
Cal. Valencia. 1 60 @ 1 80
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Lat, ton. 75 @ 1 25
do Summer bx. 75 @ 1 25
String beans lb. 3 @ 7
Tomatoes box. 1 00 @ 1 25
do choice. 1 00 @ 1 25
Turnips chl. 1 00 @ 1 25
Beets, sk. 1 25 @ 1 50
Cabbage, 100 lbs. 1 00 @ 1 25
Carrots, sk. 30 @ 50
Eggplant, 1/2 bx. 1 00 @ 1 25
Garlic, lb. 1 00 @ 1 25
Green Corn, cr. 1 00 @ 1 25
do sweet cr. 1 00 @ 1 25
do large box. 75 @ 1 00
Green Peas, sk. 1 00 @ 1 25
Sweet Peas sk. 1 00 @ 1 25
Lettuce, doz. 1 00 @ 1 25
Lima Beans lb. 5 @ 25
Mushrooms, lb. 5 @ 25
Rhubarb bx. 40 @ 1 00
Cucumbers, doz. 20 @ 50

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
May 10-16.																																				
Thursday.....	.03	56	N	Cy.	.00	54	N	Cy.	.00	89	N	Fr.	.00	76	Nw	Cl.	.00	68	W	Cl.	.00	82	Nw	Cl.	.00	71	W	Cl.	.00	62	W	Cy.	.00	64	Nw	Cl.
Friday.....	.T	60	Nw	Cl.	.00	56	W	Cl.	.00	84	N	Cl.	.00	80	Nw	Cl.	.00	76	W	Cl.	.00	88	SE	Cl.	.00	67	W	Fr.	.00	76	SW	Cl.	.00	66	SW	Fr.
Saturday.....	.00	74	Nw	Cl.	.00	58	N	Fr.	.00	88	W	Fr.	.00	90	SE	Cl.	.00	83	SW	Cl.	.00	88	W	Cl.	.00	61	S	Cy.	.00	76	SW	Cl.	.00	66	Nw	Cl.
Sunday.....	.00	78	Nw	Cl.	.00	58	N	Fr.	.04	74	S	Fr.	.00	68	SW	Cy.	.00	62	W	Cy.	.00	80	SW	Cl.	.00	64	W	Cl.	.00	76	SW	Cl.	.00	66	Nw	Fr.
Monday.....	.00	76	Nw	Cl.	.02	54	W	Cy.	.06	78	S	Cy.	.00	72	SW	Cl.	.00	57	W	Cy.	.00	78	N	Cl.	.00	63	W	Cl.	.00	74	W	Cl.	.00	64	N	Cl.
Tuesday.....	.00	80	NE	Cl.	.18	54	W	Cy.	.12	58	S	Ry.	.00	66	SW	Fr.	.03	60	W	Cy.	.T	70	Nw	Fr.	.00	56	N	Cy.	.00	66	SE	Cy.	.00	64	Nw	Cy.
Wednesday.....	.00	72	Nw	Cl.	.00	56	N	Cy.	.02	76	N	Cl.	.00	70	Nw	Cl.	.00	60	W	Cy.	.00	72	W	Cl.	.00	65	W	Cl.	.00	70	S	Cy.	.00	64	W	Cl.
Total.....	.03				.2				.24				.00				.03				.T				.00				.00				.00			

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Our New Catalogue for 1888, mailed free on application, contains description and price of Vegetable, Flower, Grass, Clover, Tree and Field Seeds; Australian Tree and Shrub Seeds; native California Tree and Flower Seeds, Fruit Trees, and many new novelties introduced in Europe and the United States.

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BEST TREE WASH.

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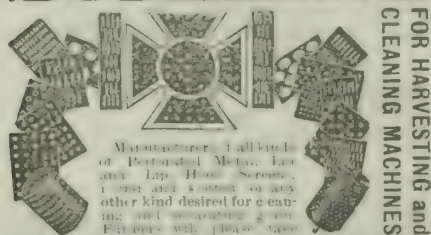
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ADRIATIC and SAN PEDRO FIGS.

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Stockton, Cal.

BERMUDA GRASS SEED.

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TRUMBULL & BEEBE, SEEDSMEN and 419 & 421 Sansome St., S. F.

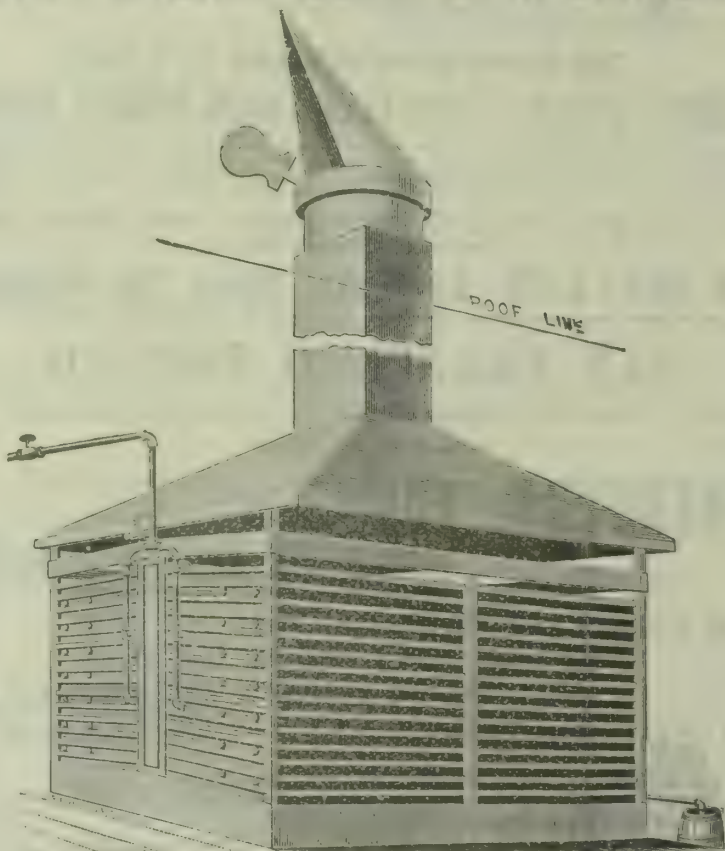
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SAN FRANCISCO, CAL.
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Reserved Fund.....40,000
Dividends paid to Stockholders.....515,620

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I. C. STEELE.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

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A. MONTELLIER, Manager.

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San Francisco Agency, JAMES LINFORTH
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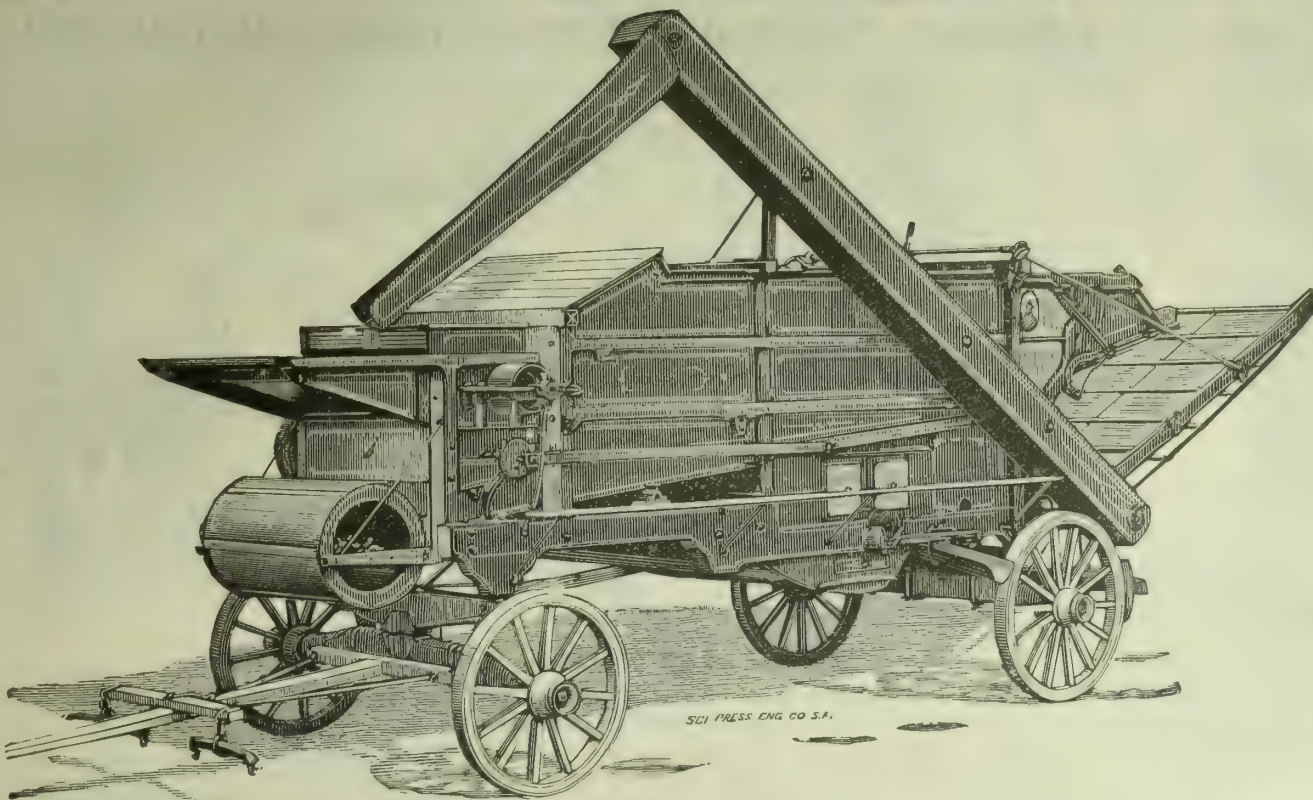
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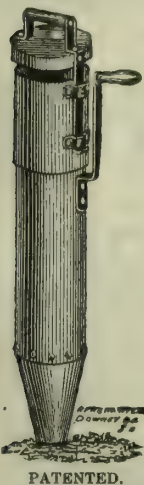
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Every Can Warranted.This Poison has been on the market less than two years, yet in
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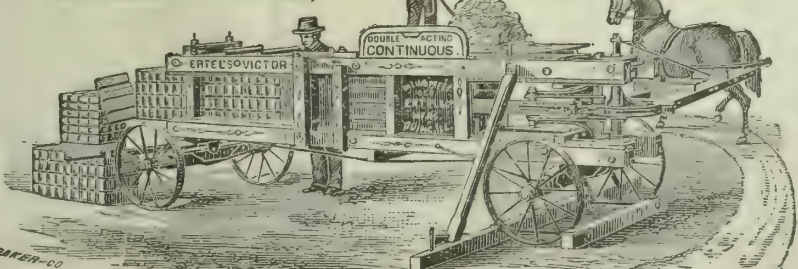
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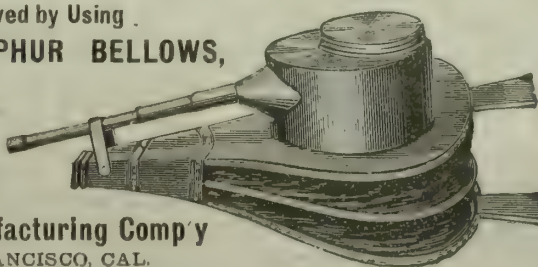
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HAY PRESSES!



THE HURRICANE—Size A.

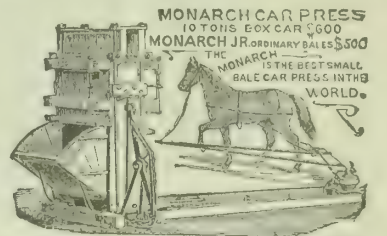
A mounted, horizontal double-ender. Size of bale,
when in the press, 17x22 40 inches. Average weight of
bale, 220 pounds. Capacity, from 16 to 25 tons per day.
Uses 4 men and works with 2 horses. Requires no
TRAMPING. Puts 10 tons or over in a box car.

Price.....\$1000.

THE HURRICANE—Size B.

Size of bale in press, 22x24x46 inches. Average
weight of bale, 260 pounds. Capacity, from 20 to 35
tons per day. Uses 5 men and works with 1 or 2 horses,
at option of baler. Requires no TRAMPING. Uses rope
or wire. Puts from 7 to 8 tons in box in a box car.

Price.....\$1000.



The SELF-TRAMPING JUNIOR MONARCH

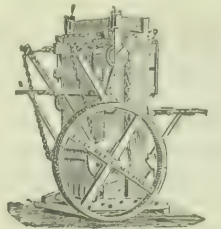
Size of bale in press, 22x24x46 inches. Average
weight of bales, 260 pounds. Capacity, from 15 to 25
tons per day. Uses 3 or 4 men, at option of baler.
Works with 1 or 2 horses. Uses rope or wire. Does its
OWN TRAMPING. Puts from 7 to 8 tons in a box car.

Price.....\$500.

THE MONARCH.

Same principle as Junior Monarch, only smaller and
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Average weight of bale, 220 pounds. Capacity, from 12
to 20 tons per day. Requires 3 men and 2 horses. Uses
wire only—rope will not hold. Does its own TRAMP-
ING. Puts 10 tons or over in a box car.

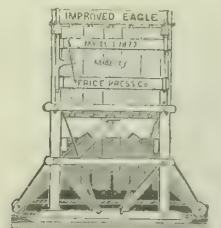
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Size of bale in press, 24x24x50 inches. Average
weight of bale, 250 pounds. Capacity, from 10 to 18
tons per day. Requires 4 men and 2 horses. Uses rope
or wire. Hay has to be tramped into the press. Puts
from 5 to 6 1/2 tons in a box car.

Price.....\$350.



THE IMPROVED EAGLE.

Size of bale in press, 26x26x50 inches. Average
weight of bale, 235 pounds. Capacity, from 10 to 15
tons per day. Requires 4 men and 2 horses. Uses rope
or wire. Hay must be tramped in the press. Puts from
4 1/2 to 5 1/2 tons in a box car.

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The above is the finest line of Baling Presses in the
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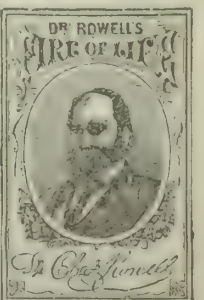
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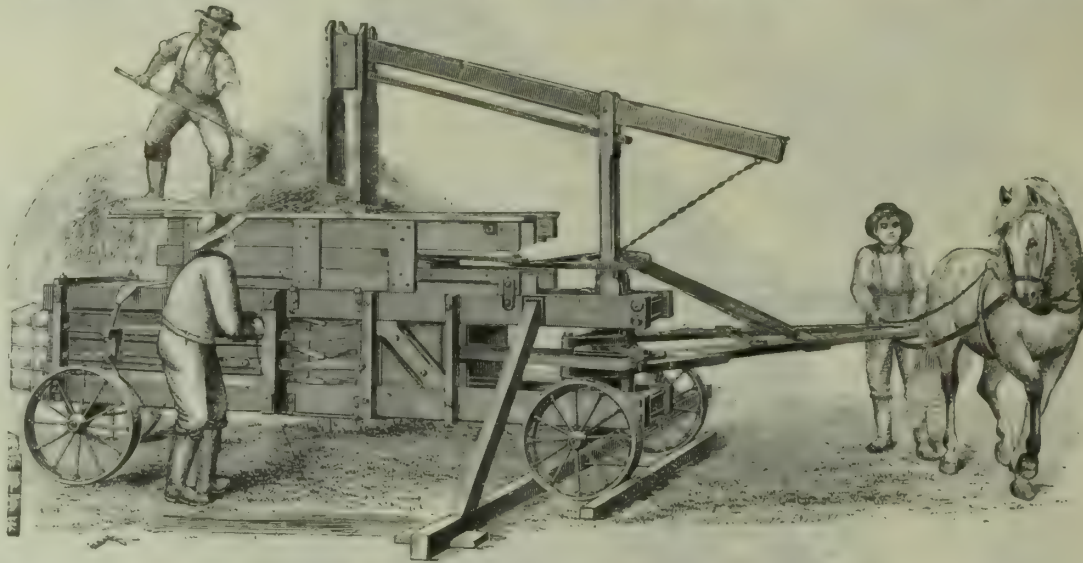
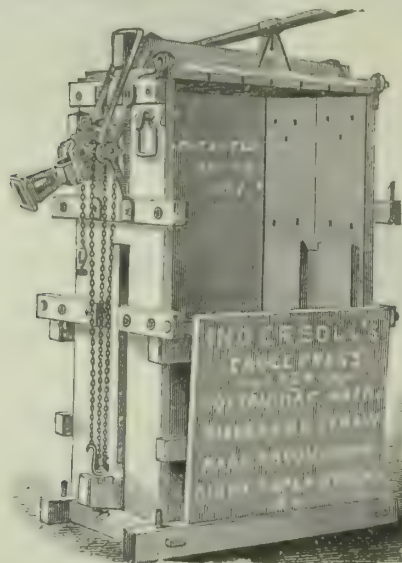
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Market St.,
SAN FRANCISCO.**HAWLEY BROTHERS HARDWARE CO.**

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INGERSOLL'S HAND PRESS.**DEDERICK'S TOP-FEED REVERSIBLE LEVER PERPETUAL PRESS**

During many years' experience in the sale of presses, we are fully convinced that the INGERSOLL PRESSES will be found to have overcome the great objections heretofore existing against hand power presses. They combine a quick, convenient, and effectual working power, and everything liable to break has been done away with. With a double ratchet wheel combined with a chain pulley and loose sheaves, a TWO, THREE, or FOUR FOLD lifting chain power is obtained, which, when acted on by only ONE PERSON with a light lever of only 5 or 6 feet long, will exert a force on a bale reducing it to SMALLER dimensions than has heretofore been accomplished.

No. 1.—Size of Bale, 46x25x24; Weight of Bale, 200 pounds; Weight of Press, 850 pounds; Price, \$125.

No. 2.—Size of Bale, 49x27x28; Weight of Bale, 300 pounds; Weight of Press, 1500 pounds; Price, \$175.

IMPROVED FOR 1888.

Price of Reversible Power Perpetual Press (17x22, Variable Length. Mounted on Truck, Weight, 4700 pounds), \$450.

These Presses may be operated by either one or two horses, and they press two sections to each half-turn and reverse of the horse, which is twice as fast as any other Press, operating half-turn and reverse; with all other Presses the horse must turn about to draw the power back, besides having to stop to bind and remove the bale, whereas our Reversible is our Patent Continuous Press without stopping to bind or remove the bale, and the power is reversed by the reaction of the pressed material, which method is secured to us by patent, hence the movement of the horse either way presses a section of a bale. Reversing the horse requires a driver, but gives satisfaction. The Press is otherwise the Perpetual or Continuous Press, with open feed orifice, screen bottom and all improvements. By a late improvement we have doubled the power of this Press; one horse will now do the work on it that two will do on Presses made in 1881, and we have also adapted and added our Patent Condensing Hopper, by means of which it may be fed with much greater ease and rapidity, as it is hard and disagreeable work to feed hay in its loose state into any Press without the aid of our Condensing Hopper.

For Further Information, Address

HAWLEY BROTHERS HARDWARE COMPANY, San Francisco, Cal.

One of these Stackers, with two Rakes, will
Stack 50 Tons a Day; with four
Rakes, 100 Tons a Day.

"ECLIPSE" HAY STACKERS AND LOADERS AND "ACME" RAKES,

MANUFACTURED UNDER THE "ACME" AND OLIVER PATENTS

—BY—

**Byron
Jackson**

SAN FRANCISCO,
CAL.



Jackson's Improved "Eclipse" Stacker and Loader. \$100.

With the rakes the hay is taken from the swath, when cured, just as left by the mower, or from the cock or windrow, if it is desired to rake it before it is cured sufficiently to stack; and when the Rake is loaded it is driven to the Stacker, the rake-teeth entering between the pitcher-teeth; the hay is pressed forward against the pitcher-head, the horses then back the Rake off, leaving the hay in a compact mass upon the pitcher, and return to the field for another load. As soon as the Rake is out of the way, the horse attached to the pitcher rope is started, elevating the load the desired height, when the latch-rope is pulled, and the hay is dropped in the center of the stack, the horse is backed up, the pitcher being brought back to the ground by its own weight, ready for another load.

I have adopted the "ECLIPSE" as my standard Stacker and Loader. I mount it on wheels, which are not shown in the picture. It builds stacks 30 feet high, and the load may be "tripped" at any point, after the horse is started, varying with height of stack, or of load on wagon. This feature is peculiar to the "ECLIPSE," and of great importance, enabling the farmer to stack hay in the windiest weather, as it does not carry all the hay up over itself, regardless of height of stack, but dumps it just where wanted, and the hay, while being elevated, is held so that the wind cannot scatter it.

It is light, yet strong enough to lift the heaviest rake load; easily and quickly moved; requires but one stake.
Weight, 1500 pounds. Price, \$100.

WRITE FOR CATALOGUE.

Jackson's Improved "No. 3" "Acme" Rake and Buck Combined. \$50.

Does the work of all other Hay or Horse Rakes, viz., wire rakes, sulky rakes, revolving rakes, buck rakes and "go-devils." It rakes from the swath, and leaves the hay in large bunches at once, requiring no hand-work. One man and two horses will keep up with two mowers, following the mower as soon as the hay is wilted enough to be raked clean with any rake. It rakes clean. The hay will cure quicker without bleaching by dew or sun. Very large bunches can be made by pushing two or more rakes into one.

If raked and bunched by my Improved "Acme" Rake, the hay is in very much better shape to reload and deliver on the Stacker evenly and level (loading the rakes all they will carry to the stack), and spreads well over the stack, saving labor in stacking, because it has not been tangled, as it is when gathered with the sulky or revolving rake. It also saves waste of leaves and seeds, and gathers the hay clean of trash, such as old stubble, stalks and lumps of dirt. Bear in mind that wind-rowing hay with any rake is labor thrown away, and is detrimental to the neat and most economical working of the "ECLIPSE" Hay Harvesting Machinery.

These rakes, as offered for this season, are an improvement over all others. They have HIGH WHEELS (34-inch), with WIDE TIRES (4-inch) (not shown in the cut), and the patented ratchet-lever device, which enables the driver to EASILY raise the heaviest load.

Weight, 650 pounds. Price, \$50.

WRITE FOR CATALOGUE.

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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XXXV.—No. 21.

SAN FRANCISCO, SATURDAY, MAY 26, 1888.

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Secretary of Agriculture.

In the U. S. House of Representatives, May 21st, Hatch of Missouri, from the Committee on Agriculture, moved that the rules be suspended and the bill passed to enlarge the powers and duties of the Department of Agriculture, and to create an executive department to be known as the Department of Agriculture. After a brief discussion the motion to suspend the rules and pass the bill was agreed to—ayes, 233, noes, 13. It creates an executive department to be known as the Department of Agriculture, under the supervision and control of the Secretary of Agriculture, and provides for the appointment of a First Assistant Secretary of Agriculture. It also transfers the weather service of the United States Signal Office Bureau from the War Department to the Department of Agriculture.

The elevation of the Department of Agriculture to a leading place and giving its chief officer a place in the cabinet of the President has been long asked for by the Grange Order and other organizations. Opposed to this is the idea, which was advanced by Prof. Hilgard a few years ago, that it should rather be elevated into a position like that of the Coast and Geodetic Survey, or other learned institutions of the Government, and should thus be freed from change and disturbance, which is likely to follow a change in administration at Washington. Col. Colman, the present Commissioner, in his address before the National Grange last fall took ground in favor of lifting the Department of Agriculture above political control. The passage of the bill by the House of Representatives, as noted above, shows that the political elevation of the Department is the more popular proceeding.

THE NEWCASTLE APRICOT.—We have received a sample of this new California seedling apricot from its originators, C. M. Silva & Son of Newcastle, Placer county. We gave an engraving and description of the Newcastle in the RURAL of November 26, 1887. The fruit received justifies all we said of the fruit from samples sent us last summer. We would especially emphasize the rich flavor of the variety, which we conceive to be one of its chief values, notably so when considered in connection with its earliness. Silva & Son write us that they picked soft-ripe Newcastles on May 11th, which was quite as early as the Pringle with them. As for

size, they report it good as the Royals growing near by. The tree so far shows great health and vigor and freedom from gum disease, and its regular bearing hitherto is emphasized by the fact that it has a full crop this

year, when every other variety in the neighborhood is more or less of a failure. The Newcastle has been tested in distant shipment and has carried perfectly. Silva & Son report that they sold all the year old trees they had last winter.

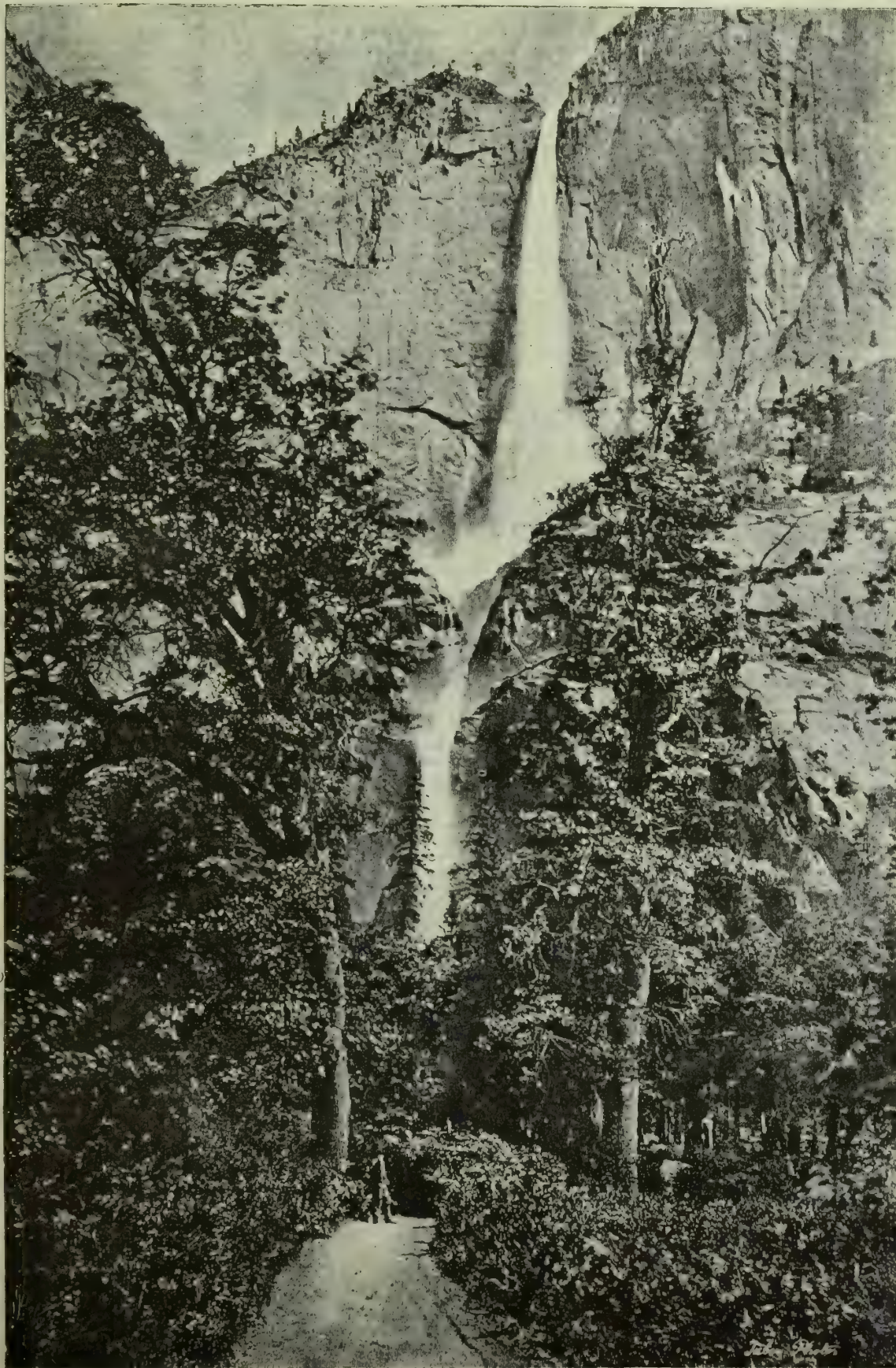
the fleeting population of the valley. Our Eastern tourists and teachers who have gazed in awe upon the sublimity of Niagara, should not fail to visit Yosemite—not to do so would be the play of Hamlet with Hamlet left out.

In the Yosemite.

As the outing season rolls around, the thought naturally turns to the Yosemite, which still holds its place as the greatest single piece of natural scenery in California. It is true that as railways extend and multiply new masterworks of natural forces are made accessible, and our vacationists are scattered over a greater area, but there are always enough tending toward the great valley to fill its hostleries during the open season. The new State hotel, the Stoneman house, is also an attraction as well as a convenience, and this large structure, with the added improvements in the way of roads, trails, bridges, etc., are an inducement to revisit the valley. Recent publications in text and picture concerning the glaciers and lofty peaks of the high Sierra back of the valley will also have an effect to make the venturesome dissatisfied with the old charms and lead them to farther explorations. In all these ways the Yosemite becomes ever new.

The central figure of this group of wonders is of course the great Yosemite Fall itself; a view of which is given in the engraving on this page. The upper one is 1700 feet, and the lower one 400, with the distance of half a mile, and a descent of 626 feet in a series of small cascades, which are not visible from the valley between them. The falls are made by Yosemite creek, which is fed by the melting snow on the southern slope of Mt. Hoffman, two miles away. The stream is usually 30 feet wide and 10 feet deep, with a speed of a mile an hour, about the middle of June; but its size is variable, depending upon the stock of snow and quantity of heat. A hot day, when the snow is abundant, makes a very perceptible difference in the volume of the cascade. It is the loftiest waterfall known on the face of the earth. It awes the beholder into silence. Gracefully awaying from side to side in rhythmical vibrations, swelling into grandeur in earlier spring, and shrinking into beauty under the ardency of summer heats, towering above all the cataracts, calmly abides this undisputed Monarch of the World's Marvels.

The coming of the 10,000 Eastern teachers to California this summer should largely increase



YOSEMITE FALLS—Photoplate Facsimile.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

From Northeastern Kern Into Inyo.

EDITORS PRESS:—The country along the south fork of Kern river is now in a most flourishing condition. What was a barren desert only a few years ago is now a most delightful valley studded with farms and ranches with their herds of cattle and stock. Ditches have been constructed everywhere, and in many cases there are as many as five of them running parallel, conveying water to land below. Fruits of all kinds flourish wherever planted and grass is abundant.

Near Weldon there is one field of not less than 1500 acres in extent, all in alfalfa, which gives three crops per year and keeps stock innumerable. This belongs to a Mr. Brown.

Continuing up the valley and through the pass we find amid the Sierras hundreds of thousands of acres of what is termed "desert land"—extending through Kern, San Bernardino and Inyo counties, and all lying below Owens lake—which is of the richest and most fertile description. All it requires to make it among the most valuable in the State is water. It will not be 10 years before this so-called "desert" will be dotted with homes, and instead of land being worth only \$1.50 per acre, it will readily bring \$30 to \$50 per acre. The problem can be easily and quickly solved by artesian wells.

At Little Lake a young man has settled and taken up 160 acres for a stock ranch. He has about 100 head of cattle which do well summer and winter. He is constantly making improvements and will shortly have up houses and barns, sufficient to make comfortable any who travel over the road.

At the foot of Owens lake, and 16 miles below the town of Keeler, is the ranch of P. Walker, showing what a little cultivation will do. Entering the garden we find roses, pansies, snow-balls, and various other flowers in perfection of bloom; while of fruit-trees there are apples, pears, cherries, plums, etc., all doing remarkably well. The old gentleman is also trying oranges, which he thinks will flourish.

Arizona Notes.

EDITORS PRESS:—Confidence that the fierce Apache is at last under control, is manifest by Eastern people coming to view the land for which he contended till the very last.

Salt River valley has come rapidly to the front since Geronimo found his abode on the promontory of Florida.

Salt river bids fair to again be under the control of the hand of man, and her waters, instead of rushing madly down to the gulf, be again restrained by reservoirs, canals and ditches, and cause cities and villages to again dot this valley, as they did in the day when Nineveh was in her glory, and Babylon builded her immense walls and engineered her immense aqueducts. Notwithstanding the people who formerly dwelt in this valley lived in a day when metals were unknown, we will yet have to learn of the footprints left on the sands of time of their skill as engineers and builders.

Our crops are good, universally. Haying began on many farms April 23. Several headers go to work on barley crops on Monday, May 14th. The first crop of alfalfa hay is in the stack.

By personal observation here and correspondence with my friends in Vacaville, Solano county, California, I propose to compare the ripening of the standard classes of the apricot as to date of maturing and size and quality, and other points of value pro and con for the benefit of the readers of the RURAL. I tried this task last year, but as I did not get evidence enough to warrant a conclusion, I postponed until another crop. This much I settled last season: Fruits of any kind have more sugar here than in California. I hope my conclusions on the apricot will not get such a troop of land agents firing into me as was my fate in 1873, when, through the columns of the RURAL, I wrote up Southern California as a semi-tropical region as compared with regions (protected nooks) north of San Francisco. I had no axe to grind then, neither have I now. I am ever a friend to the PACIFIC RURAL PRESS and of the rural people.

Tempe, Arizona.

GEO. KAY MILLER.

The Colorado and Gila Valleys.

EDITORS PRESS:—In view of the intense interest which almost every section of the Pacific Coast is attracting on account of the advantages which each district presents to settlers, a few facts regarding the Colorado and Gila valleys may prove readable to many of your patrons. A large portion of the above-named valleys lies in Yuma county, the Gila river intersecting with the Colorado at Yuma City and forming a large amount of rich and productive land in the vicinity. The Southern Pacific railroad crosses the Colorado at Yuma, and, extending eastward, follows the edge of Gila valley for a number of miles, but the car window view gives the traveler a very imperfect idea of the extent and character of the arable soil

along the river. The general character has been described, as for the most part, a deep, sedimentary soil of brownish, gray, sandy loam, resting, in most places, upon a clay subsoil at a depth of from 10 to 20 feet below the surface. The clay subsoil forms a hardpan which is impervious to water. These soils have been slowly formed by the decomposition of shales, sandstones, marls, limestones, etc., mixed with organic and vegetable matter, washed down by the mighty waters, and have been gradually deposited during the course of centuries.

This soil with the use of water is capable of producing a large variety of fruits and vegetables, and two crops of the same each year. All the cereals grow to perfection here. There is yet a large amount of good land in this region, subject to entry under the various land acts of the United States, and a still larger percent filed upon with title unperfected, much of which can be bought on reasonable terms from claimants. There is here the best opportunity that the writer knows of for men of moderate means to get a home where exist a combination of excellent soil, good water and plenty of it, mild and salubrious climate, good shipping facilities and a most prosperous outlook. Well water is obtained in these two valleys within a depth of from 10 to 20 feet. There is considerable wood suitable for fuel and other purposes. The principal varieties are cottonwood and mesquite. Besides the S. P. R. R. the Colorado river affords navigation for several hundred miles for eight months in the year. The steamer now plies monthly between here and the Needles, a distance of 280 miles.

A large number of enterprises are in progress to irrigate the various sections of the Gila valley, many of which have been just started this year. Most of the ditch companies sell water rights to the owners of land along their canals for a stipulated sum, and agree therein to supply water usually at from \$1.25 to \$2 per acre for each year.

An important advantage which the settler of this region has over that of almost any other section of the United States is the earliness of the maturity of crops. All kinds of fruits ripen at least a month in advance of the coast and southern counties of California, giving the producer a monopoly of the best markets, either east or west.

The Yuma Indians, of which there are about 600, have a reservation set off for them on the west or California side of the Colorado. They are a peaceable people, and are known to work quite well by spells when they can get the employment that they wish. It is said that it never gets too hot here for a Yuma, though the mercury for about three months of the year often ranges as high as 110° to 120° in the shade. However, a case of sunstroke is said to be a thing unknown to the oldest inhabitant. Usually a breeze springs up during the day, and this, taken together with the fact that the air is so dry and perspiration so free, accounts for the fact that the heat does not bear oppressively upon the animal kingdom.

The Government maintains a school here for Indian youths, which is under the management of the Roman Catholic church. One of the peculiar features of interest here is the old Government fort now abandoned by the troops and occupied by the Catholics for their Indian school. The territorial penitentiary is located here with over 100 inmates. The building is a substantial edifice. Yuma contains about 1000 population, a large per cent of whom are Mexicans.

There is much reason to predict a brilliant future for this locality, being situated at the junction of the two largest rivers in the southwest, along which may be found such vast tracts of arable lands, all of which must in the very nature of things soon be occupied by people whose products will demand an outlet by additional railways. The road already projected from this point to San Diego, and which will soon be constructed, will give an almost incalculable impetus to trade and the substantial improvement of the country.

T. B. L.

THE STOCK YARD.

Wild Cattle.

A strange breed of wild cattle is found in the high hills skirting the Umpqua valley. In the mountains, near Riddle and Rosebud, they are probably most plentiful, but they do not venture down in the valley much. They stay on the hills and get water from the living springs which rise there. For the most part they are concealed in the dense growth of oak and fir in these mountains. There is heavy underbrush, too, so that it is a hard matter to get them. They go in bands of six or eight usually, but at night a herd of 40 or 50 get together and lie down in the same yard—that is, they sleep in the same spot, which is usually secluded among the trees.

A band of wild cattle have been known to get together on a cleared place like this every night for a couple of years. When feeding there are always a few bulls to act as sentinels. While the cattle graze in bands of half a dozen or so, they are, nevertheless, close to other bands, so that at an alarm from any one of the bulls, which leisurely feed on higher ground, they all run away together. The cattle are of all colors, and wilder than deer. It is a hard matter to

get a shot at them, for the reason that their scent is so keen.

They can smell a man a long distance off. They got wild in 1853, when the old man Riddle and two or three others of the first settlers came to the valley. Their cow wandered off and could not be found. After two or three years all the pioneers had to do when they wanted beef was to rig out two or three pack animals and go up into the mountains. The cattle had to be killed on sight, the same as deer and bear, for they could no more be driven down than deer could. Once killed, they were quartered, packed on horses and carried down.

They have been hunted a good deal of late years, so that there are not as many as there used to be. A peculiarity about these cattle is that their eyes and horns are jet black. The retina, iris and the whole apple of the eye are one mass of black. You can't distinguish any difference in any part of it. The horns, too, while being black as ink, are long and sharp. Brought to bay, the Oregon wild cattle are wicked fighters.—Oregonian.

The Nevada Cattle.

A correspondent of the Reno Gazette, writing from Elko, gives the following interesting account of the condition of the cattle interest in Eastern Nevada:

April has always been considered a trying month upon stock, even if it be as pleasant as the past one has proved to be in this locality. Old cows that have reached from 12 to 14 years of age, and young heifers with their first calves reach, during this month of each year, a crisis of depletion of strength and vitality, and their loss is often great during the calving and early suckling period—say from the middle of March to the first of May. This period is also a critical one with other kinds of stock, particularly sheep, as it embraces the lambing period. So far as any information extends from inquiry and interviews with stockmen or from foremen of their several bands, I find that stock that has wintered south of the railroad in Southern Elko and Northern White Pine counties, taken as a whole, is satisfactory to the holders, all things being considered. The percentage of loss among small holders is much less than was anticipated the latter part of last winter, and for the very good reason that this class of stockmen seem to have been better prepared with hay and shelter, and were so situated as to be able to give their stock a personal supervision during the inclement season. I learn from inquiry that the greatest mortality during the present spring has been among the stock that were fed and sheltered up to the first and middle of March and then turned out to provide for themselves. The regular range stock seems to have passed through not only the winter but April and March in better condition and with less loss than those fed and sheltered to early spring. Experience of past few winters have clearly proven one fact, and that is, if you commence to feed your stock you must continue to do so through the entire winter and including the month of April, unless your locality be visited with a very early and favorable spring.

I am informed by the foreman of Scott & Co. that their several large bands in Southern Idaho and Northern Utah, with a bunch in Montana, have wintered well and passed through the spring ordeal in fine condition. Their loss among the several immense bands will hardly reach the usual average, and the crop of calves will be large. But the firm have not been so fortunate with a bunch of some 3000 head that have been wintered in the vicinity of their home ranch, some ten miles southeast from Halleck station, notwithstanding every care was taken and every precautionary means adopted in the way of feeding and sheltering all of the stock that seemed to need assistance. The foreman, M. L. Polk, and his able lieutenant, Mr. Griswold, with their crew of cowboys, were in their saddles almost night and day, including Sundays, riding over their range gathering up such stock as needed feed and care, yet the loss has been considerable over the average. The greatest mortality occurred during the latter part of March and during the month of April.

All stockmen of Eastern Nevada whose winter ranges are situated along the line of the Humboldt river (say from Deeth, Elko county, to Battle Mountain, Lander county) have experienced a greater death rate among their cattle than in any other portion of Eastern Nevada, which has been chiefly caused from two facts that existed in that locality and that does not exist in other sections of the State of the same altitude and latitude, namely, the thermometer fell from 12 to 15 degrees lower along the line of the river than among the neighboring rolling hills and plateaus, whose general heights above the river are from 300 to 500 feet, and in some instances 1000 feet or more. Another reason is the winter ranges along the river were pastured bare and in some places barren of anything like grass or vegetation by early fall, and hence great distress must follow such a condition of things, especially when the winter was so unusually severe. However, when you leave the river either north or southward you will find the weather several degrees milder and the ranges in better feed condition.

I am informed by Myers Brothers, of Ruby valley, that, notwithstanding they have fed more hay during the past winter and the pres-

ent spring, and have taken greater care of their stock, they will, nevertheless, sustain a heavy loss, the major portion of it occurring in March and April, for the reason they turned their cattle out in early March in consequence of their hay being exhausted.

John Wright and Colonel J. B. Moore, both heavy holders, will also lose heavily, both on the general winter range and among the large bunches retained at the home ranch and fed as long as their stock of hay lasted—you have not only to feed your stock through the entire winter, but as late as the middle of April or the first of May. When stockmen are prepared to do this their losses will be insignificant. The same state of facts is also true in a more or less degree to other stockmen in Ruby valley, including Thomas Short, who is a large holder of stock; Ira D. Wines, Fred. Butch; John Hawkins and Hardson & Son, in Newark valley, White Pine county; Mr. Conover and Mr. Sharp, with others in that valley who have large interests in stock.

Our sheep interest has fared little or no better throughout northern White Pine and southern Elko counties, excepting E. C. Hardy, who is one of the largest sheep-raisers in eastern Nevada, and has a finely situated range, hence his meager loss during the past winter and spring.

I am informed by Assemblyman Griswold, who resides in Ruby valley, that the cattle belonging to Griswold Brothers have done exceedingly well during the past winter and present spring, which is owing to the fact that they had sufficient hay to feed them up to about the first of May, but they are fearful that their loss of brood mares will be unprecedented. They turned out last fall upon their old winter range 103 mares in good condition, but up to the present time they have been unable to find but 50 head. They have scoured the range from one end to the other, as well as other neighboring localities, for the past month or more, and 50 is all they have been able to round up. They, however, still entertain hopes of finding more during the general round-up in June and July. The loss sustained thus far by these brothers is over 50 per cent, something unheard of in the history of stock-raising.

AGRICULTURAL SCIENCE.

Anti-Fungoid Prescriptions.

F. Lamson Scribner, vegetable pathologist of the U. S. Department of Agriculture has just prepared a circular concerning remedies to employ against fungoid diseases of plants, from which we condense as follows:

In applying the remedies we must consider the period and manner of the attack made by the parasite and the manner of action of the substance applied. Fungi living within the tissues of the host must be prevented from gaining an entrance to these tissues; fungi which live upon the surface of plants or having their bodies soon exposed through the breaking up of the epidermis, like the apple-scab fungi or the fungus of bird's-eye rot of grapes may be treated by curative methods. The compounds having sulphate of copper for a base are, so far as we know to-day, the best preventative remedies; sulphur, sulphur and lime, sulphide of potassium, hypsulphite of soda, are to be classed as curatives.

Destructive treatments are available between the periods of vegetation (winter season), and consist in destroying all infectious material and in washing the plants to be protected with strong caustic solutions, e. g., solutions of sulphate of iron or copper and sulphuric acid.

During the growing season the strength of the solution used is governed by the power of the green tissues to resist their action. In the early part of the season while the shoots and leaves are yet tender, weaker solutions than those which may safely be applied later in the season must be employed. There is great diversity of susceptibility to the caustic action of the remedies between different species of plants and even between different varieties of the same species. The conditions of the weather at the time the applications are made may be of importance in this connection. Sulphur alone, applied when the weather is very hot and the sun bright, may cause a burning of the foliage. The same is true of sulphatine and also of eau de ciste.

Explicit directions cannot be given for these cases. Much has yet to be learned by experiment, and each one must exercise judgment and govern himself by surrounding circumstances.

Avoid making the applications excessive; do not drench the plants with the fluids nor plaster them with the powders. With a suitable spraying apparatus, which projects a fine, mist-like spray, merely wet the plant surfaces, and employ bellows which will discharge the powder evenly and in such a manner that the plants may be enveloped in a cloud of dust, which, settling upon all parts, becomes just preceptible.

Liquids.

1. Simple solution of sulphate of copper.—Dissolve one pound of pure sulphate of copper in 25 gallons of water. For treatment of downy mildew and oidium of the vine. For treatment of downy mildew and black-rot of the grape.

2. Simple solution of sulphate of copper.—

Simple solution in water, 5 to 8 pounds to 10 gallons. For soaking grains previous to sowing to destroy the spores of smuts.

3. Copper mixture of Gironde, Bordeaux mixture—original formula.—Dissolve 16 pounds of sulphate of copper in 22 gallons of water; in another vessel slake 30 pounds of lime in 6 gallons of water. When the latter mixture has cooled it is slowly poured into the copper solution, care being taken to mix the fluids thoroughly by constant stirring. It is well to have this compound prepared some days before it is required for use. It should be well stirred before applying. Numerous modifications in the preparation of this compound have been suggested, chiefly for the purpose of reducing the amount of copper. A solution containing the ingredients in the following proportions has been recommended for general use: Sulphate of copper, 4 pounds; lime, 4 pounds; water, 22 gallons.

The copper is dissolved in 16 gallons of water, while the lime is slaked in 6 gallons. When cool the solutions are mixed as described above. For treatment of mildew. For downy mildew and black-rot of the grape. For blight and rot of the tomato and potato.

4. Eau Celeste, Audouard process.—Dissolve one pound of sulphate of copper in two gallons of hot water; when completely dissolved and the water has cooled, add 1½ pints of commercial ammonia (strength 22° Baume); when ready for use, dilute to 22 gallons. The concentrated liquid should be kept in a keg or some wooden, earthen or glass vessel. For downy mildew. For treatment of mildew and black rot of the grape. For treatment of mildew and anthracnose. For blight and rot of the tomato and potato. For apple scab.

5. Eau Celeste, modified formula.—Sulphate of copper, 2 pounds; carbonate of soda, 2½ pounds; ammonia (22° Baume), 1½ pints; water, 22 gallons. Dissolve the sulphate of copper in two gallons of hot water; in another vessel dissolve the carbonate of soda in a similar manner; mix the two solutions, and when all chemical reaction has ceased add the ammonia; then dilute to 22 gallons.

6. Solution of ammoniacal carbonate of copper.—Prepared as follows: In a vessel having a capacity of two quarts or more pour one quart of ammonia (strength 22° Baume), add 3 ounces carbonate of copper, stir rapidly for a moment and the carbonate of copper will dissolve in the ammonia, forming a very clear liquid. The concentrated liquid thus prepared may be kept indefinitely. For use, dilute to 22 gallons. For peronospora of the vine.

7. Sulphate of iron.—Simple solution in water 4 to 8 pounds to the gallon, to be used only as a wash. For anthracnose.

8. Chloride of iron.—According to *Nature* (vol. xxxvii) a very dilute solution of the above-named substance has been used with success in combating the coffee disease due to *Hemileia vastatrix*. This fungus is a member of the group *Uredineae* (rusts), and it is said that the chloride of iron not only cures the disease, but also prevents its recurrence. The solution is applied to the under surface of the leaves by means of a pulverizer or spraying apparatus. Its sticky nature causes it to adhere for two months.

9. Shawinski's sulphate of iron and sulphuric acid solution.—Sulphate of iron, 110 pounds; sulphuric acid (53°), 1½ pints; warm water, 22 gallons.

"In order to avoid sputtering it is necessary to be very careful in pouring the sulphuric acid upon the crystals of iron sulphate, and not to add the warm water until after this operation. Besides, it is best to use sulphuric acid of only 53° Baume, because it is less dangerous to handle. I am careful to use this mixture the same day and while warm, for when it becomes cold the sulphate of iron crystallizes and the solution has no longer the strength necessary in order to be efficacious."

10. Sulphide of potassium, liver of sulphur.—Simple solution in water, 1 to 1 ounce to the gallon. Dissolve the sulphate of copper in 2 gallons of hot water; in another vessel dissolve the carbonate of soda in a similar manner; mix the two solutions, and when all chemical reaction has ceased add the ammonia; then dilute to 22 gallons.

11. Solution of hyposulphite of soda.—Simple solution made by dissolving 1 pound of the soda in 10 gallons of water. Must be used as soon as prepared. For apple scab. For celery-leaf blight. For orange-leaf scab.

12. Liquid Grison. Eau Grison.—Prepared by boiling 3 pounds each of flowers of sulphur and lime in 6 gallons of water until reduced to 2 gallons; when settled pour off the clear liquid and bottle it. When used, mix 1 part of the clear liquid in 100 parts water. For mildew on grape vines. For powdery mildew of the vine.

13. Milk of lime.—Simple solution in water, 2 to 6 parts lime to 100 parts of water. For peronospora of the vine. For anthracnose.

14. Phenic acid. Carbolic acid.—Simple solution in water one-half pint to 10 gallons. For powdery mildew of the vine.

15. Phenic acid in solution diluted with soap-suds and glycerine.—Soap-suds, 10 gallons; glycerine, 1 pound; carbolic acid, one-half pint; mix thoroughly to form an emulsion. For orange-leaf scab.

Powders.

16. Sulphur.—For grape mildew. For powdery mildew of the vine.

17. Sulphur and lime.—A mixture of sulphur and lime in equal parts by weight. A treatment of anthracnose during the growing season.

18. Blight powder, Sulphated sulphur.—Prepared by thoroughly mixing from 3 to 8 pounds of anhydrous sulphate of copper with 90 to 100 pounds of flowers of sulphur. For simultaneous treatment of oidium and the downy mildew. For downy mildew of the vine. For tomato and potato blight and rot.

19. Sulphatine, the Esteve process.—Mix 2 pounds of anhydrous sulphate of copper with 20 pounds of flowers of sulphur and 2 pounds of air-slaked lime. The proportions may be varied. For the treatment of mildew. For the treatment of the downy mildew and black rot of the grape. For the treatment of the tomato and potato for blight and rot.

20. Shawinski's powder.—Mix 22 pounds of finely powdered sulphate of copper with 33 pounds of soot or alluvial earth and 165 pounds of coal dust. For simultaneous treatment of oidium and downy mildew of the vine. For treatment of mildew.

21. Sulfosteatite or cuprique steatite.—An exceedingly fine bluish powder composed of steatite or talc, and sulphate of copper, the proportion of the latter substance amounting to about ten per cent. Very easily applied; considered the most adherent of all the powders. For the treatment of mildew (*Peronospora*).

22. David's powder.—Dissolve 4 pounds of sulphate of copper in the least possible amount of hot water, and slake 16 pounds of lime with the smallest quantity of water required. When the copper solution and slaked lime are completely cooled, mix them together thoroughly; let the compound dry in the sun, crush and sift. Apply with a sulphuring blow furnished with an outside receptacle for the powder. The copper coming in contact with the leather will soon destroy it. For downy mildew. For downy mildew and black rot of the grape. For mildew and anthracnose.

23. Podechard's powder.—Air-slaked lime, 225 pounds; sulphate of copper, 45 pounds; flowers of sulphur, 20 pounds; ashes, 30 pounds. Dissolve the sulphate of copper in the water; when thoroughly dissolved, pour the solution upon the lime, which is surrounded by the ashes to keep the liquid from spreading; after 24 hours, add the sulphur, thoroughly mix the compound, ashes and all, and when dry, sift through a sieve with meshes of one-eighth of one inch. This preparation may be made several months before it is required for use. For the downy mildew of the vine. For the treatment of mildew and anthracnose.

HORTICULTURE.

The Philosophy and Value of Fine Tilth.

Gen. N. P. Chipman has prepared another letter for the *Red Bluff Sentinel*, which we reproduce as of the greatest importance to orchardists just at this time, owing to the short season's rainfall:

We are just entering the season for cultivation of our orchards. Any mistake now or failure to appreciate the importance of thorough cultivation may result in the loss of all previous labor and money, and may discourage future effort. I have devoted one number to this subject, but it is not possible to exaggerate its importance or inform ourselves too well of the reasons and necessity for thorough cultivation. I am led to renew the discussion because of requests sent me for a more full statement of the theory and reasons; and also because I have observed some published theories that, to my mind, are misleading. In the *Cottonwood Index* of April 12th, I find the following:

"Theory of Cultivation.

The true secret of the value of cultivation of the soil is to keep any crust from forming, either at or beneath the surface. The existence of this crust does not induce evaporation, but it prevents the soil from absorbing the moisture from the air. The crust acts as a non-conductor of moisture, the capillaries all being closed by the dirt having run together and hardened. Break the crust (or never let it form in better), and the ground acts as a sponge, absorbing, especially at night, an immense amount of moisture from the air by capillary attraction. So we find the true object and purpose of cultivation is to keep the pores of the ground open to catch the moisture from the atmosphere. If this is not done the moisture already in the ground gradually sinks but does not evaporate. The crust prevents evaporation, just the same as it prevents absorption, resisting alike the passage of moisture from beneath into the air, and the absorption, by the capillaries of the ground, of the moisture from the air. Therefore, keep the crust from forming in your orchards, vineyards and gardens, if you would keep plenty of moisture in the soil."

We all agree that the crust must be broken. It is, however, a familiar rule that where the reason of the rule ceases the rule itself may be dispensed with. If, therefore, as stated, the crust acts as a non-conductor of moisture, I should think the first thing to do would be to form the crust and carefully preserve it. But to meet this it is said that this non-conductor prevents moisture of the atmosphere from being conveyed to the earth below, and if this source of supply is shut off the moisture already in the ground sinks and the earth becomes dry. Suppose your ground has an impervious substratum of hardpan or cement or compact clay; how can your moisture sink, and if you are fortunate enough to have such ground and can get a crust formed on top, what prevents your

having a perfect reservoir for your roots that will become exhausted only by appropriation of moisture by the tree?

I had always supposed the thing we are after by cultivation is to reduce the conductivity of the soil to the minimum point, and that perfect tilth is that point. We mulch trees to secure a non-conductor of moisture and to hold what we have already in the ground. But how can you have a conductor of moisture from the outside that is not also a conductor of moisture from the inside? If it conducts down it must conduct upwards. If the reason is sound that we cultivate alone to arrest moisture from the atmosphere and convey it into the ground whence it will not pass off only downward by gravitation, then perhaps the theory may be sound, but this, unfortunately, is not true; our moisture mostly escapes in the form of vapor and goes up—not down—and this process of cultivation, to prepare for carrying moisture down must also act to return it at once to the surface and off by evaporation, and we would thus gain nothing if it were not for the law governing this matter, which I will soon state.

The error into which my friend has fallen lies in the reason given. The crust is not a non-conductor, but is in fact the very best of conductors, and it is largely because it is such a conductor that we break it up, although there are other reasons as will appear further on. If you would prove how good this conductor is, fill a tight box with earth and pour water on the earth and let a crust form.

If the theory I am combatting is sound in the illustration just put, the moisture would remain in the box indefinitely because it couldn't pass out. On the contrary, however, the moisture will pass off rapidly and your box of earth will soon be as dry as a bone. Now, if you had stirred the top of the earth in the box and kept the crust from forming, the moisture would have been retained a much longer time. Why do we cultivate irrigated land where we have abundance of water? It is to hold the moisture taken up by the earth, and also to allow the atmosphere to enter the pores of the earth. There is no doubt that moisture is absorbed by the cultivated soil, as the editor says. Besides, cultivated soil will not so readily absorb the heated rays of the sun as will the compact crust, and hence the sun's heat does not penetrate the earth so far, which is a great point. The further the sun's heat penetrates, the more the moisture is vaporized and passed off. Again, cultivation promotes capillary action and tends to bring the moisture from below to the tree and plant roots. It also arrests the passing off of the vaporized water, and thus retains it below the surface. Cultivation adds to the porosity of the soil and permits the circulation of the atmosphere among the particles of the earth, as we have seen, and thus aids plant life, for the atmosphere penetrating the cool earth by means of this condition of porosity, is condensed to some extent and drops its load of moisture much the same as we see it depositing globules of water on the outside of a glass of ice water.

The result of cultivation is manifold. It promotes the raising of moisture from beneath the cultivated surface; it adds to the porosity of the earth and admits the atmosphere; it adds moisture to the earth by condensation of the atmosphere in contact with the cool earth; it destroys to an extent the conductivity of the cultivated stratum, so that vapor does not so readily escape; it prevents the soil from becoming heated to any great depth, and thus avoids the desiccating effects of the sun's rays.

We would have the perfection of cultivation if we could plow only late in the afternoon and when the south wind blows and never during a north wind. The beneficial effects of the atmosphere to the soil are seen in our summer-fallow land sown to wheat. It is not alone the rest which the land receives, because if the same land rested unplowed and was then plowed and winter-sowed, it would not yield the crop it does when summer-fallow, and the reason is, that in the latter case the atmosphere mingles freely with the earth, and in the former it cannot; and the observant farmer will tell you, that his latest plowed summer fallow land yields the best, and this is because the early plowed is beaten down by spring rains and loses the benefit of atmospheric influences. All this shows the great value of cultivation.

Mr. A. T. Hatch of Suisun tells me that he was led by accident to discover how very important is constant and persistent cultivation. A part of his orchard was infested with morning glory, and he was told that only frequent plowings would kill it. He tried it and found two valuable results; first, he killed the morning glory, and, second, that part of his orchard produced the largest fruit and tree growth. That pestiferous little vine taught him the most important lesson he ever learned in horticulture.

I had written thus far, but not being entirely satisfied of my ground, and not being able to give a satisfactory reason for what I had observed to be true, I wrote to Prof. Hilgard, of the State University, and submitted to him the point under discussion. The reply I give in full, as it makes clear the whole matter, as he always does anything that comes from his pen; and I wish to make public acknowledgement of the service he has been to me personally, in pointing out the right way, and the service he is daily doing to the people of the coast.

"BERKELEY, April 19, 1888.

N. P. Chipman, *Red Bluff*: DEAR SIR:—In reply to yours of 16th inst., I would say that the idea you refer to—that a crust on top of the soil is a non-

conductor of moisture—is simply contrary to facts of the case. On the contrary, the crust, by dint of its smaller capillaries, takes violent possession of all the moisture within the reach of the surface in the loose soil beneath, and, being a good conductor of heat, evaporates that moisture and so depletes the soil very rapidly, just as a dry brick laid on a wet sponge drains the latter of its moisture, and, when heated, will let it go. The sponge, on the contrary, will not take up any moisture from ever so wet a brick, because the small capillaries of the latter will not yield the water to the coarse ones of the sponge.

Cultivation prevents evaporation because the loose soil is like a blanket, preventing conduction of heat downward, and, on account of the coarseness of its capillaries, of its moisture upward. The crust is like the sheet of horn that might be made by compressing a blanket under superheated steam—it conducts the sun's heat freely; but, unlike the sheet of horn, also sucks the moisture upward and allows it to be dissipated.

You will find this matter discussed in some of its bearings in my pamphlet on alkali soils, which I mail with this. Very truly yours,

E. W. HILGARD."

We find, then, that the true and scientific reason why we break up the crust is to enlarge the capillaries and thus destroy their power as conductors of moisture. The other advantages follow to which I have referred.

I wish to express my dissent to the practice of growing vegetables or grasses or small fruits, or, in short, anything among our young trees.

Every living vegetable growth, whether a weed or some useful plant, lives upon the moisture which should go to your trees, and, in proportion to the extent you consume this moisture by vegetable growth among your trees, in that proportion you deplete the soil of its moisture.

There are soils where this can be done to some extent without injury, and probably a small space might be used in most soils for annuals, but, unless there is a necessity for it, I would never do it.

I notice, also, some are plowing or cultivating near the tree but neglecting the space beyond. This is very unwise and will prove detrimental. You cannot have moist soil around the tree if the soil next to it is dry, because the moisture will be drawn laterally away from your tree into this dry earth, and thus your tree will suffer.

We have not had our usual rainfall; it behooves us to conserve what moisture we have, and this can only be done by frequent stirrings of the soil.

Frost Affects on Plants.

EDITORS PRESS:—The damages which the frost of January has inflicted on different trees and shrubs can now be accurately ascertained, and to give an idea how much cold various plants can stand, we shall state the injuries done at Quisisana, near Auburn.

The lowest temperature witnessed here on two mornings before 6 o'clock was 16° Fahrenheit or 9° Centigrade below freezing. The growths killed entirely were:

Small one-year-old orange trees (only a small percentage is sprouting out from below the bud); pepper tree, guava apple, date-palm (*Phoenix Canariensis*); small plants of *Ritchardia filifera* (California fan-palm); *Veronica imperialis*, *Diosma alba*, *Arancaria excelsa*. (The trunk killed but the plant sprouting out from the stock); *Grevillea robusta*; *Acacia decurrens*, *linifolia* and *melanoxydon*. (With these the sprouts are so exceedingly weak that it is doubtful if they ever will give a healthy tree); orange and lemon trees less than four feet high. (The new sprouts of the orange are already ten inches, while those of the lemon have hardly one inch). *Dracena stricta*, *Cordylus indivisa*; *Agave*, Century plant (small plants); *Metrosideros semper-florens* (bottle brush); *Hydrangea hortensis*; *Abutilon*; *Solanum jasminoides*; *Habrothamnus elegans*; *geranium*, banana (*Musa Ensete*); rubber tree (*Ficus macrophylla*) and heliotrope. The last three were protected by a cover of manure.

One-year-old wood frozen on the following: Oranges more than four feet high; olives less than three feet (Mission and Piccolini have suffered equally less than Nevadillo, which lost all leaves; at present, however, all are covered with green foliage, the new growth being as long as six inches); oleander, gum tree (*eucalyptus*) *Acacia dealbata*.

The following were slightly injured, part of the leaves killed: *Phoenix tenuis*; fan-palm (two years old); New Zealand flax; *Eucallonia baxterianum*; *Ligustrum Japoeicum*; *Berberis Darwinii*, myrtle.

The following were not injured at all: Olives over three years old, *Araucaria imbricata* and *Bidwellii*, *Magnolia*, *Bambusa*, *Pittosporum*, *Yucca*, *Chamaecyparis xcelsa* and *humilis*, *Acacia julibrissin*, *daphne*, *camellia*, etc.

Quisisana, May, 1888.

F. C.

POWER FROM ARTESIAN WELLS.—Heavy machinery is now run by artesian well-power in many parts of France, and the experience of the French shows that the deeper the well the greater the pressure and the higher the temperature. The famous Greenelle well, sunk to the depth of 1800 feet, and flowing daily some 500,000 gallons, has a pressure of 60 pounds to the square inch, the water being also so hot that it is used for heating the hospitals in the vicinity.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Interstate Commerce Law.

[By MORTIMER WHITEHEAD, Lect. N. G.]

It is now generally admitted that, more than all other causes combined, the farmers of the United States, in their organized capacity in the Grange, brought about the legislation, both State and National, that is commencing to hold in check the great railway corporations, in their abuse of the power conferred upon them by the people. First came the "Grange decisions" of the United States Supreme Court, and followed in the last Congress by the passage of the Interstate Commerce law that has now been on trial about a year. It takes intelligent united work on the part of the people to secure good laws, and it requires watchful care to keep the laws after they are passed. "Eternal vigilance" applies here. The victorious soldier must not sleep upon the field of honor, or his triumph may turn to final defeat. As has been fore-shadowed during all the 12 months of its trial, amendments to the Interstate Commerce law are now before Congress, and will soon be acted upon. Will they make the law better, or will they lessen its usefulness?

As far as we can at present judge, the amendments to the Interstate Commerce law seem to be in line with the spirit of the law itself, and to make it more rather than less effective. We will present them here; and as the original law itself was so generally discussed by Granges all over the country, it would seem right and proper that Patrons should carefully study these proposed amendments, seek to understand them thoroughly, and then act accordingly.

The Senate Committee on Interstate Commerce has completed, and Senator Cullom has introduced, the following series of amendments to the Interstate Commerce Act: These amendments require that the printed schedules of rates shall be kept "open to public inspection" and "accessible to the public;" that reduction to the published rates shall only be made after three days' public notice, instead of without previous notice, as at present, and that the provisions in regard to advances and reductions in rates shall apply to joint tariffs made by connecting roads, as well as to the tariffs made by individual roads. It is proposed to amend the criminal penalty section by making those convicted of violating the Act liable to imprisonment for not exceeding two years, in addition to the fine already provided for, or both fine and imprisonment, when the offense is an unlawful discrimination in rates for the transportation of passengers or property.

The committee proposes three provisions in regard to "underbidding." First, that the officers, agents or employees of a railroad, who, by means of false billing, false classification, false weighing or false report of weight, or by any other device or means, knowingly and willfully assist or willingly suffer or permit any person to obtain transportation at less than the established rates, shall be deemed guilty of a misdemeanor, and shall be subject to a fine of not exceeding \$5000, or imprisonment for not exceeding two years, or both.

The second is that any person, or the officer or agent of any corporation, who delivers property for transportation to any common carrier subject to the provisions of the Act, or for whom as consignor or consignee such carrier shall transport property, who shall knowingly and willfully by false billing, false classification, false weighing or false report of weight, or by any other device or means, whether with or without the consent or connivance of the railroad or its agents, obtain transportation for property at less than the established rates, shall be deemed guilty of fraud, which is declared to be a misdemeanor, and shall be subject to a fine of not exceeding \$5000, or imprisonment for not exceeding two years, or both.

The third provision makes subject to the same penalties any person who by the payment of money, etc., or by solicitation shall induce any railroad or any of its officers or agents to discriminate unjustly in his favor as against any other consignor or consignee in the transportation of property; and also makes such persons liable with such railroad in an action on the case to be brought by any consignor or consignee discriminated against, for all damages resulting therefrom.

The only other amendments of general interest proposed are: One to permit railroads to carry free destitute and homeless persons transported by charitable societies; and another to permit railroads to give reduced rates to municipal government for the transportation of indigent persons.

Anarchy and Dynamite.

The *American Magazine* for May contains a startling article entitled "My dream of Anarchy and Dynamite." The editor states that "the author is a well-known writer who stands very high in military, social and political circles, but whose name is withheld at his request." The article itself professes to be an expose of the plottings of the Anarchists, and the avowed object of its publication is to so arouse the public sentiment that has been lulled to sleep by the delusive absence of open demonstrations, that laws will immediately be enacted for the suppression of both anarchy and dynamite. The utter inadequacy of present statutes, and of the police and military preventive measures, is forcibly shown, and effectual remedies are presented.

The author declares that "new features must be added to the laws: First, the possession of a dynamite bomb by any unlicensed person must be *prima facie* evidence of an intent to commit murder; and unlimited powers of search for bombs must be accorded to the police. A bomb would not be used by a private citizen not engaged in blasting, for any purpose other than murder; and the law might rightfully conclude that the man who had one in his possession without license, had it in pursuance of an intent or conspiracy to murderously take human life. The penalty for conviction should be specific and extreme; no loopholes for jury nor judge should be left; the penalty should be specifically imprisonment for life, and, if it be possible, the intervention of pardoning power should be forever prohibited. Let these fiends know that the mere finding of a bomb, in house, shop or pocket, means perpetual imprisonment with no miscarriage of justice possible, and it will tide us over the danger temporarily. But this would not be a permanent safeguard. After a time, police vigilance must necessarily relax; and the danger would again suddenly confront us, the more effectively, from the fact of its having been driven to underground and hidden methods."

Oregon State Grange.

The 15th annual session of the Oregon State Grange convened at Salem, Tuesday, May 22d, Worthy Master R. P. Boise in the chair.

During the afternoon the Grange was addressed by Governor Penoyer and others. Mayor Murphy of Salem delivered the address of welcome to the members of the Grange.

The attendance is large, and an interesting session is anticipated.

Temescal Grange.

The Harvest Feast at Temescal Grange on Saturday, the 19th inst., was a very pleasant affair.

Bros. Perkins and Renwick and Sister Dewey were appointed a committee to confer with neighboring Granges with a view of having a Farmers' and Grangers' picnic on or about the 4th of July, and to arrange a program for the same in connection with other Granges.

ELECTION OF U. S. SENATORS.—The late Democratic Convention, at Los Angeles, declared itself in favor of the election of United States Senators by direct vote of the people of the several States, and urged the adoption of such an amendment to the Constitution of the United States as will accomplish that result. This backs up the Grange lead in this reform. So far so good. Now for the Republican party. Can they afford to do less?

THE painful duty falls upon us to chronicle the death of Sister M. J. Frisbie, wife of Past S. G. C., B. F. Frisbie. Sister Frisbie was a most pleasant and amiable lady, who had endeared herself to the hearts of all who knew her. The heartfelt sympathy of all Patrons will be extended to Bro. Frisbie in this, his hour of affliction.

THE SAN JOAQUIN COUNTY GRANGES' PICNIC at Lodi, on the 18th instant, drew a great multitude to Wardrobe's grove, where Hon. J. V. Webster delivered an excellent oration—published in full in this week's *Patron*. Music, recitations, baseball and dancing varied the pleasures of the occasion.

SEBASTOPOL GRANGE PICNIC.—The picnic given under the auspices of the Sebastopol Grange, P. of H., was largely attended, and proved one of the most enjoyable events of the season.

WATSONVILLE GRANGE will hold its picnic to-day at Porter's Grove, about one mile from the town of Watsonville. A general good time is expected.

Slickens.

Relative to the statement made by W. H. Lee that "fully one-half or more of the hydraulic mines now in operation are worked by Chinese, but the mines are generally owned by white men, who lease them for a certain amount of the gold taken out," the *Red Bluff Sentinel* asks:

"If this be true, and we have no reason to doubt it, why have not the bosses of the Anti-Coolie Leagues gone into the hydraulic mines, into the hydraulic mining camps, and waged war on those who subsidize Chinese and run hydraulic mines with Mongolian muscle and coin, in defiance of the laws of the State?"

Mr. Lee's statement may be relied upon as correct, and the *Sentinel's* inquiry is pertinent. It is more surprising, however, that the white miners, especially those engaged in drift and quartz workings, have not put a stop to this employment of Chinese to transgress the laws of the State and bring honest miners into reproach. Every form of mining to which there is no opposition on the part of the valley people is suffering from the illegal operation of the hydraulic miners. If public sentiment in the mountains were correctly reflected by the newspapers of that region, it would be found that there is general condemnation there of the continued violation of anti-debris injunctions. But the law-breakers seem to have instituted a reign of terror, and to have silenced the voice of the law-abiding majority.—*Marysville Appeal*.

LONG AND SHORT HAULS.—The Interstate Commerce Commission filed a decision last week in the case of Martin & Co. of Denver against the Southern Pacific Company and the Union Pacific Company. The chief question involved was that of a greater charge for the shorter haul from San Francisco to Denver than for the longer haul to Kansas City over the same line. The commission decided that no adequate ground now exists upon which a greater charge for the shorter haul to Denver than for that to Kansas City can be justified. But in view of the fact that an effort is being made in good faith by the various lines to re-adjust the tariff to meet the requirements of the law, no order will be issued in this case for 60 days.

THE GRANGERS' PICNIC AT HOCK FARM, on Tuesday, May 15th, was largely attended. Governor Waterman made an interesting little speech, and J. W. Breckenridge of Merced, delivered an eloquent address.

FRANKLIN GRANGE had a pleasant and profitable meeting Saturday, May 19th; conferred the Third and Fourth Degrees on two worthy sisters, and discussed a fine Harvest Feast.

Vacaville Fruit Notes.

EDITORS PRESS:—The weather has been very cool for some time past, with fog hanging about the hill-tops mornings, which is not common at this season of the year. Fruit ripens slowly. Cherry-picking is about done, the crop being very light. Hay is pretty nearly all out, has turned out very well and is selling at from \$7 to \$10 per ton in the shock.

Two carloads of apricots, mostly Thissell's seedlings, were shipped East from Winters last week. They were put up by Messrs. Brink, Thissell and Pleasant. These apricots are a very light crop this year, but are the largest ever raised here. Some raised by Mr. Brink weighed seven to the pound. They are put up much ripier than those heretofore sent East, especially those packed by Mr. Brink.

When Mr. Earle and Mr. Porter were buying fruit to ship East, there was always a strife between them to see which would get the first fruit in market, consequently a great deal of what they shipped was never fit to eat. This the fruit-growers acknowledged would be the case, but so long as the money was paid and the shipper took all the risk, they did not care. Now that they take the risk and the fruit sells on its merits, things are changed for the better, and fruit is put up in much better condition. Fruit picked when fully ripe, but before it begins to soften, will keep much longer, either in the packing-shed or shipped away, than that picked green.

There has been much anxiety among the fruit-growers as to what would be done in regard to the contract made with Mr. Mauser for apricots. Mr. Mauser was around last week and assured parties with whom contracts had been made that fruit would be received and paid for just as contracted for. He promises fairly and some are satisfied, while others are doubtful if affairs are all settled. It is said that the Lusk cannery has about 700 tons of apricots engaged in the State, and 400 or 500 tons are between Vacaville and Putah creek.

Much uneasiness is felt in regard to the supply of labor. The China company at Winters have notified parties that they will have to pay \$1.25 per day for Chinamen. Many say they will pay but \$1 per day. Several have tried Japanese, and think they are much better than Chinamen.

Vacaville, May 20th.

A PARTY of Idaho vigilantes captured four men driving a herd of stolen ponies in No Man's Land, and lynched the whole party.

THE VETERINARIAN.

Serious Swellings.

EDITORS PRESS:—The swellings, alluded to by subscriber in your last issue, as occurring on his four-year-old bull and three-year-old heifer, are either of a *scrofulous* or *actinomycetic* nature, which can only be determined upon by examination by a qualified veterinary surgeon. These tumors used to be described and known as "wens" or "olysers," and were considered as *scrofulous* tumors, but are now generally considered to be *actinomycosis*, which is produced by a vegetable fungus, the *actinomyces*. It is of recent discovery and has been found in man, ox and pig. *Actinomyces bovis* is the name applied to the fungus in the ox.

These growths are found in various parts of the body, especially affecting those parts which have lymphatic glands situated in them. They increase in size slowly as a rule, but may manifest a first acute stage, which changes to a phase of less activity.

Softening often occurs, but the inflammatory action is often not active enough to cause bursting of the abscess, whence it is called a cold abscess or tumor.

Treatment.

As a general rule, surgical extirpation of the tumor is absolutely necessary. We must cut down on the diseased parts and remove all that is possible. Then dress the internal part with a strong solution of carbolic acid. The edges of the wound must be closed by sutures (stitches).

Syringe it out once a day with the carbolic solution, and apply a blister on the external surface.

In bad cases the animal had better be fattened for the butcher.

A. E. BUZARD, M. R. C. V. S. L.,
No. 11 Seventh St., S. F.

From Southern Colusa.

EDITORS PRESS:—The present season is a hard one for Colusa county, the soil being generally of such a light nature that less than ten inches of rain leaves us short. The reverse is the case in a wet season, for, unless the ground is actually flooded and kept so for a long time, Colusa responds nobly. If one-third of the crop of 1884 is realized, we shall think ourselves well off. Of course there is good fallow grain, but even that is far from being up to the standard. In Sutter county, as you get toward Yuba City from Colusa, the grain improves, but I am told that it fails again toward the Sierra foothills. Spots that have been irrigated hereabout show the good effects of water by the grain standing at least a foot higher than that surrounding, and instead of having that blasted appearance which most of the grain has, it is green and filling well.

Some alfalfa fields are irrigated here by pumping from the river. The land has to be divided into half-acre checks and leveled, and have direct communication with the ditches to make it profitable to use the size of pump we have here—the 10-inch. Land so prepared, not too far from the pump, with ditches working satisfactorily, can be covered or flooded to the depth of ten inches, at the rate of an acre per hour, which makes alfalfa more profitable than grain where the water can be obtained.

The Democratic Convention in this county nominated to the Assembly, and that is equal to an election, Mr. A. H. Rose, a great reclamation man. He has spent more time and money on levees and attempts to reclaim land than any other man in Northern California. How good a legislator he will make remains to be seen.

Sycamore and the whole of Colusa county has lost in Mr. Howell Davis one of its most energetic and enterprising citizens. A pioneer and resident of this county for the past 30 years, he has been merchant, teamster, farmer and contractor during nearly the whole of that period; and in connection with Mr. Rose and on his own account has constructed many miles of levee. About his last business transaction was to purchase two sections of swamp land and then encircle and include them within his vast levee system. He was one of the contractors who constructed the debris dams on the Yuba and Feather rivers, and he did all the earth-moving that was done by teams on the Colusa & Lake railroad. He was at the time of his death, and for 15 years before, a member of Grand Island Grange.

The haying season is advancing. Many acres and but few tons will be out. Much grain is too short to cut even for hay. The harvest season will doubtless be early here, as many fields of barley and some of wheat will do to cut in a week or ten days. They are already white and yellow.

The hog disease of which I wrote you last fall has not appeared for certain as yet; but doubtless will as the warm season progresses. Precautionary preventive measures are in order. The canal movement is just now the all-absorbing topic—one down the plains and one along the west side of the river is the course.

E. G. MORTON, JR.

Sycamore, May 18, 1888.

A COMPANY of English capitalists have sent an expert ostrich-raiser from Africa to Nevada to look out a suitable place for establishing an ostrich farm.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

A JACK SOLD WELL.—Chico *Enterprise*, May 14: A few days since D. M. Hooper purchased two fine Kentucky jacks of a gentleman just from the East, paying for both animals the sum of \$900. On Saturday Mr. W. Finnell of Tehama was in this city, and seeing "Uncle Dad's" fine canary birds, took a fancy to one of them and paid \$750 for him. He was shipped to the Finnell ranch, and hereafter his musical voice will resound along the banks of Thomas' creek. "Uncle Dad" says it was a pretty fair bargain, but claims he has the best one left yet.

Contra Costa.

HAY CROP.—Martinez *Item*, May 16: The whole country from Bay Point for some distance above Antioch is one immense hay-field, and farmers, assisted by the dry cool weather, are virtually "making hay while the sun shines." As an instance of the return from this valuable crop, Frank McCabe, near the town, has already baled three tons to the acre from about 15 acres, and thinks he has over 300 acres that will average as well. His crop is estimated at 1000 tons of first-class hay. Other ranches are doing as well, and, at the present prices of the article, it is a question if a greater profit will not be realized from this crop than from a large grain yield at the present low price of grain. Less expense is incurred in harvesting the hay crop and a consequent greater profit realized.

Fresno.

PROMISING FIG ORCHARD.—Fresno *Expositor*, May 16: W. M. Williams came down from his fine fig orchard on Dry creek this morning bringing some specimen boughs from his young orchard. One small bough within a space of 10 inches carries 21 figs and another 15, which are about half grown, and measure 5½ inches in circumference. Mr. Williams states that on his 60-acre orchard there is any quantity of such boughs. One small tree that would cover a space of 12 feet square he estimates will yield 1500 pounds of fruit. They are all the white Adriatic variety.

Placer.

THE CHIEF OF CHERRY TREES.—Newcastle *News*, May 16: It is pretty generally known that the largest cherry tree in the State stands in the orchard of Mr. Robert Hector, near the town of Newcastle. The yield of this immense tree increases from year to year, and notwithstanding the short crop of cherries the present season, Mr. Hector assures us that this old father of the orchard will yield over 3000 pounds of cherries this year, which will fill more than 300 10-pound boxes. The cherries are of the Oxheart variety, and very fine.

CHERRY-PLUMS.—Record-Union: A correspondent from Newcastle says the first plums of the season were picked on the ranch of G. D. Kellogg at Newcastle on May 18th. They were of the cherry variety, and very highly colored.

Sacramento.

CANNIBAL DUCK.—Bee, May 17: Mrs. Parsons, who resides in the Eastern suburbs, essayed this spring to raise some chickens and ducks, but the young fowls were no sooner hatched out and able to get about than they would mysteriously disappear. It was thought that the depredations were being committed by cats or rats until a few days since an accident occurred which lifted from the felines and rodents the weight of suspicion and fixed the guilt where it belonged. Mrs. Parsons is the owner of some large Pekin ducks, and on the occasion referred to children who were playing in the yard saw an overgrown drake waddle up to a young duck, knock it over with a vicious peck, and then gulp the duckling down into his capacious maw as easily as a hungry longshoreman would dispose of a luscious bivalve. This explained the fate of the young ducks and chickens which had gone before, and the Pekin ducks have been put where they will cause no further slaughter of the innocents.

THE FOLSOM CANAL.—Ground was broken at Folsom the 16th for the great irrigating and manufacturing canal. About 20 prisoners were put to work clearing away for the immense dam to be constructed. It is expected that over 200 men will be engaged in the work by the first of next month and operations will be energetically pushed.

San Bernardino.

SAN BERNARDINO CANNERY.—Ontario *Record*, May 16: The cannery at San Bernardino is now an assured thing, over \$30,000 in stock having been taken. The company has been incorporated with the following directors: S. G. Bart, J. L. Grow, E. C. Seymour, R. F. Cunningham, John P. Clum, John Anderson, H. L. Drew, H. H. Linville and J. B. Goodlett. A call for 20 per cent of the capital stock has been issued, payable in 10 days.

MOORPARK APRICOTS.—Lugonia *Southern Californian*: Everybody, nearly, who has tried apricot growing, knows that the Moorpark, though a fine flavored and large fruit, has proven so shy a bearer that it has been discarded by nearly every one. But in conversation with M. Eason of Crafton the other day, the editor learned with surprise that that gentleman had had none of that trouble with this variety. His trees are in soil which is a mixture of the red land and gravel, and they bear

abundantly every season. Mr. Eason thinks that his system of pruning may have something to do with the fruitfulness of the trees. He never prunes in winter or spring, but defers that operation until summer. He is of the opinion that better results are thereby secured, and certainly this seems to be the case in the matter of the Moorpark apricots.

San Joaquin.

MONEY IN FRUIT-RAISING.—Stockton *Independent*: One of the largest and most successful fruit-growers on Roberts island is Joseph Hale, who has 180 acres under cultivation, from the product of which he has cleared over and above expenses, \$80,000 in the past 12 years. Mr. Hale is satisfied that with proper cultivation the sediment-soil of the island will produce as good results as have been produced in his orchard. The fruit-growers of Roberts island have a great advantage over those of other sections in that the fruit ripens and can be placed on the market very early in the season, thus enabling them to derive the benefits of first prices. This is especially true of pears of all varieties. Since Mr. Hale set out his pear trees, his net profits from the fruit have averaged \$300 an acre. He has netted in one year \$1800 off 1½ acres of Bartlett pears. He has between six and seven acres devoted to apricots, and last year netted \$1700 from the apricots shipped. On 4½ acres in peaches he netted in one year \$1400. His 180 acres of land planted in fruit, vegetables and wheat brought him in a yearly profit of \$6,660, or \$37 per acre.

Shasta.

FRUIT SUPPLANTING GRAIN.—Cottonwood *Index*, May 17: Through the kindness of C. E. Williams we were shown through the Oak Lawn farm, and saw some splendid evidences of the fertility of upland. He has wheat, rye, oats and barley that are of fine growth and will fill without more rain. We never saw finer heads of barley, and much of the wheat is good for an average of at least 20 bushels to the acre. But grain is no longer profitable, and it has been clearly proven that our upland is the best in the world for fruit and grapes. Mr. Williams' orchard and vineyard will testify to this. They are loaded with fruit and grapes and are making a fine growth. He will plant trees and vines extensively next winter.

Sonoma.

DRIERS AND CANNERS PREPARING.—Healdsburg *Enterprise*, May 16: As the fruit season comes on, work tending toward the completion of the Magnolia cannery is being pushed to its utmost. A fine new engine and boiler have just been placed in working order. Tables and cooking vats are being placed in position, preparatory to beginning work. The tinshop employs ten men who have already made up over 80,000 cans, making them at the rate of 5000 per day. Over 500,000 cans will be required for the season's run. The enterprising proprietor, T. S. Merchant, has already contracted for the cherry crop of several large orchards in this vicinity, paying from 4 to 6 cents per pound delivered at the cannery. He has made arrangements with the S. F. & N. P. R. R. to issue commutation tickets during the busy season, from Cloverdale and return each day, \$5 per month, and from Geyserville \$3 per month, thus insuring him help from abroad and from our own county. He proposes to pay the very best of wages, being governed by the S. F. rates. During the busy season from 250 to 300 hands will be required. The Russian River Evaporating Co. has bought of G. W. Chapman the entire interest in his fruit-drying and evaporating establishment in this city, also the Hotchkiss evaporator at Windsor. Both of these driers will be enlarged and remodeled on scientific principles, using all the modern improvements in the evaporating system. The company expects to be able to handle all the drying fruits of this section, and to enlarge as the growing fruit industry may demand.

PEACHES FREE FROM CURLED-LEAF.—Santa Rosa *Democrat*: At a special meeting of the Fruit and Grape-Growers' Association, held in the Court-house, Saturday, May 12th, Mr. Woolsey reported that he had found the Early Crawford and Lemon Cling somewhat affected with the curled-leaf this season, but not enough to be seriously detrimental to the growth of the trees. The Orange Cling, side by side with the Lemon Cling, were remarkably free from the disease. The Muir was also an exempt variety.

Tehama.

THE OSTRICH FARM.—Red Bluff *Sentinel*, May 19: Since Dr. Sketchley's second visit to Red Bluff, when he entered into a contract to purchase from Beers Guyre 2100 acres of land seven miles north of Red Bluff for \$30,000, for an ostrich farm, his actions have been closely watched. After this transaction he became at once an object of interest in both Southern and Northern California. The time he asked for in which to consummate the purchase and perfect arrangements for removing his ostriches from Los Angeles and establishing them on a farm in Tehama county—16 days—expired Saturday, and true to his arrangements the Doctor was on hand and matters were satisfactorily adjusted. He arrived here on the 3:30 train Saturday afternoon, and was hospitably received by our citizens. He is enthusiastic over his new home. He thinks the climate well adapted to ostrich farming, and that the propagation and raising of the birds will be profitable. Nine of the ostriches arrived Sunday evening on the freight train. They occupied one-half of a box car, while the other half was occupied by a

keeper and a lot of vegetables on which the ostriches fed. The birds are all young. Early this morning six of them were loaded on McCann's dray and taken to the farm. More birds will be shipped here from time to time, as the farm is put in condition to receive them.

ARMY WORMS AT VINA.—The vineyard at Vina, it is reported—in fact, the entire ranch—was recently invaded by the army worm, and desolation was spread on every hand. The vineyard escaped total destruction only by the prompt action of H. W. McIntyre, the superintendent. He had trenches dug before the army, by plowing a furrow and shoveling out the loose earth. The worms could not cross these, as they are not able to climb. Many of the trenches were filled level with worms, however. The loss is considerable.

Tulare.

IRRIGATION COMPANY.—Visalia *Times*, May 17: Articles of incorporation of the Frazier Valley Irrigation Co. were filed in the office of the County Clerk on Tuesday. The purposes for which it is formed are the construction of a canal from Tule river and the diversion of water therein from said river, and the using of the water so diverted for irrigation, milling, manufacturing and domestic purposes in this county. The principal place of business is Frazier Valley, and the capital stock is \$60,000. The directors named for the first year are H. M. White, John Tuohy, James A. Kincaid, B. M. Hotchkiss and L. L. Gill. Jas. A. Kincaid has been elected treasurer and J. E. Shuey secretary of the corporation.

Yuba.

WOOL PURCHASES.—Appeal, May 18: The Marysville Woolen Mill ceased purchasing wool for the present season yesterday, having taken about 1500 bales, equal to about 500,000 pounds. The average price paid was 16 cents. Their purchase this year is larger than that of last. The wool-growers of this district find the factory a decided advantage to them, as it always pays good prices and they can usually do better to sell here than at the bay.

WILD BLACKBERRIES.—Chinamen appeared on the streets with wild blackberries yesterday, which they had gathered on the Feather river banks north of here.

FIRES IN THE MOUNTAINS.—Several small forest fires have been reported from the mountain regions. Residents there are going to take precautions this year to see that they do not spread.

ARIZONA.

PINAL COUNTY NOTES.—Enterprise, May 12: The Papago Indians residing in the valleys below Casa Grande are raising good fields of grain this year without irrigation. They take advantage of the occasional rains to store water sufficient to supply small fields and usually secure fair crops. After the summer rains they plant corn, melons and beans, and raise enough for their own consumption. H. G. Ballou killed his 47th lynx, at his ranch ten miles below Florence, Saturday night. These predatory animals pass his place in their meanderings up and down the river, and occasionally one that carries to pay its respects to his chickens contributes its scalp to Mr. Ballou's trophies. The Montezuma Canal Co. has two ditching machines on the way to Florence, which will be used in constructing the canal. Mr. Laughlin says he will have the canal completed for a distance of over 20 miles from its head inside of four months. Farmers about Dudleyville are in the midst of their harvesting, and very heavy crops are being gathered. Help is quite scarce in that section.

APRICOTS AND BARLEY.—Editors Press:—The apricot known as Wood's Early—alias Pringle, appeared in Phoenix, ripe, May 1st, from a tree owned by Maj. Hancock. In Mesa City, same day, ripe apricots appeared. May 6th, many trees yielded their first picking, and on the 10th, Maj. Hancock's tree had ripened all its fruit, which was a fair crop of an eight-year-old tree. May 9th, the first load of new barley thrashed by a common thrashing machine of a volunteer crop, appeared on the market in Phoenix. Many headers went to work on barley fields, May 14th, in this valley. —GEO. KAY MILLER, Tempe, Arizona, May 21, 1888.

OREGON.

THE WOOL CLIP.—Portland *Cor. Chronicle*, May 20: Sheep-shearing is actively progressing in Eastern Oregon, and wool is already being hauled to points on the railroad. The clip being hauled to Arlington and The Dalles is in fair condition. The staple is better than last year, except from localities where the ranges are crowded. Umatilla and Snake river wools are average in appearance. Union and Baker counties show a heavier clip, owing to the introduction of better blood. Grant county wools are light, and on the whole the clip of Oregon may be considered five per cent heavier in shrinkage than last year, but wools classed as railroad wools by the trade are as much as 10 per cent heavier. There is no buying to speak of, except at Arlington, where Eastern speculators are operating to a small extent at full prices.

THE Senate Committee on Appropriations has adopted an item in the Indian Appropriation bill of \$25,000 for the construction of buildings for an Indian school at Carson City.

News in Brief.

GENERAL PHIL. SHERIDAN is seriously ill. A REPORT is to be made to the Secretary of War as to the probable cost of a breakwater at Santa Monica.

A SPEED-TRACK to cost \$35,000 is to be built in Golden Gate Park. The money has been subscribed by citizens of San Francisco.

THE cruiser Baltimore will be launched at Philadelphia on July 4th, and it is thought that Mrs. Cleveland will christen the vessel.

THE Napa Agricultural Association has purchased the Coombs tract, just northwest of the town, and will lay out a mile course thereon.

A PORTLAND fisherman landed a 27-pound Chinook salmon with a hook and line last Friday. It took him over half an hour to do it.

THE Board of Underwriters has lowered the rate of insurance in Fresno on account of additions to the fire extinguishing facilities of the place.

THE Marine Engineers have adopted a resolution to notify U. S. Inspectors where marine engineers are known to be habitually intemperate.

THE Boca Mill and Ice Co. are enlarging their dam so as to have the ice pond cover nearly one square mile. The improvements will cost \$40,000.

THE trustees of the town of Santa Monica are trying to keep campers from building tents on the beach. A test case has been made so as to carry it before the Superior Court.

W. F. BOARDMAN, the Contra Costa Water Company's engineer, says that Oakland uses more water per capita than any other city in the United States, in the proportion of about nine gallons to six.

J. O. BROWN, General Manager of the State Board of Trade, has been notified that Tulare county has taken steps to affiliate with the State Board, and that the local board at Hanford will shortly send an exhibit to the State Board rooms.

THE Kern county *Californian* says: Mr. W. B. Carr expects to cut and stack 100,000 tons of hay on his ranches in this vicinity this season. He has also some of the finest fields of wheat and barley that were ever grown in this State, the result of irrigation.

THE director of the Lick Observatory was notified by telegraph of the discovery of an asteroid by J. Palisa, at Vienna, May 16th. At eight hours one minute, Washington time, its position was R. A. 16 hours, 21 minutes 8 seconds; and Dec. south 21° 35' 12". Its motions were minus 56 seconds and 1 minute. Its magnitude was 12.

THE Sutter cannery, says the Marysville *Appeal*, has now 40 persons at work. The superintendent declares that 400,000 cans have been made, and that contracts have been entered into for enough apricots and peaches at two cents per pound to insure a successful run. He expects to handle at least 1000 tons of this fruit.

ALL the trout at the United States Breeding Station on the McCloud river have been turned loose into the public waters of the States. Besides the large trout which have so been disposed of a large number of young fish are being hatched, which, when they have arrived at the proper age, will also be released into the McCloud river or its tributaries.

Carnations Raised From Seed.

On Tuesday afternoon the expressman brought us a basket from the famous florist of Goleta, Joseph Sexton. The muslin carefully sewed over it could hardly keep in the delicious fragrance, which exhaled more and more as the wrappings were taken off, and the beautiful contents began to appear—double carnations, only two or three alike, nicely laid on moist cotton, and all enveloped in oiled paper, so they came out wonderfully fresh.

There were about a quarter-thousand of them, of perhaps a hundred varieties—white, pink, lemon, cherry, crimson, purple, ashes-of-roses—countless shades in endless combinations; some being almost wholly of one tint throughout, others daintily bordered, and yet others dotted and striped and mottled in divers fashions that defy description.

Deft feminine hands drew them gently from their traveling carriage, layer after layer, even to the sixth, and laid them in order on the counter in the business office, where they stayed awhile, delighting many with their loveliness, and thence were borne away in small bouquets to beautify and perfume a score of homes.

CORNERS CONTEMPLATED.—It is a queer commentary upon the proposition now before Congress to prohibit corners in food supplies, as recently noted in the *RURAL*, that on Tuesday the Chicago Board of Trade adopted an amendment abolishing the rule prohibiting corners by a large majority. "This action is significant," local papers say, "for the reason that corners in May corn have been among the possibilities, and a corner in July wheat might also occur without surprising anybody."

AGRICULTURAL DIRECTORS.—On the 21st instant Gov. Waterman appointed the following directors of the Sixth District Agricultural Association: J. W. Waters, Jr., San Bernardino; L. J. Rose, Jr., Ventura; K. D. Wise, J. W. Robinson, A. Workman, L. J. Rose, L. Lichtenberger, J. C. Newton, Los Angeles.



Decoration Day.

[Written for the RURAL PRESS by SARA C. G.]

Again in one beloved cause all hearts united,
We meet to celebrate this ever sacred day;
Asking not if those who slumber here had plighted
Their faith and service to the Blue or to the Gray;
We only know that here on Nature's kindly breast
Sons of America are lying in their peaceful rest.

As some fond mother, musing o'er the part
Beside the resting-places of her cheri-headed dead,
Says not: "This was the first and that the last
In my affection." Roses and blossoms sweet are
spread
With loving care o'er all; so our fair land to-day
Brings tribute of bright flowers alike to Blue
and Gray.

For each was brave and faithful to the cause
He ever had been tought to deem the right;
True patriots were they who knew no holier laws
Than those of the country; their sole guiding light.
Love of their native land, they, at her call
Gave to her gladly, their service, lives, their all.

Shall we be censors, then, and shall we dare
Decide that these were right, and those were
wrong?

Ah, no! we leave them now to Him whose care
Is over all, and while the wild bird's song
A requiem sweet will be, with flowers of May,
And garlands white, we cover Blue and Gray.
Silver City, Nevada.

A Homely Romance.

So the old lady's been tellin' you I might 'a'
been President if I hadn't wasted myself on a
farm, has she? Bless her, she can't no more
help that idee a-bein' in her head and a tellin'
of whenever she gets a chance, than I can help
whittlin' when I talk!

Want to know how I missed livin' in the
White House an' instead struck root on a down
East farm? Well, I don't mind if I do tell ye,
seein' the cows is milked, and the turkeys in,
and the old lady can't no ways think of another
chore for't least a minit and a half.

Never lived on a farm, did ye, with a real
smart and go-ahead wife? Well, you'd be
s'prised to see how many things sich a help-
meet could find to do after all was done.

But land! Keziah, she's got so uster midgin
me up and I've got so uster waitin' to be midged
thet it ed seem strange like if things wasn't
that way.

Ye see I ain't nigh so pudgicky as I uster be,
and things step along first rate and easy—reck-
on even the old notion of a brimstone hereafter
wouldn't scare me much now. I'd sorter say
to myself and Keziah, if we've got to be burnt
to cinders, we've either got to gin out some-
time, or be made tough enough to stand it.

But about my bein' President. I was young
in them days, and was considered good-looking,
bein' five foot seven in my stockin's and not
lackin' in conceit. Maybe you've found out
for yourself that folks value you pretty much
at your own figures, and to think you're some
pumpkins is the surest way to be some pump-
kins. It's strange, but mighty true. Now I
don't count for nigh so much as I did in them
days jest because I've sorter grown modest
and don't set myself forward. Heigho, if it wa'n't
for Keziah, I don't b'lieve I'd be any 'count at
all.

But when I had this good feelin' about my-
self I lived over there on a farm jest beyond
them hemlocks ye see to the north, and Keziah,
she lived here in the old house, which I may
add wa'n't nigh so smart and white as it is now.
Keziah was a beauty in them days, jest like a
peach that's all ready to drop off'n a tree; but
if you'll b'lieve me I didn't know it then. I
had to go away to learn it.

Ye see I had growed up with her and was so
uster takin' her soft eyes and gentle ways for
granted that I didn't think nothin' of 'em in
particular, or if I did I thought they was a
part of pretty much all girls and my due for
bein' a superior chap. I uster carry her to
singin' school and apple bees and meetin's, but
as for lovin' her, I didn't know what it meant.

I was ambitious, ye see, in them days, and
couldn't give no thought to love-makin' more'n
an evenin's fun. And Keziah, she seemed
never to think about it no more'n I did. She
was easy and gentle, but that was all.

Off and on I worked down to the village, and
kept a wantin' stronger and stronger to swing
out for myself, where there was lots o' noise
and excitement. Country ways begun to seem
dull and country folks no end slow. I got a
notion in my head that I was meant for a bigger
man than a farmer. I wanted to see the city.

Dear me! all boys jest comin' into whiskers
and neckties has the same feelin's. Sometimes
they recover and sometimes they don't—which
I take it was the case with Bonyparte. Now
if he only hadn't had a relapse he might 'a'
lived several years longer in comfort and happi-
ness.

I recovered, but I had 'em pretty bad and
needed some master bitter herbs before I got
well.

I took to findin' faults in the old folks as
had brought me into life and worked their poor,
tired hands into hard knots for my sake. I
actually begun to see that they eat with their
knives and didn't care whether they had a
napkin or not!

When I came to that state I thought it was
time I left. An' so one Sunday afternoon I
packed up my clo'se and told mother I was
goin' to New York.

I don't like to think about the way her
wrinkled faced looked when I told her—it
was sudden and unexpected, ye see, to her,
for I kept my feelin's pretty much to myself.
She didn't try to argy with me not to go—it
wa'n't that, but it was the way she said
"Good-by."

Father wa'n't so hard—he was a man, and
after givin' me some good advice the thing was
over.

Then I went to tell Keziah I was off. I
hadn't no sentiment about that. I only had a
feelin' that it oughter be done, and so I did
it. I came across her at the pasture bars a-
drin' home the cows.

"I'm off to New York to make my for-
tune," says I, gay and easy, "so wish me good
luck!"

She stood still like for a minit there in the
shadder of the maples, a-holdin' on to the post
and lookin' up as if she didn't understand.

"Aint you glad?" says I wonderin' why her
eyes made me feel so sorter uneasy.

"Why, yes," she makes answer in a hesitat-
ing way, "but aint it dretful sudden?"

"Maybe 'tis to some, but 'tain't to me. I've
been thinkin' of it these two months. I hev a
place in Jim Barker's uncles' store—and I'm
goin' to take it."

She took out the top bar slow like and patted
Brindle's head.

"What'll the old folks do?" she says, and
then I know partly why her eyes made me un-
easy. But I wouldn't own to her I knew—a slip
of a girl as had never been to the city in her
life and didn't know how a horse-car looked!

I spoke up loud and confident. "Oh, they'll
do all right! and besides, a man's first duty is
to himself. He's got ter make jest as much out
himself as he ken—and I'm goin' to begin."

I had heard that sentiment at a perlitical
meetin' and it had sounded first-rate, but some-
how here in the fields with them gray eyes
lookin' at me, it didn't seem to have the same
ring.

"Maybe your right, Is'el, maybe you're
right. I don't know much about sich things.
But anyway, I wish you 'luck,' an'—an'—
all happiness."

With that she turned and hurried up to the
house a-leavin' the cows starin' over the bars in
a perfect muddle o' 'magement. Dem fool that
I didn't see anything in that, but I didn't! I
druv the cows home myself, and then cut across
the fields to the village.

The next day I was in the city, a free and in-
dependent citizen, but somehow it wa'n't half
the satisfaction I expected it to be. Jim Bak-
er's uncle's store was one o' they sell things at
wholesale in, and my part o' the work was to
tumble 'round bags and boxes and sich things.
It wa'n't exactly what I'd looked for from
Jim's account, and I didn't relish it.

As the weeks went by I come to relish it
even less. The men I worked with was freer
and independent in their words than any-
thing else. Between dust and oaths I was
pretty nigh choked to death. And the noise at
night was worse'n a Methodist revival in full
swing. I couldn't deaden it down under the bed-
clothes, 'cause there wa'n't enough o' them, and
I couldn't groan out against it, 'cause the man
in the next room threw things at the wall if I
did. Boardin' house biscuits wa'n't even sec-
ond cousins to home-made biscuits, and boardin'
house girls—well, I got over my notion that all
girls was Keziahs in pretty short time.

I begun to think there wa'n't so much room
in cities as I had imagined. I come to hev
dreams o' rock pastures and maples and hem-
locks, and along o' them come Keziah's face,
sweet and still as it had looked that afternoon.

Owin' to dust and not relishin' my vittals, a
scratchy kind o' cough fastened onto me, and
some fever with it o' nights. I was lonesome,
I tell ye, and finally I couldn't stand it no
longer. I says to myself, "Maybe this is the
way presidents begin, and maybe if I kept on
and this cough didn't kill me, I'd come to be
one some day, but I'll be hanged if I'll take the
chances—I'm goin' home!"

It wa'n't much of a "See the conquerin' hero
comes" feelin' that I hed when I got out o' the
cars. I didn't feel nigh so big as I hed planned
to, when I went away, but I kalkulite the
President goin' to his inauguration wa'n't no
gladdern's I was to see them old hills again. I
was so glad I couldn't wait for no wagon to
carry me, but struck out across the fields on
foot. It was jest the pleasantest afternoon in
September I ever see. The trees had begun to
turn gold and crimson, and the bees was
growin' lazy, and the late flowers was smilin'
contented, and the clouds nestled off on the age
o' the fields as if there wa'n't no better place in
the whole world.

I didn't mind the soraggly bushes; I didn't
care a mite for the holes they tore in my
trousers. I just took clean satisfaction in
stummlin' over them and the hummocks. The
hills, too, was so easy I almost wished there
was more of 'em. It seemed as if the smell o'
them hemlocks down in our pasture was differ-

ent from all other kinds, and when I got to 'em
I slowed up to drink it in.

I hedn't thought o' Keziah—somehow I
wouldn't let myself. I had had a strange sort
o' setness against it. But now I was comin'
near where she lived and I couldn't hold back
no more. I begun to tremble and a dull sort o'
ache crept into my heart. I went to the
maples we'd stood under that day and looked
at the bars where I had seen her last, wonder-
in' if I'd ever stand there again with her—me a
fellow that had started out so loud and ended
up so limp.

It was most sundown, and I wondered if
she'd got the cows yet. Then as if in answer
to my question I heard a soft tinklin' and saw
her comin' over the edge o' the hill, lookin'
like a picture I'd once seen in the city. Her
dress caught against the bushes and her sun-
bonnet lay way back on her head, and her hair
strayed 'round her face like fine, soft silk.

Like a flash it come over me, the reason I
wouldn't think of her was because I loved her;
because I was wide awake and knew that I
wanted her and her only of all the women of
the world.

I waited like one waits for the benediction in
church, and as I watched the little figure mak-
in' its way down the hill, it come to me thet she
was the one of us who was "makin' the most
of herself." She was the brave one stayin' here
on the farm with the old folks; I was the coward
goin' off to the city. I took off my hat and
bowed my head. I couldn't look up any more,
and I was glad the clump o' maples hid me
from her. I couldn't speak to her with all
them selfish plans and ambitions left so little
way behind. I would wait.

Slowly she come driving Brindle and Pet and
Boss just as she'd done that other time when I
hadn't had no eyes to see. She let down the
bars and spoke gentle to each cow as it went
through, but after the last one had stumbled on
into the footpath, she rested her arm on the
post and looked off to where night was comin'
up slow in the east.

Her eyes was sad and her face was thinner
than it hed been. My heart ached and yet beat
for gladness at the same time. Maybe—maybe
—and then I sort o' lost the grip o' the reins.
I forgot I'd been selfish, I forgot I'd been blind,
I forgot I'd failed, I forgot everything except
that I loved Keziah.

"Ziah, dear," I says, husky, "I've come
back for you."

She started with a little cry, for I frightened
her steppin' out so sudden, but in a minit drew
herself up and away as only a woman can.

"I don't understand. I aint a city girl—
you went away to be a great man. I—I—don't
understand."

There I stood up full before her in my torn,
dusty clo'se and grimy face.

"I aint a great man," I says, glad o' the
chance to be ashamed. "I aint a great man
or even a brave one, and I never will be. But
I love you true and honest!"

She looked up at me for a long minit and
then under the shadder o' them maples, without
a question, she took me as I was for better or
worse.

The birds on the treetops and the butterflies
on the flowers, and the bees in their hives
wa'n't nigh so happy as we was there by the
pasture bars, knowin' little and carin' less
whether the cows was in the barn or not.

And that's how I missed bein' President.
Not very near, you think, but 'bout as near as
a quarter on 'em get as run, I reckon, and a
big sight nigher'n the other quarter that lays
out piles o' money to get there.

Ze-ziah, she thinks if I'd kept on I might 'a'
been there—and maybe I might; but bless me,
it orter be time for her to hev something for me
to do—guess I'll go and look her up.—H. G.
Duryee in Port and Transcript.

Light.

[Written for the RURAL PRESS by C. P. NETTLETON.]

The thought of faith sufficed to perfect sight,
When He who keenly looked read happy trust;
No less shall now Himself bring joyous light,
If faith will ask from swe' contributions dust.

MERCIFUL TO HIS BEAST.—A pathetic scene
of kindness to animals was noticed in New
York, rather singularly, on the day of the
death of Henry Bergh. A big dray horse had
fallen from exertion. The driver did not flay
him and urge him to get up—he was evidently
a man of human feelings—but instead of doing
so, placed the harness as comfortably as possi-
ble, unhitched the truck and drew it away, and
then placed the collar under the beast's head as
a pillow and protection from the snow, covered
him not only with a blanket but the overcoat
from his own back. Did the dumb animal ap-
preciate such kindness? Any one would have
admitted that the horse was grateful, for he
raised his head and licked his master's hand,
as a dog would have done, and grunted in a
seeming effort to murmur his gratitude.—Ex.

"ARE YOU THE HORSE EDITOR?" inquired
an innocent looking young woman, approaching
the desk of that functionary. "I have that
pleasure, Miss," he replied, taking off his hat.
"Can you answer all sorts of questions about
horses?" "Well, I rather think I can," he
said, with a prideful swell in his bosom. "Oh,
I'm so glad," she twittered. "Will you tell
me the difference between a bay horse and a
sea horse?" As she went out of the office she
smiled back at him, but he sat gloomingly at
his desk and said nothing.

My Baby.

[Written for the RURAL PRESS by MAUDE S. PRABLER.]

Dear little eyes that look so clearly into mine,
With never a thought behind their shine,
God might not know.
Dear little hands that softly grasp and cling;
Dear little ears that listen when I sing—
Why do I love you so?

Dear little curls that cluster round your head,
Dear little voice that ne'er a word has said,
Stay on my breast.
Dear little feet that soon from me must stray,
Here is thy warmest welcome night or day—
Home is the best.

Dear little soul in God's own image made,
Dear little frame sometime in dust to fade;
The Lord will spare thee many happy years,
Despite thy mother's foolish fears.

Country Homes Should be More Beautiful.

The ensuing article from the *Oregonian* would
be quite as good were "California" substi-
tuted for "Oregon" wherever the latter word
occurs:

A farmer from this region who went East
a year or so ago came back satisfied that Ore-
gon is the best country on earth, but determined
to make his farm look more like farms he saw
in Iowa and Illinois. There they work hard,
and early and late, yet for all that their farms
struck him as wearing an appearance much im-
proved over the usual run of farms in Oregon.
There are some tidy and even beautiful farm
homes here, but the majority of Oregon farms
do not present so attractive an appearance as
all homes should have.

A farmer would be surprised to find in any
town or village that claimed public notice, any
home possessing so little adornment, or even
neatness and comfort of appearance, as his
own home would display if it was trans-
ported suddenly from the country to the
town. He seems tacitly to consider that
towns are to have a monopoly of all beauty
and culture, even the beauty of vegetation
and the culture given by the plow and hoe. He
actually rules himself to a lower order of civili-
zation and enters a protest against being classed
as a lover of beauty or a grower of anything at-
tractive. The town resident hires man and
team, wagon and plow, to do the work required
to beautify home for him, and keeps men delv-
ing and digging to realize what the farmer can
do himself or by his team and hired man. The
odds seem against town improvement, and in
favor of country life and homes; but the farm
team must plow the fields, and can not lose an
hour to beautify the farmer's home. The man
who helps is needed in the field, and cannot till
the garden as it should be done to command
success.

This presentation is forcible and strong, and
unfortunately it is abundantly true. If the
farmer had a son or daughter who were married
and living in town, and saw their home neg-
lected, it is more than likely he would offer to
send the team and teamster in to help improve
the city home. Why cannot he see the need of
such improvement for himself, and make the
acre or two surrounding his country home vie
in beauty and charm of cultivation and plant
life with beautiful homes everywhere? There
are generally wife and children to tend the
home spot and make it beautiful, and there
seems no excuse for the neglect so commonly
realized of farmers' homes lacking grace and
comfort.

EDUCATION AND POPULATION IN JAPAN.—The
people of Japan are greatly interested in the
education and elevation of women. In 1887
there were 128 new schools and societies for
girls and women established in that country.
These are in addition to the public schools,
which have long existed. Considering the
density of population in Japan, the small
number of populous towns is very striking.
Only five have a population exceeding 100,000,
namely: Tokio, 900,900; Osaka, 313,890;
Kioto, 255,400; Nagoya, 126,900; and Kana-
gawa, 104,320. Six only have a population be-
tween 50,000 and 100,000. This peculiarity in
distribution is due to the circumstance that
Japan is not an industrial, but an agricultural,
country. At the date of the last census there
were 8898 Japanese abroad, of whom 4356 were
in Corea, 2068 in China and 817 in America.

HOW TO HAVE ROSES IN WINTER.—The fol-
lowing is an extract from "Arabian Society in
the Middle Ages," by E. W. Lane, page 163,
and is given to our readers for what it may
prove, on trial, to be worth. "Some persons
preserve roses during the whole of the year in
the following manner: They take a number of
rosebuds and fill with them a new earthen jar,
and after closing its mouth with mud, so as to
render it impervious to the air, bury it in the
earth. Whenever they want a few roses, they
take out some of these buds, which they find
unaltered, sprinkle a little water upon them
and leave them for a short time in the air,
when they open and appear as if just gathered."

FUMIGATION is said to have originated with
Acon, a physician of Agrigentum, who is said
to have first caused great fires to be lighted and
aromatics to be thrown into them to purify the
air, and thus to have stopped the plague at
Athens and other places in Greece about 573
B. C.

Stage-struck Women.

There are no doubt hundreds of girls in this and other cities who have a great hankering for the stage. There seems to be just now a craze for this profession, and almost every day we hear of a stage-struck maiden leaving home to try a theatrical career. The success of Mrs. Langtry and Mrs. Potter has quite likely had much to do in turning their heads. In the blaze of such triumphs, home-life becomes humdrum, the drudgery of the shop, store or school irksome, and the atmosphere behind the footlights alone is fascinating. Where else is so much money to be made, to say nothing of fame, brilliant dresses, seeing one's name in the papers and one's face in all the show windows. Are there not Clara Morris and Ellen Terry and Modjeska and many others who make hundreds of dollars a night and are the idols of the public?

Of course it is true there are scores of poor girls in the stock company, the traveling troupes, the dime museum contingent, who are glad to act for just enough to find food and clothing, and who are never mentioned in the press or show-bills. But our stage-struck young lady just turns up her pretty nose at the thought of these.

And so it happens that the glamour of the footlights and such successes as those of Mrs. Langtry and Mrs. Potter have spoiled lots of nice girls who would have honored a good home and made happy wives and mothers. It is not impossible they might make good wives and mothers and go on the stage, but the history of the theater does not encourage the thought. It is only the successes of the theaters, not its failures, we hear of; but the successful actresses may all be counted on the fingers of one hand. The profession pays well those who succeed, but there is certain to be ninety-nine failures out of every hundred, and then there is no mode of life so full of hard work, disappointments, discomforts and humiliation.

Then to be a leading actress, as the phrase now goes, one must not only be familiar with the principal female roles of the great plays, able to give their full and true meaning, but such a course of life implies the possession of a costly wardrobe, the maintenance of a splendid establishment and a wide acquaintance with the leading managers throughout the country. This is something the majority of American girls do not possess, and however brilliant their talents cannot hope to attain without years of toil and disappointment. Then they should remember that the public is fickle and is fond of new faces and soon tire of the old ones, no matter how pretty they are.

But this is not the worst feature of the case; no career unsexes a woman so soon and so hopelessly as this cruel and drudging mode of life. She must travel from year to year and encounter all sorts and conditions of people. If all the old stock actresses would tell the story of their career it would wipe out in total eclipse all the triumphs of such actresses as Mrs. Langtry and Mrs. Potter. It is a life of hard study, bitter disappointments, insults open or covert, thankless neglect and premature old age.

MOTHERS-IN-LAW have been the butts of irreverent jests by scalawag sons-in-law since the world began. But the very boldness with which the latter have slandered them is the best evidence of the amiability of the one and the cowardice of the other. Were mothers-in-law such viragos as run-away or braggart sons-in-law claim, the latter would not venture to open their mouths against them. It is because they are amiable, gentle and good that so many men dare to swagger and sneer at them. All the world feels a kindly interest in the German Emperor. He is a true and manly man, and the best evidence of it was his gladness to meet his mother-in-law.

THE American hog is the terror of the world. John Bull started the cry, for he loves beef better than bacon; and since then several foreign Governments have prohibited the importation of swine products. But as the prohibition does not cover bologna sausages, a semi-production of the hog, our people may complacently enjoy the market that is made for our canine products. What is lost by the aggressive character of the American hog may be made up in the docility and adaptability of the American dog.



"THAT BLARSTED BANANA PEEL."

YOUNG HOLKS' COLUMN.

"This Little Pig."

It is not the little pig who only went to market, and let another little pig stay at home, and still another eat all the roast beef. You have heard all about those five pigs ever since your pink toes were first counted, as you count baby's now. The one real little pig this true story is about was smart enough to do all five things herself. And this is how it happened:

We four, and no more, went to ride one day. On the way home, who do you think had come into the buggy, to make five for Fanny to draw? It was this little pig, then hardly larger than your pussy. She had two black spots on her round white body, but you would not have seen them if you had been riding with her. How she did squeal when the man tried to tie her kicking little legs! So she was first wrapped in an old shawl, that the cords might not hurt her. Dressed in this way, and riding in a buggy, she looked so much like the picture in your book that we all said, "This little pig went to market."

Though her new home was as nice as a pen could be, the little pig did not like it at all. Where were her mother and her brother and sisters? "I will go and see," said Piggy. She made a very small hole a little larger and crept through. Away over the hill, behind the hay stacks, she trotted, with her little white tail in the air. She was soon out of sight in the tall prairie grass, but I heard her say quite plainly: "Kwee, kwee, kwee, kwee! I think I can find my way home."

But she could not. I could have told her so myself if she would have stopped to listen. For Piggy's first buggy ride had been three miles long. However, experience is the surest teacher, even for little pigs.

When it had grown quite dark between the haystacks, I heard a tired little voice say sadly: "Kwee, kwee, kwee! I never can find my way home."

For a long time after this, Piggy seemed willing to make the best of it. She was firmly set in her own mind that a well-behaved pig, who never did any harm, should be allowed the freedom of the barnyard. At last, she brought us around to her way of thinking, which saved her the trouble of planning out a new way of escape, as she had done every time she was fastened in.

So, when Fanny went to the lake for water, Piggy always trotted behind like a little colt. At night, she soon found out a better plan than cuddling alone in the straw. The way I came to know where she slept was this:—

A pale little boy, out of breath with running, burst into the dining-room just after I had lighted the lamp. There was a little tremble in his voice when he said:

"Oh! there is something alive in Fanny's manger. I was putting in more hay for her to eat to-night, and I felt it."

He was sure it could not be the pig. But, when I asked him if he really thought it was a bear or a wolf or a fox, he grew braver with each laughing shake of the head, and concluded to look again. When he found that it was the pig, after all, she was given another hay blanket for her funny bed under Fanny's nose.

As for all the other pigs in the world, our one all alone seemed to think that they had gone out of it. She certainly could not find them, so "this little pig stayed at home."

This was before she took her second journey. One day, a buggy drawn by a black horse passed within Piggy's sight. Never stopping to notice that this horse did not have Fanny's brown nose, Piggy thought:

"There goes Fanny; I shall go, too."

No dog in the land ever trotted behind a team more faithfully than this funny pig. Two, four, six, eight, ten miles she followed at the

heels of the horse she had mistaken for her friend.

A week later, we received a postal card from another town. It said:

Dear Sir:—I am told that it is your pig that followed my buggy from F. last Tuesday. She is safe at my farm, where you can call for her when it is convenient.

There was nothing for it but to make the best of Piggy's blunder, and bring her home again. But, as strange horses looking somewhat like Fanny might pass along at any time, we were obliged to make poor Piggy a prisoner. She minded the loss of her freedom less because of Thanksgiving and Christmas times, when "this little pig had roast beef," or other dainties quite as good every day. But the time came when she had none. She was even obliged to submit to having her ears of corn counted out for her, because the pile was growing very small.

The little boy who used to care for her had another home now, where there were little twin calves for him to feed. He used to say that little boys were good to keep milk from souring, but Piggy could not see that any more of it came into her trough now he was gone. She was once more at liberty, Fanny's strong hoof having helped her out; but Fanny's next neighbor in the barn was Jersey, the cow. If Piggy ever got into her manger by mistake, she was treated quite rudely.

So, with one trouble and another, we began to feel sorry for the pig, and engaged board for her at a farm.

Once more Piggy trotted behind the buggy to a land of plenty, where we left her with other pigs for company. Perhaps it was because this farmer also kept guinea fowls, which she heard always saying, "Go back, go back," that we heard her familiar grunt at our door the very next morning. Piggy had found her way home alone from two miles away, and now rests from her travels. Though of roast beef "this little pig had none" after she came back to her home, we all felt that some honor belonged to her for her faithful attachment to us all. So I will tell you what she now shares with the family.

Baby is very fond of making "patty cakes," and Clara tells how to make them. She is always ready with P for Papa, C for Clara, E for Baby Evelyn—herself—while mamma has a bite out of each. For, strange as it may seem to older little folk, our four-year-old girlie thinks quite as much of these "make-believe" cakes as she would of real ones, and is grieved if each one has not a share in baby's baking.

One day, little Clara was in too great a hurry with the C to mark her own cake, and O came out instead; but mamma sang right along, "Toss it in the oven to make Piggy grow." And now the baking is never finished until we have sung:

"Pat-a-cake, pat-a-cake, baker's man
Yes, I do pat-a-cake as fast as I can.
I roll it and prick it and mark it with O,
And toss it in the oven to make Piggy grow."
—Christian Register.

WEALTH IN SCHOOLHOUSES.—There are today in the five States of Ohio, Indiana, Illinois, Michigan and Wisconsin more than 50,000 schoolhouses, in which schools are maintained from three to ten months every year. The value of these buildings, with the grounds, is considerably over \$80,000,000, which is more than one-half that of all other public-school property in the Union. Nearly 3,000,000 children annually receive instruction in the public schools, while more than 85,000 teachers, a large number of whom have been trained especially for their work, are employed as instructors. The total amount expended each year for the support of these schools somewhat exceeds \$32,000,000, or more than \$8 for each child of school age within the States.

ACCORDING to the Nevada papers the water in Lake Tahoe is lower than ever.

DOMESTIC ECONOMY

Corn-Bread.

The difference in the quality of granulated or new process corn-meal, and of the stuff sold at most mills and groceries under the name of corn-meal, is equally as great as the difference between the best brands of patent and the poorest grades of "red dog" flour; yet there are only 40 or 50 mills in the United States that make corn meal by the new or gradual reduction process. To be sure, there is a vast difference in the quality of corn raised in different sections of the country, but the best varieties grown are always readily obtainable. And if millers and grocerymen would furnish a supply of choice corn-meal and corn-flour suitable for culinary purposes, they are such delicious and nutritive articles of diet, and can be prepared so easily and in such a variety of methods that they would soon win their way to popular favor, and be found in general use upon the tables of all classes. It is just as impossible to make good corn bread of poor corn meal as it is to make good wheat bread of poor flour. But until the average individual realizes this fact a large proportion of the corn-meal offered for sale will be as measly looking and worthless as it is at present, and consequently a large proportion of the corn-bread made will be unfit to be eaten.

Here are a few good recipes for corn-bread:

Dodgers.—Mix a teaspoonful each of sugar and salt, with a quart of corn-meal, and scald with boiling water till a paste is formed sufficiently stiff to retain its shape without spreading, when placed upon the griddle. Mold into cakes three or four inches in diameter and half an inch in thickness, put a bit of butter about the size of a pea where each cake is to be placed upon the griddle, and as soon as melted lay the cake upon it. Fill the griddle in this manner with cakes, and when they are brown on the lower side place a small bit of butter on each of them, turn over and gently press as close to the griddle as possible, with a knife or cake paddle. After being turned on the griddle and browned on both sides the cakes can be transferred to a baking-pan and finished in a hot oven; or, if more convenient, they can be baked altogether on a pan in the oven. Such dodgers can be baked in 30 or 40 minutes, but are sweeter and nicer when baked a longer time. The heat under the griddle should be moderate so as not to scorch the dodgers, and they may be turned several times if necessary.

Corn Crusts.—Scald a pint of corn-meal, into which a teaspoonful each of sugar and salt have been mixed, with a pint of boiling water. When sufficiently cool stir in a well-beaten egg, spread thin in a greased pan and bake in a quick oven.

Corn Pone.—Mix a teaspoonful each of sugar and salt with a pint of corn-meal, scald with a pint of boiling water and let stand till it swells and is about lukewarm, then add a half-ounce of compressed yeast, dissolved in a little warm water. If too stiff, reduce to the proper consistency with warm water, put in a well-greased baking pan, let rise, at a temperature of about 80°, for four or five hours or until light, and bake till thoroughly done in a moderate oven. Pone should be eaten fresh and hot, but is very nice when toasted, even after it is several days old. Home-made yeast may be used in place of compressed, but it requires so long for the pone to rise when mixed with ordinary yeast that it is generally slightly sour when baked.

Corn Muffins.—Mix together a pint of corn-meal, a teaspoonful of salt and two teaspoonfuls of sugar. Scald with a quart of boiling milk, and when sufficiently cool stir in the yolks and whites of four eggs beaten separately. Bake in shallow bread or pie pans, gem cups or muffins. If slappers or griddle cakes are desired, thin to the proper consistency and bake on a griddle.

Milk can be used instead of water in making all kinds of corn bread, and is preferred by many people; but a majority of corn-bread eaters think it is sweeter when mixed with water. It is difficult to give the exact proportions of meal and wetting in making corn-bread, as so much depends on the quality of the meal. Coarse granulated meal frequently takes twice as much water to swell it thoroughly as finer meal does, and care should be taken to always have the dough the proper consistency without closely following the recipe. Boiling water or milk should be used for scalding meal, as there is a vast difference in the quality of corn-bread made with water boiling briskly, and with water that has not quite reached the boiling point.—Mrs. E. P. Ewing in *Indiana Farmer*.

A NEW DEVICE FOR WASHING WINDOWS.—An Englishman has invented a machine by the use of which a servant can clean a window with safety, washing the sash and glass on the outside while standing on the inside. A belting is ingeniously arranged, and a water spray is fixed on the traveling cleaner, so as to play on the glass just above it, when fed by a rubber pipe, which ends in a bucket within the room. One hand of the operator squeezes a ball of rubber which drives up the water, while the other hand works the belting.

CREAM PIE.—Take one pint of milk, one heaping tablespoonful of flour, three tablespoonfuls of sugar, one tablespoonful of butter, two eggs and flavor to taste. Bake with one crust, the same as a custard pie. Beat the whites of the eggs to a stiff froth, spread over the pie after it is baked, and brown in the oven.



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W. B. EWER.

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SAN FRANCISCO:

Saturday, May 26, 1888.

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Veterinary Surgeon—Dr. A. E. Buzard.
Fireman's Fund Insurance Company.
Derricks—H. C. Shaw Plow Works, Stockton.
Orange Seed—J. Ivanovich & Co.

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The Week.

The weather has been cool for the time of year, and in certain parts of the State the sky has been considerably overcast. Though no rain falls, the condition of air and sky lessens evaporation, and growing plants are making the best possible use of all available moisture. So notable is the result produced in some parts of the State, that grain has made good growth during the week and promises better than a week ago. Though this may help out some growers considerably, it is not wise to anticipate any great effect of such weather on crop aggregates. Commercial bears make the best possible use of every degree on the thermometer and every cloud in the sky to depress prices at this season of the year, and to entrap the unwary into contracts. There is every reason to expect very good grain and hay prices, and we hope the growers and not speculators will secure what benefit there may be in them.

Fruit crops are coming on apace, and newly planted trees and vines are favored by the weather. Where to get help is the great question. Nor are the fruitmen alone in this search. The hop-growers are on the anxious seat, and the new beet-growers at Watsonville want a hundred men to secure their crops from the weeds.

Origin of Races.

Europe, Asia and Africa all meet on the shores of the Mediterranean. Africa is surely the original home of the black man, Asia of the yellow man, and Europe of the white man.

When we get back from the point of contact in what is now Turkey, we find each race more and more distinct till all the shades are lost, and we have the distinct type, pure and undefiled, and, as we approach the center, the Mediterranean, we find traces of mixture, till they are so blended that we cannot say which prevails.

It is manifest that at some remote period these three races met each other near this common center. How? Simply as rambles, singly, or as families. The earth was not crowded then. Man did not increase very fast. The contest for life against wild beasts, famine, pestilence and accident was fierce and uncertain. Government, armies, planned invasions were unknown. It was simply as hunters for game or curiosity that drew these races to the common ground.

And when they saw each other, what a surprise it must have been. Imagine, if you can, black and white people meeting for the first time. It is impossible to think what might happen. A fright or a fight was inevitable, and both are possible. But it is certain that they did meet, and eventually mingled, and produced an intermediate race.

But the white man also met the yellow Asiatic, and the same thing occurred—mixed families. The three seemed to come pell mell upon each other, and produced varieties and shades innumerable. In Persia the Caucasian prevailed. In Arabia the Asiatic took precedence. The Moors of Africa might have been a cross of white and black, or Arab and black.

If we now draw a line from Norway to Arabia, we shall find at one end, light hair, blue eyes and whiteness; at the other, black hair and eyes, and skin; between, a gradual ascent from the one to the other. Let the line run to China and Japan, and the yellow deepens as you go. It seems a little uncertain whether the Chinese or the Malays were the original type. A line from Arabia through Africa brings us gradually to the black Hot-tent.

As the races met and the mixed families arose, it would seem that they showed more courage and force than the pure races, and drove them back continually. Thus the dark hair and eyes penetrated to France, to England, and even further north in some degree. The North of Africa was lost to the negro, and the pale faces entered India and Tartary.

While man remained a savage without a local habitation, the name applied to the tribe, or family, rather than the country. Government like that of Abraham was in the father, who ruled his children and his slaves. Polygamy was common, and the Chief and his sons became indeed the fathers of their people. Hence the family likeness in the Jews and other small nations. They made war to extermination of all the males of mature age, and slavery for the women and children. The rising generation were of the blood of the conquerors.

This was the origin of the feudal system, and gave national characteristics. The blood of the Chief, or King, was diffused among his nobles, and they, on the same plan, bestowed it on their vassals. The whole clan became one family.

Thus the Western nations took their features and complexion not so much from the climate as from their actual descent. When monogamy came into fashion it somewhat broke the line and the distinctive features passed away. More recently friendly treaties and travel and inter-marriage have brought Europe almost into a homogeneous mass as to the nobility, but when you come to the classes that do not travel you know them and their location by their features and dialects.

The American people are likely to be still further compounded and their race and origin lost in a chaos of multitudinous ancestry. The United States is another center where we meet to contend again for place and supremacy, not by battle, but by lawful and peaceful emulation. All the races of the earth are represented here, either by a primal or a secondary specimen. We are told that the fittest will survive, but the fittest for what? That is an important question for us. What shall our race be? Shall the people of this republic be

the most intelligent, the most beautiful, the most moral on earth, or shall some other quality, some crooked deformity, take charge of our country and make the most unscrupulous cheat the type of the future?

It is for us to say. If we set up such a moral atmosphere that only honor and beauty can thrive, why honor and beauty will come to the front and all else fade and die out. But if we permit intrigue and villainy to take all our high places, what we sow we shall reap. The majority of our people are on the side of virtue, and it will in the end prevail against all its enemies. They die. Virtue lives.

Fairs of 1888.

Repairs and refitting are now in active progress on the State Fair grounds in Sacramento. They include an entire renewal of the underpinning under the grand stand, replacing with brick piers the old posts which have yielded to contact with the soil. There will also be a renewal of the apartments under the grand stand, so far as the carpenter work goes. If we had our way about it, we should like to refit the whole basement of the grand stand morally, as it is about the worst place in this way imaginable.

An improvement at the park which will be generally appreciated is the addition of new space on Twenty-third street. The sheep and swine pens will be removed to this part of the grounds. Cattle and horse stalls will be constructed around the outer edge of the property purchased. The carriage entrance is to be changed to Twenty-third street, coming into the grounds on G street, exactly opposite the foot entrance on Twentieth and G streets. This will obviate the necessity of driving around among the stalls where the horses are being cared for, and where there has heretofore been some risk in passing them. The new entrance will land exactly where the roadway crosses the track on the east side of the grounds.

We give below a list of fairs to take place in this and adjoining States the coming season, arranged in the order of their dates, so far as known. We intend to republish it, revised from time to time, and shall be grateful for any aid which officers of associations may give us in correcting errors and filling gaps:

Los Angeles—Live-Stock department.—Aug. 6 to 11 (Hort. department, October).
Ione—26th Dist.—Aug. 7 to 10.
Mechanics' Institute, San Francisco.—Aug. 7 to 10.
Santa Rosa—Sonoma Co.—Aug. 13 to 18.
Petaluma—4th Dist.—Aug. 20 to 25.
Placerville—8th Dist.—Aug. 20 to 25.
Chico—3d Dist.—Aug. 21 to 25.
Oakland—1st Dist.—Aug. 27 to Sept. 1.
Marysville—13th Dist.—Aug. 27 to Sept. 1.
Sacramento—California State—Sept. 3 to 15.
Santa Barbara—10th Dist.—Sept. 11 to 14.
Independence—18th Dist.—Sept. 17 to 21.
Reno—Nevada State—Sept. 17 to 22.
Salem—Oregon State—Sept. 17 to 22.
Stockton—2d Dist.—Sept. 18 to 22.
Concord—Contra Costa—Sept. 24 to 29.
San Jose—S. Clara Valley—Sept. 24 to 29.
Susanville—11th Dist.—Sept. 24 to 29.
San Luis Obispo—16th Dist.—Sept. 25 to 29.
Salinas—7th Dist.—Oct. 1 to 6.

GREAT WORMS ON THE VINES.—The vineyards in the upper part of Napa valley are suffering considerably from great striped or spotted caterpillars. They are larvæ of two species of Sphinx moths or humming-bird moths. The moths are seen hovering about the flowers in the evening and are particularly partial to verbenas. These worms have done much harm in other years in other vine districts. Around Woodland and Fresno they were very abundant many years ago. There are two ways at least of fighting this pest. The moths may be stricken down and killed in large numbers in the garden and thus future hatches of worms prevented. The best way to treat the worms on the vines is to spray with Paris green—one pound to 150 gallons of water. This is death to all leaf-eating vermin.

AMERICAN SOUTHDOWN ASSOCIATION.—The Seventh Annual meeting of the American Southdown Association will be held in the Illinois National bank building, Springfield, Ill., May 30th. Parties who have heretofore not thought a public record of Southdown sheep necessary, are now being led, by the increasing demand for recorded animals, to seek the registry of their breeding stock. This fact, with the growing interest in mutton sheep throughout the country, is encouraging to every member of the association and patron of the record. S. E. Prather of Springfield, Ill., is secretary of the association.

Fruit Notes.

The fruit is beginning to move eastward overland, although no assurance has been obtained from the railway authorities as to rates to be charged this season. Our Vacaville correspondent gives a very interesting account of these first shipments in another column.

The representatives of the Fruit Union made a forcible statement to the Railway Managers' Convention of the needs and demands of the growers for less rates and better time than were given last year, but there does not seem to be any disposition on the part of the railway people to act in the matter. It is still interesting to give an outline of what was claimed, even though it is not granted. The report in the *Chronicle* says:

Mr. Hatch said that the California fruit-growers could not reach the English market under favorable conditions unless there was a change in the present system of fruit-shipping as well as in the transportation charges. The Fruit Union wanted the ten-car-train arrangement so altered as to permit of the carrying of fruit through to New York and other cities east of Chicago by the single carload. Under the present arrangement the trainload rate does not apply to New York shipments unless five of the ten cars are sent East from Chicago. This practically shuts California fruit-shippers out of the far Eastern market. They cannot afford to pay the present high single-carload charges. A rate of \$300 a car in ten-car lots to Chicago and of \$400 a car for single cars in this same train to New York was asked for, and if it were granted he had no doubt that the shipments would be greatly increased. The union was ready and willing to continue under the present system of ten-car trains, but he thought that it ought not to apply farther east than Chicago under the present restrictions.

Mr. Pratt of the firm of Pratt, Gilman & Francis of Minneapolis, who was present, wanted an "open train," in which the shipments were not controlled by any man or set of men. He was willing that the Southern Pacific Company should receive the freight in its own way and control all the shipments.

Mr. Hatch said that single-car rates to Chicago were too high, and that they should be reduced to \$200 a car for slow freight to Chicago, and \$400 or less on passenger trains.

The labor supply continues to be the uppermost topic in the fruit districts. All available supplies are being drawn in. Quite a number of Japanese are being secured, but there is no great supply of this material, most of those now in the State being here on educational errands, and they find plenty of profitable housework to do. However, some are appearing in the fruit districts. Reports of the negro experiment at Fresno continue in the main favorable. A. B. Butler of Fresno writes to the State Board of Viticulturists that the colored help that he has recently secured from the Southern States are making capital field hands, and that he is using 100 of them to advantage in his vineyards. The pay averages \$15 per month. Even the boys are stated by Mr. Butler to be familiar with plowing, handling horses, etc. Should the experiment with colored help prove a success this year, many more will be imported next spring. Dr. Hastings of Fresno, who is trying the same experiment, states that his colored help is about the best he has.

Petaluma seems to have advanced most quickly in the employment of school-children. The schools of that city closed last week for a three months' vacation and the Petaluma cannery opened at once on cherries with 75 hands.

The influence of the assignment of the J. Lusk Canning Co. upon fruit contracts made by their representatives is quite a question in districts where they have been buying. Our Vacaville correspondent says the agent who bought fruit in that district has revisited the growers and assured them the fruit would be taken as agreed. At a meeting of the directors of the suspended cannery held in this city on Monday afternoon of this week, and it is reported that William Lawson, Barry Baldwin and C. E. Palmer were appointed by the creditors to confer with David Wilcox, the assignee, as to the means of immediately disposing of the plant, so that the purchaser may use it in the coming canning season. A public statement of the assets and liabilities has been made, the total liabilities, \$253,680.41, and total assets, \$39,530.36. The calculation probably is that the purchaser of the plant will corral the fruit contracts, which we imagine are rather desirable property. It is announced as probable that the whole assets will be sold at auction.

SENATOR STANFORD and wife will shortly go to Carlsbad.

The Maple Sugar Product.

Now that it has been demonstrated, as recently stated in the PRESS, that one of our native maples (*Acer macrophylla*) is a satisfactory source of maple sugar, it is possible that California may grow to be a leading maple-sugar State. These trees are naturally abundant in some parts of the State, and are very satisfactory for forest planting, owing to their easy growth from the seed and rapid progress afterward. In view of these facts a few notes, which we collect from an Eastern exchange concerning the maple-sugar production in Vermont, may be interesting. In reference to the distribution of the Eastern sugar maple we read as follows:

Though it does not elsewhere usually form so large a proportion of the forest as in Vermont, the sugar maple is a widely distributed tree, growing in Newfoundland and south through the Northern States, along the Alleghenies in the Southern States, and even in Florida a variety of the species is found. It is not rare in any large extent of territory in the Northern States east of the Mississippi. There are many large, thrifty maples in the forests of Michigan, Ohio, Pennsylvania, West Virginia, etc., but they do not in general yield sugar like the maples of Vermont; the sap is not so sweet and the quality of the sugar not so good. Even here there is a difference in the quality of the sap and the sugar which it makes, according to the situation of the trees. Maple growing in a low, damp soil or on the northwestern slope of a hillside produce a poorer quality of sap, and generally less in quality, than trees in other situations.

The two States—Vermont and New York—produce about half the maple sugar and syrup made in the United States. According to the last census, the total product of maple sugar in the United States was 36,576,061 pounds. Of this, Vermont made 11,261,077 pounds—over 2,000,000 pounds more than a fourth part of the whole. The total production of maple molasses in the United States was 1,796,048 gallons, equal to about 14,000,000 pounds of sugar, making the total product of maple sugar and molasses equal to 50,000,000 pounds of sugar. Vermont made very nearly one-half of this total.

Maple sugar is made in 23 States. Six States made, as reported by the census of 1880, more than 2,000,000 pounds each, as follows:

	Pounds.
Vermont.....	11,261,077
New York.....	10,693,616
Michigan.....	3,423,149
Ohio.....	2,895,782
Pennsylvania.....	2,866,010
New Hampshire.....	2,721,945

In addition to the sugar, nine States made more than 40,000 gallons of maple molasses each as follows:

	Gallons.
Ohio.....	495,839
New York.....	266,390
Indiana.....	252,084
Pennsylvania.....	140,667
Michigan.....	131,990
Vermont.....	128,091
Maine.....	82,007
New Hampshire.....	79,742
Wisconsin.....	58,712
Illinois.....	40,077

The production of maple sugar is said to be not one per cent of the whole amount of all kinds of sugar consumed in the country, and is not likely to increase in amount so that its price will be depressed by ordinary cane sugar. On the other hand, the call for a fine quality of maple sugar and syrup appears to be increasing from year to year, and it is doubtful whether in future enough will be made to supply the demand. For two years past the markets have been cleared of old maple sugar with a demand for more. The indications now are that whatever may be the price of other sugar, there will always be buyers willing to pay a good price for a nice quality of the maple product.

A FINE BULL FOR HUMBOLDT COUNTY.—Mr. S. B. Loveren of Eureka, Humboldt county, has been paying a visit to Baden farm. He takes home with him the fine young roan Shorthorn bull Prince Pansy, 13 months and 2 days old, and weighing, in San Francisco, 980 pounds, his heart girth being 5 feet 9 inches, which we consider good weight and good measure for a hand-raised calf. As Mr. Loveren has a few good milking Shorthorns on his cheese dairy near Eureka, he was desirous of getting a breeding bull of the best milking strains, which he has without doubt got in his choice of one from the old and reliable Pansy tribe.

NEVADA sheep are finding summer pasturage in Mono county, California, and the owners willingly pay the license tax of five cents a head.

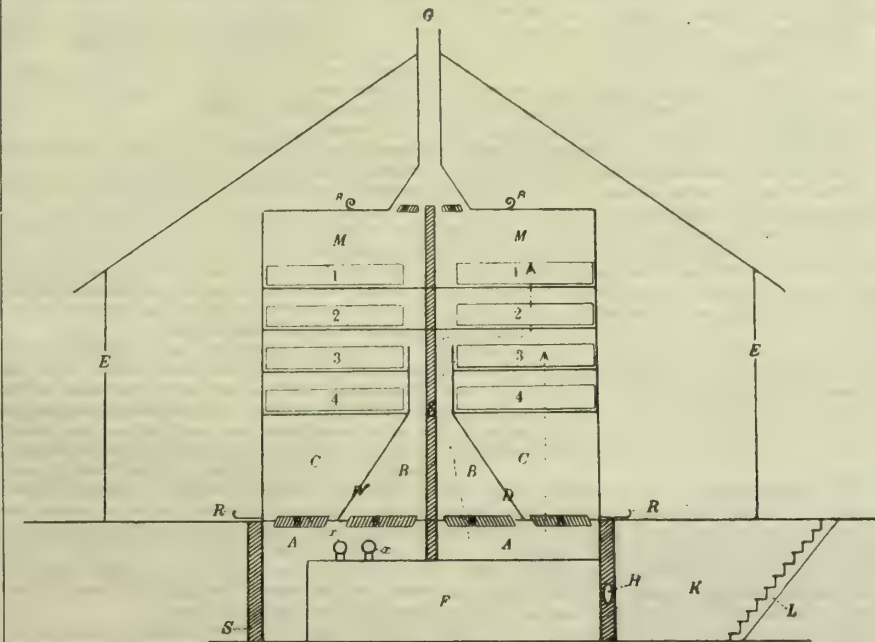
Farmers' Steam Generator and Engine.

Uses for small steam generators, with and without engines, are multiplying as our agriculture becomes more diversified. The engraving on this page shows a California invention for which a patent was secured through Dewey & Co.'s agency in September last. It is useful in the form shown in the engraving for running small manufacturing machinery of all kinds, or for pumping, cutting and grinding feed, sawing, etc., also for dairy work. Without the engine it is an excellent steam generator for heating or other purposes. The machine occupies but little space and is easily



FARMER'S PATENT STEAM GENERATOR AND BOILER.

accessible in all parts for cleaning inside and out. The side plates rest on hooks at the bottom and fit in a recess at top and can be lifted off, the soot brushed from tubes and the plate replaced in a few seconds without tools. The water tubes each have a plug opposite the end of the tube, so the scale or sediment can be readily



WALNUT DRIER USED BY RUSSELL HEATH OF SANTA BARBARA.

removed without disturbing the tube. The water spaces at front and back also have plugs for cleaning the inside, and it can be accomplished in a few minutes. This is an excellent feature, as the best boiler will soon burn out with bad water if there is no way to keep it clean.

These generators are made of different sizes and are furnished with and without engines. The form shown in the engraving is a four-horse generator with a three-horse engine. The manufacturer is E. H. Farmer of Gilroy, who is also known to our readers as a manufacturer of vises and cheese-presses. The generators are taking well and are being ordered from different parts of the coast, one being shipped to Arizona last week.

SALT LAKE CITY is to have a fruit cannery. It will start with a paid-up capital of \$100,000.

A Satisfactory Shorthorn Sale.

The sale of Shorthorns at Sacramento on Thursday last brought together a respectable company of breeders in search of fresh blood to infuse into old herds, while not a few were on the lookout for suitable animals for the foundation of future herds. Col. S. A. Sawyer, the auctioneer, by his agreeable and gentlemanly manner in conducting the sale, gave general satisfaction to all. The colonel knows a good beast as well as a good pedigree, an advantage, under most circumstances, to both buyer and seller, especially to the buyer who had not the opportunity of referring to the herd-books when necessary to do so, which it often is when one wants to get at the bottom of a pedigree.

The sale cannot but be considered a success when 42 head of cows, heifers and calves, sold for \$4860, an average of \$115 70, and eight bulls made an average of \$179, equal to an average of \$125.90 for the 50 head sold belonging to Messrs. Dunlap and J. S. Latimer & Sons. The cattle were in good, thrifty condition, though some of them might not improperly be called fat—at least fat enough for a show-ring.

The highest priced cow was the beautiful three-year-old, Red Rose of Cedar 3d, a descendant of imported Rose of Sharon by Belvedere (1706). Lillie Belle Geneva 3d (a "Young Mary"), with her seven-months old bull calf by her side, sold for \$310.

The yearling bull Baron Acomb 5th sold for \$400, being the highest priced animal sold, which must have been more on account of the "blue blood" coursing in his veins than for individual merit, as there were better bulls, of good sound breeding, sold for a good deal less money.

After the sale of Dunlap & Latimer's cattle there were sold about ten head of cows and seven bulls belonging to Messrs. Bill & Burnham, among which were some remarkably good animals. Water Sparkle, a light roan, thick-bodied, short-legged cow of the Torr Waterloo family (Booth upon Bates) was deservedly the favorite among the cows. With a roan heifer calf by her side, the two sold for \$390. The best bull sold was the yearling Earl of Aylesby 2d, a short-legged bull of great substance, de-

Russell Heath's Walnut Drier.

Our correspondent who recently visited place of Hon. Russell Heath, in Carpinteria, Santa Barbara county, thoughtfully prepared for us an outline sketch of a drying-house which Mr. Heath devised to prepare his walnuts for market, and which he has found very speedy and effective in operation. Walnuts are finished in eight hours from the time of placing in the drier, and our correspondent assures us that Mr. Heath dried the entire crop of 280 acres of walnut trees with 12 cords of wood. As the crop brought an aggregate value of \$10,000 last year, the drying is certainly very economically done. Mr. Heath has no patent on his drier, and any one who chooses is at liberty to make use of it. He has been growing walnuts for 25 years, and this fact, with the intimation of his large crop, indicates that his experience is valuable. It is usual to count 12 hours as the time required to finish walnuts in a drier, or 8 to 10 days in the sun.

In the little sketch on this page *F* is the furnace; *H* is the opening to let in the cold air and bring in the draft; *A* is the heating-room for the air, which is divided through partition *D*, one part of it passing through *B* into the drawers 1 and 2, and the other through drawers 3 and 4 into *M*, whence it is allowed to escape into *G*, the chimney regulated by another register *R*. *K* is the cellar and *L* the stairway; *E* is the outside building, which is, of course, higher than indicated in the sketch.

Mr. Heath has found it best to put the fresh nuts into drawer 1 and move them downward, according to their state of dryness. The drawers close, of course, airtight, and have a wire netting for a bottom. They are 5x36x30 inches. The flues from the furnace are marked *x*; they run through the whole length of the heating-room *A*. The drier frame rests upon stone walls, marked *S*.

This description is not as explicit as it might be, but probably our readers' ingenuity may supply the details which are lacking. If not we will endeavor to secure fuller points if questions are asked. We would also like to know what other nut-growers have found satisfactory in preparing their crops for market.

PROGRESS OF THE UNITED STATES.—Probably no one thing will give a better idea of the progress of this country than the following facts in regard to our postal service: The immensity of the United States postal service is not easily comprehended. The sum to be appropriated for its maintenance during the year ending June 30, 1889, exceeds \$60,000,000, and of this formidable aggregate all but \$2,500,000 is derived by the department from its own revenues. The extraordinary growth of the country during the last 50 years is indicated by the fact that in 1839 the postal revenues were less than \$8,000,000. The present expenditure for railway transportation of the mails is \$19,000,000, their weight being the basis of compensation. On seven of the great trunk lines there is now carried an average daily weight of 578,984 pounds of mail matter, or 289 tons. The deficiency in receipts as compared with expenditures during 1889, according to the estimates, will not be half of what it was in 1876, when the letter postage was 50 per cent higher.

A MAMMOTH ENGLISH GRAPEVINE.—The largest specimen of a growing vine in Great Britain is a Black Hamburg vine in Kennell, in Perthshire, Scotland. This vine, planted about 56 years ago, has a main stem 22 inches in circumference and completely fills a glass house 270 feet long, and is still growing as rapidly as ever. Its yield last year was 2548 bunches, of which only about 500, averaging about two pounds each, were allowed to mature. A substantial subsoil of leaf mold was used when the vine was planted, but the only extra material which the vine now receives is broken bones in half-inch pieces. This vine exceeds in size the famous Black Hamburg at Hampton Court, the principal branches of which are about 110 feet long, though its trunk is 38 inches in circumference.

TO PRESERVE THE NATURAL COLOR OF FLOWERS.—A method of preserving the natural colors of flowers consists in dusting salicylic acid on the plants as they lie in the press, and removing it again with a brush when the flowers are dry. Red colors in particular are well preserved by this agent.

scended from imported Telluria Wassail, a cow that the writer had the pleasure of seeing sold for 310 guineas (about \$1600) when the herd of the late Wm. Torr was sold on the 2d of September, 1875.

The day following the sale of thoroughbreds there was an auction of high-grade Shorthorn heifers from the breeding farms of W. P. Higginbotham and Bill & Burnham of Manhattan, Kansas. Very satisfactory prices were received.

NURSERYMEN'S CONVENTION.—The thirteenth annual meeting of the American Association of Nurserymen will be held in Fraternity hall, Detroit, Mich., commencing Wednesday, June 20, 1888, at 10:30 A. M., and continuing three days. Hotel headquarters at the Michigan Exchange. Rate, \$2 per day (special). For further particulars address the secretary, D. Wilmet Scott, Galena, Illinois.

THE VINEYARD.

Raisin Growing.

The following paper was read by Supervisor T. C. White of the Raisina vineyard, near Fresno, before the State Viticultural Society at its recent meeting:

The subject assigned me for consideration and to which I invite your attention is

The Raisin Grape.

While I do not expect to add to the information of many who have been long engaged in the business, still there may be some to whom the results of our experience may be interesting if not profitable.

Ten years ago, I was among those seeking knowledge, and found a most efficient teacher in R. B. Blowers Esq., who kindly gave me the benefit of his experience in the then comparatively new field of raisin-grape culture.

The success achieved in the past few years has outgrown a local interest, and is now attracting a word-wide attention. The following table shows the growth of the industry:

1873.....	6,000 boxes
1874.....	9,000 "
1875.....	11,000 "
1876.....	19,000 "
1877.....	32,000 "
1878.....	48,000 "
1879.....	65,000 "
1880.....	75,000 "
1881.....	90,000 "
1882.....	115,000 "
1883.....	140,000 "
1884.....	175,000 "
1885.....	500,000 "
1886.....	703,000 "

In 1873 the raisin crop of the State was estimated at 6000 boxes, swelling to the comparatively enormous number of 800,000 boxes in 1887, and may reasonably be expected to reach 1,000,000 boxes the coming year.

It has been demonstrated beyond question, that the soil and climate of portions of this State will produce a grape equal in size and quality to those of the most favored districts of Europe.

Permit me to make a few general remarks in reference to the soil, climate, culture and varieties to be grown, and the best manner to pick, dry, sort and pack raisins for market:

In geographical distribution the yield is divided between the great San Joaquin valley and Southern California. No raisins are produced in any quantity outside of these two regions. The crop of the valley amounts to 505,000 boxes; that of the southern counties—Los Angeles, San Bernardino and San Diego—to 295,000. Fresno takes the lead with 350,000 boxes, nearly double the yield of any other district and nearly as much as that of all of the rest of the State combined. Riverside comes next with 180,000 boxes.

While I have visited the raisin-producing sections of the State, north and south, my remarks are based upon the experience gained during the last few years in Fresno, in the San Joaquin valley. The following requisites are indispensable to the successful production of good raisins: Soil, climate and methods of picking and curing. First, a selection of location with reference to soil. This, in my judgment, is either the white ash or the red, sandy loam. If your "lines be cast" in the San Joaquin valley, which I believe to be the best for this industry, be certain to obtain land which can be conveniently irrigated.

My own choice would be white ash, if not too strongly impregnated with alkali. So far as I am informed, the first raisin-grape cuttings were imported by the elder Haraszthy in 1862. These were the Muscatel Gordo Blanco; later there were other importations which were sent to different portions of the State, and assumed the names of Muscatel and Muscat of Alexandria, causing much diversity of opinion in reference to identity and respective merit. "When doctors disagree, who shall decide?"

My vineyard is exclusively Muscatel Gordo Blanco, which I consider the best on account of its uniform large size of berry throughout the entire cluster, small size and number of seeds, tender skin, richness of pulp and high flavor.

The vines should be trained low and pruned short, and great care and judgment should be exercised in this matter, so as to leave the vine well balanced, not having more spurs on one side than the other, and also leaving top spurs with a view to growing wood for shade.

Another important consideration is the removal of all suckers and non-fruit producing growth to avoid the diversion of the strength and vigor of the vine from the fruit and growth of wood for the succeeding year. The vineyard should be plowed and cross-plowed as soon as the vegetation starts in spring, and cultivated thereafter continuously until prevented by the growth of the vines.

Much can be done toward destroying the vinehopper by thoroughly stirring and displacing the soil immediately around the vine early in the season.

To assist in accomplishing this, plow away from the vine, then shovel directly around it, and then cross plow, turning the furrow toward the vine.

Another important aid in destroying this pest, is sulphuring, which should be commenced as soon as the vine has put forth a new growth of one of two inches. Just before blooming,

sulphur a second time, and in localities liable to mildew, a third application may be beneficial. Couleur, or the blasting or dropping of the bloom, is probably caused by sudden changes of temperature, strong winds and excessive moisture. When caused by the latter, it can be largely overcome by the application of sulphur. As vines become older, I think they are less susceptible to climatic influences. Irrigation at the blooming period should be avoided, and until the berry is well set.

If summer irrigation is necessary it should be done by means of furrows, through which the water is run.

Plowing in these furrows will prevent the cracking and drying out of the land.

In Fresno, picking commences about the 1st of September, although there have been seasons when it occurred as early as the 20th of August.

The grapes under no circumstances should be picked for raisins until they are ripe. There are three ways by which to ascertain this fact—first, by the color, which should be a light amber. Second, by the taste, and third, by the saccharometer, which is by far the most accurate.

A grape may be ripe and not have the proper color when grown entirely in the shade.

The juice of the grape should contain at least 25 per cent saccharine to produce a good raisin.

The most practicable method of drying is by the use of trays placed upon the ground. The almost entire absence of dew in our locality greatly facilitates this method.

The trays are usually 24x36 inches. Those of larger dimensions are found inconvenient to handle when filled. Trays of the former size hold about 20 pounds of fruit, and should produce from 6 to 7 pounds of raisins.

The product of a vineyard depends largely upon its age and favorable conditions, varying from 2 to 9 tons per acre.

The trays or platforms are taken into the field and distributed along the sides of the roads, from which they are taken by the pickers as they are needed. As the grapes are picked from the vines, all imperfect berries, sticks and dead leaves, are removed from the bunches, which are then placed upon the trays, right side up. A cluster has what is called a right and a wrong side, the wrong side having more of the stems exposed than the right side. Great care should be used in picking so as to handle the bunches only by the stem. If the berries come in contact with the hands some of the bloom will be removed, which will injure the appearance of the raisin.

The trays are placed after filling between the vines, one end being elevated, so that the grapes may receive the more direct rays of the sun.

The length of time required for drying depends much upon location and conditions, favorable or otherwise. I have known raisins to be dried in seven days, but they were not a good article, and too rapid drying is not desirable.

The grapes are left upon the trays until about two-thirds dry, which, with us, will be in from 6 to 8 days. They are then turned. This is accomplished by placing an empty tray on top of the one filled with partially dried raisins and turning them both over. Then take off the upper or original tray, and you have the raisins turned without handling or damage.

After turning, curing proceeds more rapidly, and frequently is completed in four or five days. During this time they should be carefully watched, to prevent any from becoming too dry. When it is found they are dry enough, the trays are gathered and stacked one upon the other as high as convenient for the sorting which follows. This protects them from the sun and prevents overdrying. Stacking should be attended to early in the morning while the stems and berries are slightly moist and cool from the night air, as they will retain this moisture after being transferred to the sweat-boxes and assist in quickening the sweating process.

The trays which have been stacked are now ready for sorting and grading, and this requires care and judgment, and, although a tedious process, greatly facilitates rapid packing.

The sweat-box is a little larger than the tray, and about eight inches deep. When filled these will contain about 125 pounds of raisins. Heavy manilla paper is used in the boxes, one being placed in the bottom and three or four more at equal distances as the filling progresses.

The object of the paper is to prevent the tangling of the stems and consequent breaking of the bunches when removed for packing.

The sorters have three sweat-boxes—one for first, second and third qualities, as the grade will justify. The bunches should be handled by the stem and placed carefully in the sweat-boxes to avoid breaking the stems, thereby destroying the symmetry of the clusters.

Any found to be too damp are returned to the trays and left a day or two longer in the sun. To ascertain if they are perfectly cured, take a raisin between the thumb and first finger and roll it gently until softened, when either jelly or water will exude from the stem end; if water, it requires further drying. When the boxes are filled they are taken to the equalizer. This should be built of brick or adobe and as near air-tight as possible, but provided with windows to allow of ventilation when necessary. The windows should have shutters to keep it dark. The filled boxes are placed one exactly upon another to a convenient height and should remain from 10 to 20 days or more, when they will have passed through the sweating process.

As the raisins are taken off the trays some of the berries on the bunches will be dry enough and a few will not be sufficiently cured. To

remove the moist ones would destroy the appearance of the cluster, and to leave it out longer would shrivel the dry ones, hence the sweat-box. The moisture is diffused through the box, some being absorbed by the dry raisins, and the stems also taking their share, and are thus rendered tough and pliable and easily manipulated when ready for packing. When the raisins are sufficiently equalized, the sweat-boxes are removed to the packing-room, which is provided with tables, presses, scales, etc. My method of packing is substantially the Blowers' style, face downward. The most convenient mode of packing is by the use of a metal tray corresponding in size to a layer of raisins and having a loose bottom. The raisins are placed in the preliminary packing tray with the face of the cluster downward, which gives the surface a level appearance and prevents the exposure of the stems. When the bottom of the packing-tray has been covered, which should always be with perfectly shaped berries and bunches, the tray is filled to the requisite weight of five pounds. The contents of the tray are then pressed sufficiently to pack the raisins firmly together, but not with such force as to break the skin, causing the jelly to exude, and consequent early sagging.

After being pressed, they are transferred to the boxes, during which process the paper is wrapped around each layer. The paper is placed on the top of the tray of raisins and a sheet of steel the exact width of the tray is placed above the paper, and the whole reversed. The sheet of steel serves to hold the raisins in place until the layer is put into the box, when the steel is withdrawn and the layer drops into the box—face up.

The standard box of California raisins is 20 pounds weight, containing 4 layers of 5 pounds each.

They are usually graded into Dehesias, London Layers, Layers, and one, two and three Crown Loose Muscatels. The Dehesia or highest grade is packed with a view to superseding the imported article, which sells at from \$10 to \$12 dollars per box.

Every one has seen and admired the boxes of imported raisins, which have a top layer packed in rows with uniform regularity; few, however, appreciate the difficulty of producing this handsome appearance by hand. The task is slow and tedious. To simplify and expedite this process, I have invented and received letters patent for a packing plate, expressly adapted to producing this effect. This device will prove of great assistance to the raisin packer. I have used it through two seasons with perfect success.

The invention consists of a flat metal mold or plate, having depressions made in its surface, which plate forms the bottom of the preliminary packing-box, and serves to hold the raisins in a fixed position, until the packing is completed and the raisins are placed in the raisin-box. Loose Muscatels are prepared by being put through the stemmer and grader. The stemmer removes the berries from the stems, and the grader by separating, according to size, determines the grade.

By observing the foregoing remarks, you will naturally conclude that the raisin business is eminently made up of details. None can be carelessly performed or overlooked if we expect to compete successfully with the nations who have made this subject and industry a study for centuries.

Not only in the essentials of quality, and quantity, but in this esthetic age a due regard to effect must be observed in the way of attractive wrappers and labels.

The industry with us is in its infancy, comparatively, and while we have some cause for gratulation, still we have much to learn before we attain perfection. In reference to shipping it is to be hoped that the near future may bring us better facilities, and cheaper rates of freight, thereby enabling us to supply the Eastern market and the growing foreign demand. I note by late quotations that all grades of raisins are scarce in the home market and insufficient to meet the demand until the next crop. May this be an incentive to us to increase and extend the industry through the length and breadth of our inland valleys.

Much may be accomplished by a free interchange of ideas and comparison of notes in reference to methods and results. Local and State conventions afford good opportunities for such conferences.

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LAND & WATER FREE! 800 Acres Rich, Level Land.

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DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10-acre lots, which they are now selling at \$200 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. Two hundred acres have now been sold on this basis, starting at \$150 per acre. The price is now \$200 per acre.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They have completed a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State. No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

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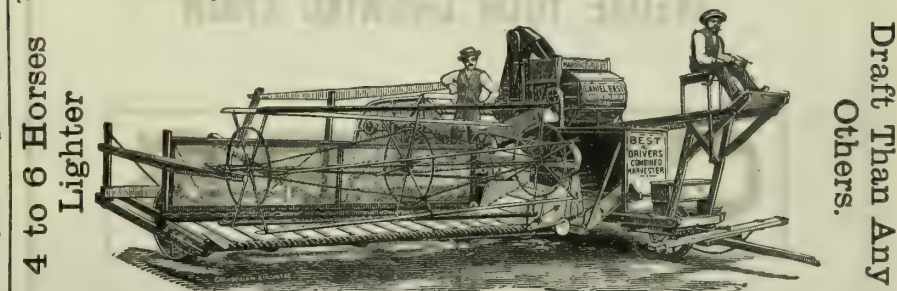
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Completely Governs the Blast on the Shoe.

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The entire wagon load is hoisted up in a center opening net, by a self-braced Portable Derrick, which is moved from stack to stack ground without being taken down. Half an hour is ample time to move and set. Two nets can be used in each box, and the load taken out in two parts by having a partition in the box. Any farmer can at once see many advantages gained by the use of this invention.

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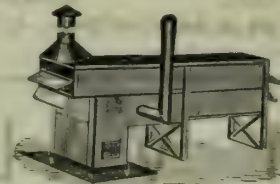
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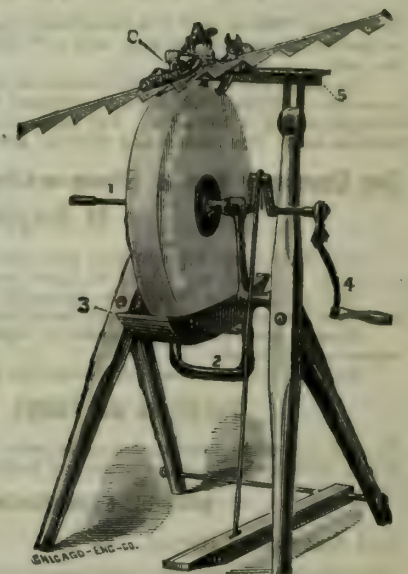
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Palermo.

About five months ago the Palermo Land and Water Company, composed of D. K. Perkins and Henry Wise, well-known merchants of Oroville, and Ex-Governor George C. Perkins, C. W. McAfee and A. S. Baldwin of San Francisco, purchased 6900 acres of land five miles south of Oroville on the line of the Northern California railroad. It would be difficult in the State to find a more charming and picturesque spot, fanned by the most genial and health-giving sea-breezes. The land is marvelously rich, adapted to all variety of fruit and floral culture, but was specially selected for its adaptation to the growth of semi-tropical and citrus fruits. No finer oranges are grown in the State than in this portion of the northern citrus belt.

About 250 acres of this tract have been surveyed into town lots, and about 1600 acres of the remainder have been subdivided into suburban tracts each one, two, four, ten and twenty acres. About the center of this tract two entire blocks and part of two others have been set apart for a park, and two blocks on the crest of an elevation reserved for a hotel. This property thus plotted and surveyed about four months ago was placed upon the market, and the sales have been surprising. Nearly all the one and two acre lots in the immediate vicinity of the town have been sold. The work of developing these lands has commenced in dead earnest. Acres over which the sheep and cattle roamed four or five months ago have undergone a magical change. Broad avenues have been opened and about nine miles of streets graded. These lots and tracts are offered on reasonable terms, the company agreeing to furnish the purchaser plenty of excellent water free for three years.

Purchasers desiring it can have their lands cultivated by the Palermo Land and Water Company, on the most reasonable terms, as the company is interested in the success of every grove and orchard planted on this tract. The following is the approximate cost of planting a ten-acre lot in the best selected fruit:

Two acres of oranges set 20 feet apart containing 216 trees at a cost of \$100 an acre.....	\$200 00
Preparing ground, planting and cultivating for one year at \$20 per acre.....	40 00
Two acres in choice figs 36 feet apart containing 60 trees at 35 cents each.....	21 00
One hundred and eighty peach, apricot and prunes at 20 cents to set alternately with the figs.....	36 00
Cost of setting figs and these trees on two acres for one year.....	40 00
Six acres to raise grapes set 6x8 feet, containing 3600 vines at \$15 per acre....	90 00
Plowing, cultivating, etc., one year at \$10 per acre.....	60 00
Total.....	\$487 00
Or say \$500, averaging \$50 per acre.	

The second and third years the expenses of cultivation will be \$12.50 and \$15 per acre and thereafter the returns will more than pay expenses, and the net profit may be increased from \$50 to \$1000 per acre, according to the character of the fruit and the ability of the cultivator.

Over 300 acres of land have thus been plowed, and 250 acres of this have been planted with orange trees and vines. Twenty-three thousand trees have been planted up to date, 21,000 being orange trees, the remainder of deciduous trees, and five acres have been planted in vines. Several property owners wanted their land this year planted in vines, but the company was unable to get suitable cuttings, and planting has, consequently, been deferred, in their cases, until next year. All of this work of plowing and planting was begun in February. A nursery company formed in San Francisco has 50,000 seedling orange trees in their nursery lot here which will be budded next fall. The company also purchased about 200 acres here which are to be planted in trees next season. Twelve miles of new ditching has also been made, with a capacity large enough to carry all the water that will ever be necessary to irrigate the entire tract. Water was turned into some of the ditches two months ago and the work of irrigation began. All of the trees thus far look thrifty, and now that water in abundance has been brought to them their success is assured.

Water Resources of the Company.

The company controls over 2000 miners' inches of water, which is conveyed 25½ miles in the Ophir Ditch from the north branch of the Feather river to Oroville. This is distributed through six subordinate ditches known as the Sycamore, Slaughter House, Planing Mill, Carpenter's Flat and Wyandotte, the latter delivering from Finletter, a distance of 16 miles, 500 miners' inches at Palermo. There are also about

five miles of branch ditches at Palermo. Five of the old reservoirs of mining days are being used by the company for catchment, storage and distribution.

In short, the water supply is abundant, buildings and other improvements are advancing as rapidly as lumber can be procured, and as Palermo is situated in the heart of the northern citrus belt, and the climate genial and healthy, there is no good reason why this settlement may not become as attractive in the northern, as Pasadena or Riverside in the southern portion of the State.

THE BIG RABBIT-DRIVE which is to come off at Pixley next Friday, June 1st, will "break the record," if those who have been engineering the project for several weeks past see their hopes realized. One of them, exhorting in the Delta, says: "Many are the pleasures of a rabbit-drive. There is scarce another sport of the field that equals it. You are doing more good to yourself than if you stayed home and worked all day, and you are doing just as much good to a hundred neighbors and to the county at large. * * * Remember that there will be a barbecue with plenty for all to eat, and plenty of lemonade to be hauled around in a wagon and ladled out free to thirsty walkers. Those who have never attended know what fun it is, and those who have never seen a drive will now have a chance to see a big one."

THE appearance of a large California lion in the neighborhood of San Gabriel occasioned considerable excitement recently. He was seen by several parties and an unsuccessful hunt was made for him.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING MAY 15, 1888.

- 382,681.—HEATER FOR BOOTS AND SHOES—Frank Batter, Slide, Cal.
 382,857.—TRACTION ENGINE—Frank Batter, Slide, Cal.
 382,799.—PIPE WRENCH—R. Copeland, Eureka, Cal.
 382,961.—STALLS FOR HORSES ON RACE-TRACKS—P. A. Finigan, S. F.
 382,969.—CABLE RAILWAY—Samuel Gibson, S. F.
 382,970.—CABLE GRIP—Samuel Gibson, S. F.
 382,973.—MACHINE FOR DISINTEGRATING BITUMINOUS SUBSTANCES—E. Groat, S. F.
 382,763.—BUTTON-HOLE SEWING MACHINE—T. F. Hagerty, S. F.
 382,989.—DEVICE FOR HITCHING HORSES—C. Kauffer, S. F.
 382,815.—RAIL JOINT—J. V. Koss, North Yakima, W. T.
 382,816.—SHIP'S LOG—O. Kustel, S. F.
 382,844.—BABY-JUMPER—B. G. Lathrop, Oakland, Cal.
 382,819.—CARBURETOR—Louis Marks, S. F.
 382,822.—HAY-PRESS—F. McKinney, San Diego, Cal.
 382,830.—CARTRIDGE-LOADER—John H. Read, S. F.
 382,731.—DISK HARROW—L. A. Richards, Grayson, Cal.
 382,736.—MACHINE FOR PULLING HAIR FROM FUR SKINS—E. Schroeder, S. F.
 383,021.—BUTTON-HOLE OPENER—J. R. Stephens, Portland, Ogn.
 382,783.—CAR COUPLING—U. L. Uhlenhart, Astoria, Ogn.
 382,895.—ROCK DRILL—W. O'Keefe, Elliston, M. T.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

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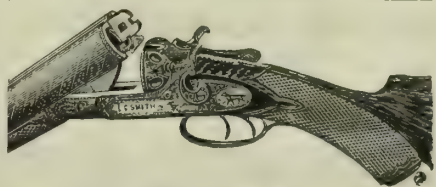
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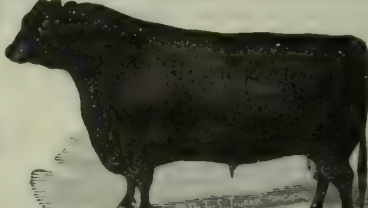
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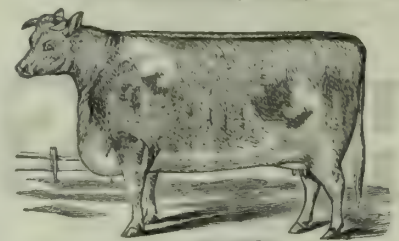
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On the Pacific Coast. Wholesale and Retail.

Send order and try goods and prices.

C. L. HASKELL, No. 10 Bush St., S. F.

Italian Sheep Wash.

EXTRACT OF TOBACCO.

Free from Poison.

Cures thoroughly the SCAB OF THE SHEEP. The BEST remedy known. Costs less than 1 cent per head for dipping. Reliable testimonials at our office. For particulars apply to

CHAS. DUSENBERG & CO., Sole Agents, No. 314 Sacramento St., San Francisco.

LITTLE'S CHEMICAL FLUID

NON-POISONOUS

SHEEP DIP.

LITTLE'S PATENT POWDER DIP (POISONOUS). Information by mail.

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Wool Agency Warehouse, Sixth and Townsend Streets.

POULTRY, ETC.

EGGS AND POULTRY.

For the balance of the season I will sell Eggs for hatching at \$2.00 for 13 from my best imported and home-bred L. Brahmas, P. Cochin, Langshans, P. Rocks, Wyandottes, Brown and White Leghorns and B. B. R. Game Bantams. I will also sell one pen of L. Brahmas (5 hens and a cock), and one pen of P. Cochin for \$15 each. One pen of Langshans, one pen of Brown and one pen of White Leghorn for \$15 each. I will sell my Axford Incubator, 100-egg capacity, for \$15, or will trade for two small out-door Brooders in good repair.

E. B. FREEMAN,
Santa Clara, Cal.

JOHN McFARLING,
Importer and Breeder of
Langshans, Plymouth Rocks,
Brown and White Leghorns,
Pekin Bantams, Light Brahmas, Part-
ridge Cochins, Buff Cochins, Black Mi-
norcas, Registered Berkshire Pigs. Also
one pen of Langshans direct from China.

706 TWELFTH ST., OAKLAND, CAL.
Large lot of young birds ready for sale; send for circulars.

OAKLAND POULTRY YARDS,

Cor. 17th & Castro Sts., Oakland, Cal.

Manufacture of the PACIFIC INCUBATOR and BROODER. Agency of the celebrated silver finish galvanized wire netting for Rabbit and Poultry-proof fences, the Wilson Bone and Shell Mill, the Pacific Egg Food, and Poultry appliances in great variety. Also every variety of land and water Fowl, which have won first prizes wherever exhibited. Eggs for hatching. The Pacific Coast Poultryers' Hand-Book and Guide, price, 40c. Send 2c. stamp for 60 page illustrated circular to the PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

HATCH CHICKENS

—WITH THE—


PETALUMA INCUBATOR.

The Most Successful Machine Made.

3 Gold Medals, 1 Silver Medal, and 16 1st Premiums.

Hatches all kinds of Eggs. Made in all sizes.

Write us for Large Illustrated Circular Free, describing incubators, Brooder Houses, How to Raise Chickens, etc. Address PETALUMA INCUBATOR CO., Petaluma, Cal.



The Halsted Incubator Co.
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Price from \$20 up. Model Brooder from \$5 up.
Thoroughbred Poultry and Eggs. Send for new Circulars containing much valuable information.

No. 107—\$25.00.



MONARCH GASOLINE RANGES

ARE THE BEST.

Gasoline Stoves, \$5 to \$35. Gas Stoves, 75 cents to \$35.

Oil Stoves, 75 cents to \$30.

WOOD AND COAL RANGES.—Royal, No. 6, \$16. No. 7, \$20. Pacific No. 6, \$18. No. 7, \$25.

Lamps, 20c. to \$10. Hanging Lamps, \$2 to \$5.

Agate Ware, Tin Ware, and Kitchen Ware at low prices.

JOHN F. MYERS & CO.,

Opp. Baldwin Hotel, 883 Market St., S. F.

TREE and GARDEN SPRINKLERS.

Wainwright's Spraying Nozzles and Pumps.

Are the latest and best, Tree Cleaners, Garden and Lawn Sprinklers. They can also be used for White-

washing. Full particulars in RURAL PRESS, March 24, 1888. Illustrated catalogue free. Agents Wanted.

Address: **WM. WAINWRIGHT,**
No. 105 Beale St., San Francisco.

BEST TREE WASH.

"Greenbank" 98 degrees **POWDERED CAUSTIC SODA** (tests 99.3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

T. W. JACKSON & CO.,

Manufacturers' Agents,
104 Market St. and 8 California St., S. F.

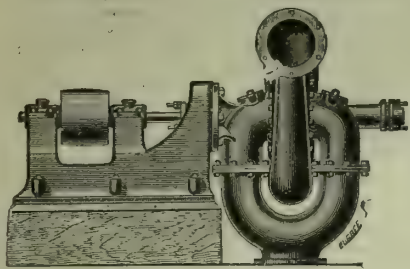
GIVEN AWAY. I will give my Double Cam HAY PRESS away if it will not fill the demand of my circulars. Send for Circulars and Price to the Manufacturer, JAS. KEMP, Kempton, Ill.

H. P. GREGORY & CO.

SAN FRANCISCO, CAL.

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WEBBER'S CELEBRATED

**IRRIGATING PUMPS.**

WE ALSO CARRY IN STOCK THE LARGEST LINE OF

MACHINERY

In the UNITED STATES,

Consisting of Wood and Iron Working Machinery. Pumps of every description.

ENGINES AND BOILERS

A SPECIALTY.

FLOUR MILL

—WITH—

Immense Water Power FOR SALE

At Merced Falls, Merced County, located on Merced River; size of Mill, 33x70; two stories in front and four stories in rear; latest improved roller machinery; new capacity; 100 barrels per day; power to increase to any capacity desired; title to water and land perfect; 69 acres of land, comprising the town site of Merced Falls; reputation of flour is A1; commands all mountain trade; fine wheat country surrounding; no failures ever known; grain warehouse 80x80; four dwelling houses; 28 shares of Merced Falls Woolen Factory go with purchase. Price, \$60,000. Address

OSTRANDER & SONS,
Merced, Cal.

Or **N. C. CARNALL & CO.,**
624 Market St., San Francisco, Cal.

REMANT PALACE,

1326 Market St., opp. Odd Fellows' Build'g
LEON LEMOS, Proprietor.

Remnants of Domestic. Suits to Order,
\$15, \$16, \$17, \$18, \$20; Imported
from \$20 to \$30.

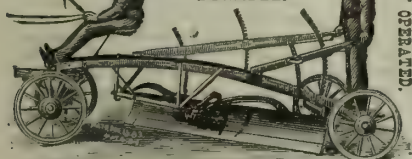
California is a Paradise, but the people would object to go in Paradise toilet. Leon Lemos has contracts with several leading Woolen Mills to buy all their REMNANTS, and can make a fine fitting, well-trimmed suit from \$15 upward.

Farmers will save money by calling on him, as he makes suits to order for the same price as ready made. Samples and prices by mail. Don't forget.

LEON LEMOS,
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LAMBORN ROAD MACHINE

LIGHT DRAFT. MADE OF IRON. STRONG, SIMPLE, DURABLE.



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SAN FRANCISCO, - CALIFORNIA.

FOR SALE OR RENT.

THE YOLO WINERY PROPERTY,

Situated in Woodland, Yolo Co., Cal., consisting of large cellar, press, rooms and distillery, all complete and new, having been used only two seasons. For particulars inquire of

I. D. STEPHENS,
Woodland, Cal.

H. M. NEWHALL & CO.,

SHIPPING AND COMMISSION MERCHANTS,

309 and 311 Sansome Street, San Francisco, Cal.

Agents for Growers and Manufacturers. Charterers of Vessels for all Trades. Agents for the Mexican Phosphate and Sulphur Company's Products. General Insurance Agents.

Have correspondents in all the chief cities of the United States, Europe, Australia, India, China and the principal islands of the Pacific. Purchase goods and sell California products in those countries.

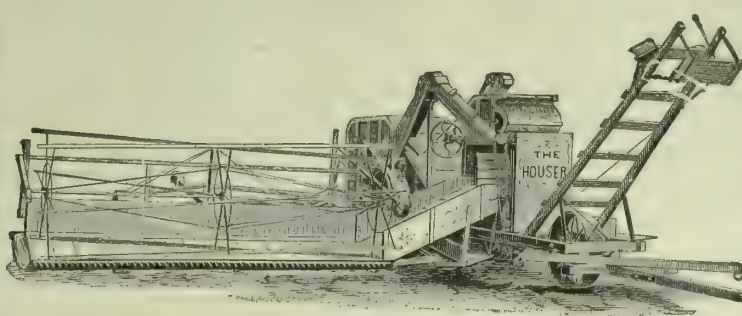
General Agents for the Pacific Coast of **NATIONAL ASSURANCE CO.,** of Ireland; **ATLAS ASSURANCE CO.,** of London; **BOYLSTON INSURANCE CO.,** of Boston, Mass.

Houser Combined Harvesters for 1888

LARGE AND SMALL.

Received First Premium, State Fair, September 24, 1887.

400 IN FIELD USE.



400 IN FIELD USE.

No Failures. None Ever Returned. Beware of Experiments.

BUY THE HOUSER!

They Have a Larger Sale than all Other Harvesters Combined.

THE SMALL HOUSER

Is adapted for Small Farms—few animals; rolling or foothill land. In weight, one-half of the Large Houser. Both the Large and Small Houser have our

Improved Double Shoe Cleaner.

Which received the Premium over all competitors at both State and County Fairs and Field Contests in 1887.

The MILLER LIGHTNING HAY PRESS

CAPACITY

—OF—

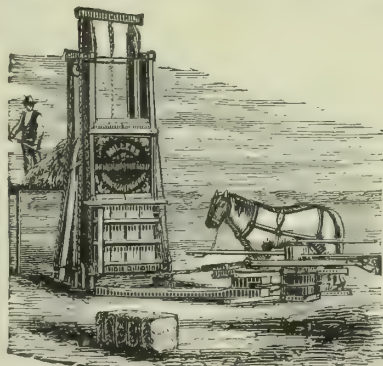
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30 TONS PER DAY

Or with Unskilled Labor
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16 TO 20 TONS.

It is the BEST PRESS in the
World for all kinds
of Baling.



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FIRST PREMIUM

State Fair, 1887;

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CONTEST MONEY,
\$50.00.

CAPACITY OF TIGHT BALING PRESS,

20 TONS A DAY. CAN PUT 10 TONS IN A CAR.

For prices, circulars and testimonials call at works, corner MAIN AND EAST STREETS, or address

STOCKTON COMBINED HARVESTER & AGRICULTURAL WORKS,
Telephone 74. Box M, STOCKTON, CAL.

CALIFORNIA CHIEF GRAIN CLEANER

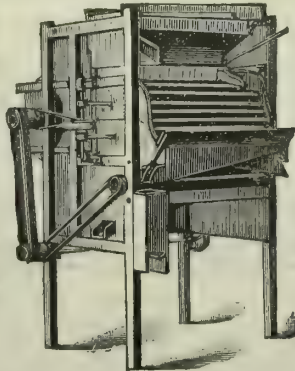
Will Clean 1600 Bags
of Wheat in a day.

Manufactured by

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OAKLAND - - CAL.

Send for Illus-
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and Price Lists.



LITTLE CHIEF GRAIN CLEANER
For Combined Harvesters.
WILL CLEAN 600 BAGS IN A DAY

SEND FOR ILLUSTRATED CIRCULARS

SHOWING WHY THE COOLEY CREAMER

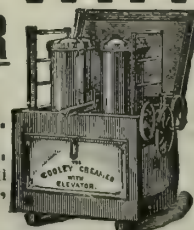
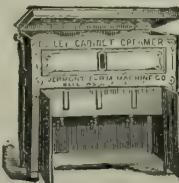
is used by the

PREMIUM BUTTER MAKERS.

Why it makes More Butter. Why it makes Better Butter.

It has both **SURFACE** and **BOTTOM SKIMMERS.** Is imitated in construction, but its **PROCESS** which gives it **SUPERIORITY,** cannot be legally used by others.

A Full Line of DAIRY and BUTTER FACTORY SUPPLIES.

VERMONT FARM MACHINE CO., Bellows Falls, Vermont.**Commission Merchants.****DALTON BROS.,**
Commission Merchants

—AND DEALERS IN—

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans and Potatoes.

Advances made on Consignments.

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Consignments Solicited.

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SUCCESSORS TO

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General Commission Merchants.

GREEN and DRIED FRUITS.

Poultry, Eggs, Game, Grain, Produce and Wool.

WM. ANGUS & CO.,**Grain, Produce**

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COMMISSION MERCHANTS.

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MERCHANTS' EXCHANGE BUILDING, ROOM 26

California Street,

SAN FRANCISCO.

Choice Alfalfa Seed always on hand in carload lots, or less, as desired, at lowest prices.

PROMPT RETURNS ON ALL CONSIGNMENTS.

MOORE, FERGUSON & CO.,**WOOL, GRAIN, FLOUR**

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General Commission Merchants,

310 California St., S. F.

Members of the San Francisco Produce Exchange

Personal attention given to Sales and Liberal Advances made on Consignments at low rates of interest.

[ESTABLISHED 1854.]

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SHIPPING ORDERS A SPECIALTY.

C. L. BENTON & CO.,**Commission Merchants,**

Wholesale and Retail Dealers in

POULTRY, GAME AND EGGS,

65, 66, 67, California Market, S. F.

WETMORE BROTHERS,
Commission Merchants,

Green and Dried Fruit, Produce, Eggs, Etc.
Consignments solicited. 413, 415 & 417 Washington St.,
San Francisco.

EVELETH & NASH,**COMMISSION MERCHANTS**

And Dealers in Fruit, Produce, Poultry, Game, Eggs,
Hides, Pelts, Tallow, etc., 422 Front St., and 221, 223
225 and 227 Washington St., San Francisco.

P. STEINHAGEN & CO.,**Fruit and General Commission Merchants**

BRICK STORES:

408 & 410 Davis St., San Francisco

WITTLAND & FREDRICKSON,
Commission Merchants.

All Kinds of Green and Dried Fruits.

CONSIGNMENTS SOLICITED. 324 Davis St., S. F.

**GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.**

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, H. MEYRICK, Box 5, Santa Cruz, Cal.

The supply of seasonable vegetables continue to increase, causing a weaker market. The weather is all that can be desired by gardeners. In peas, canners are still buying. Cheap lots of asparagus they

do not let pass either. Tomatoes and also green corn are beginning to come in more freely. The crop of these two will be larger than last year. Cucumbers, and, as for that, all other garden truck is gradually settling to lower prices.

Potatoes were steady up to Tuesday, when they temporarily strengthened, owing to some kind of religious Portuguese holiday on Monday. The demand for large, choice, well-matured potatoes is good, but inferior are only saleable at low prices.

In onions, there is nothing new to report. As the quality improves, so does the demand. As yet, very few are suitable to meet distant orders with.

Miscellaneous.

Hops are without change. The crop prospects are said to be good.

In wools; trading continues light. Receipts are backward probably due to the unsatisfactory market. The wool-buyers' organization or trust at the East is still depressing the market, using any means to keep prices down. They used the tariff humbug until it got too thin, for even the dullest wool-grower soon saw through it, now they are devising other means to keep American wools down. In our market holders of desirable grades are not pressing the market, but are firm in their views.

Continued receipts of live poultry from points on the Missouri river cause our market to rule lower.

Beans are steady. Eastern advices report a stronger tone owing to weak holders having about sold out.

In provisions the tone is stronger for both lard and meats in sympathy with higher prices at the East.

Choice varieties of apricots are beginning to make their appearance in the market. Ripe peaches will soon commence to come in; green are now in the market. Apples are still poor and consequently sell slow.

In dried fruits the market is slow, but then stocks are low and about cleaned up. The new crop will come in on a ready market.

Raisins are in light stock. The outlook is of the most flattering character for a large crop this year. The frost season has been passed and the only danger ahead is hot winds.

The tonnage movement compares with last year at this date as follows:

On the way.....	1888.	1887.
On the way.....	437,863	265,517
In port, disengaged.....	55,700	110,547
In port, engaged.....	9,989	7,818

Totals..... 503,549 383,882
To obtain the carrying capacity, add 60 per cent to the tonnage.

Tonnage on the way to Oregon, 15,077; tonnage at Portland, Oregon, loading and to load, 19,114. Total tonnage, 34,191.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS. WEDNESDAY, May 23, 1888.

Bayo, chl.....	2 00 @ 2 25	Pecans.....	10 @ 16
Butter.....	— @ —	Peanuts.....	4 @ 6
Pea.....	3 40 @ 3 65	Filberts.....	10 @ 12
Red.....	2 20 @ 2 50	Hickory.....	5 @ 6
Pink.....	2 20 @ 2 50		

POTATOES.

Large White.....	3 40 @ 3 60	New Red.....	— @ —
Small White.....	3 40 @ 3 70	White.....	— @ —
Lima.....	3 25 @ 3 85	Hurbank.....	— @ —
Red, blk eye.....	2 00 @ 2 10	Early Rose.....	1 30 @ 1 50
do green.....	2 00 @ —	Cuffey Cove.....	— @ —
do Niles.....	2 10 @ —	Petaluma.....	— @ —

BROOM CORN.

South-western.....	60 @ 80 00	River red.....	— @ —
North-western.....	60 @ 80 00	Jersey Blues.....	— @ —

CHICKEN.

California.....	6 @ 7	do King.....	— @ —
German.....	7 @ 8	Peachblows.....	— @ —

DAIRY PRODUCE, ETC.

Cal. fresh roll, lb.....	22 @ 27	do Oregon.....	— @ —
do Fancy brand.....	28 @ 29	Salt Lake.....	80 @ 1 15
Pickle roll.....	— @ —	Sweet.....	— @ —
Firkin, new.....	22 @ 25		
Eastern.....	22 @ 25		

EGGS.

Cal. ranch, doz.....	19 @ 20	do Sprig.....	— @ —
do store.....	15 @ 18	Geese, pair.....	1 25 @ 1 50
Ducks.....	— @ —	do Goslings.....	1 75 @ 2 25
Oregon.....	— @ —	Wild, do.....	— @ —
Eastern.....	15 @ 15	Turkey, B.....	13 @ 16

FEED.

Bran, ton.....	16 50 @ 18 00	Turkey Feathers.....	— @ —
Feed meal.....	30 00 @ 31 00	tail and wing.....	— @ —
Gr'd Barley ton.....	11 00 @ 12 50	Snipe, Eng., doz.....	— @ —
Hay.....	10 00 @ 11 00	do Common.....	— @ —
Middlings.....	19 00 @ 20 00	Doves.....	— @ —
Oil Cake Meal.....	32 50 @ —	Quail.....	1 25 @ 1 50
do new process.....	28 50 @ —	Hare.....	1 00 @ 1 75
Straw, base.....	40 @ 50	Venison.....	— @ —

FLOUR.

Extra, City Mills.....	4 00 @ 4 35	Cal. Bacon.....	11 @ 12
do Co'stry Mills.....	3 75 @ 4 00	Heavy, B.....	12 @ 13
Superfine.....	3 25 @ 3 50	Medium.....	12 @ 13

GRAIN, ETC.

Barley, feed, chl.....	75 @ 87	Light.....	12 @ 13
do Brewing.....	92 @ 1 05	Extra Light.....	13 @ 14
Chevalier.....	1 10 @ 1 20	Lard.....	9 @ 11
do Coast.....	90 @ 1 05	Cal Smoked Beef.....	11 @ 12
unkwheat.....	1 75 @ 2 25	Hams, Cal.....	12 @ 14
Corn, White.....	1 60 @ —	do Eastern.....	14 @ 15
Yellow.....	1 35 @ 1 40		
Small Round.....	— @ —		

NEBRASKA.

Choice feed.....	60 @ 1 65	Alfalfa.....	8 @ 9
Choice feed.....	1 40 @ 1 42	Clay.....	11 @ 12
do good.....	1 35 @ 1 37	White.....	30 @ 22
do fair.....	1 30 @ —	Cotton.....	30 @ —
do Gray.....	1 30 @ 1 27	Flaxseed.....	2 @ 3
do Oregon.....	— @ —	Hemp.....	4 @ 4
Rye.....	1 75 @ 1 90	Italian Eye Grass.....	10 @ 11
Wheat milling.....	1 45 @ —	Perennial.....	7 @ 9
do Choice.....	1 40 @ —	Millet, German.....	5 @ 6
do fair to good.....	1 37 @ —	do Common.....	5 @ 6
Shipping choice.....	1 37 @ —	Mustard, white.....	12 @ 2
do good.....	1 35 @ —	Brown.....	2 @ 3
do fair.....	1 30 @ —	Rape.....	14 @ 2

HIDES.

Dry.....	11 @ 12	Red Top.....	17 @ 18
Wet.....	6 @ 6	Burgundy.....	8 @ 10
HONEY, ETC.		Lawn.....	30 @ 40
Beeswax, B.....	21 @ 25	Meat.....	8 @ 9
Honey in comb.....	11 @ 15	Timothy.....	7 @ —
do fancy.....	16 @ 17		
Extracted, light.....	6 @ 7		
do dark.....	5 @ 6		

HOPE.

Oregon.....	6 @ 6	Humboldt and.....	18 @ 20
California.....	6 @ 15	Mendocino.....	15 @ 21

ONIONS.

Pickling.....	— @ —	Salt valley.....	15 @ 18
New.....	35 @ —	Free Mountain.....	15 @ 21
Silverskins.....	— @ —	Northern Defective.....	10 @ —
Cut.....	— @ —	S. Joseph valley.....	10 @ 15
		do mountain.....	12 @ 15

NUTS—JOBBING.

Walnuts, Cal, B.....	8 @ 10	Cava's & F's.....	15 @ 18
do Chila.....	8 @ —	Oregon Eastern.....	15 @ 20
Almonds, h'd.....	5 @ 7	do valley.....	18 @ 22
Soft shell.....	12 @ 13	Southern Coast.....	— @ —
aper shell.....	15 @ —		

PACIFIC COAST WEATHER FOR THE WEEK.																																				
[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]																																				
DATE.	Portland.				Eureka.			Red Bluff.			Sacramento.			S. Francisco.			Fresno.			S. L. Obispo.			Los Angeles.			San Diego.										
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.								
May 17 23.																																				
Thursday.....	.00	74	SE	Fr.	.00	56	Nw	Cy.	.00	8	SE	Cl.	.00	70	W	Cl.	.00	57	W	Cl.	.00	78	W	Cl.	.00	65	W	Cl.	.00	70	SW	Cl.	.14	64	Nw	Cy.
Friday.....	.00	60	SE	Cy.	.00	56	Nw	Cy.	.00	76	S	Cl.	.00	70	SW	Cl.	.00	56	SW	Cy.	.00	84	N	Cl.	.00	63	W	Cy.	.00	66	SW	Cy.	.00	66	W	Cy.
Saturday.....	.00	58	S	Fr.	.00	54	N	Cl.	.00	78	S	Cl.	.00	64	SW	Cl.	.00	58	SW	Fr.	.00	74	Nw	Cl.	.00	58	W	Cy.	.00	68	W	Cy.	.00	64	W	Cy.
Sunday.....	.02	60	W	Cy.	—	—	—	—	.00	68	S	Cl.	.00	66	S	Cl.	.00	58	W	Fr.	.00	72	Nw	Fr.	.00	59	W	Cy.	.00	66	SW	Cy.	.00	62	W	Cy.
Monday.....	.00	60	Nw	Cl.	.00	56	Nw	Cl.	.00	70	S	Fr.	.00	64	S	Cl.	.00	59	SW	Fr.	.00	70	Nw	Cl.	.00	59	W	Cy.	.00	66	SW	Cy.	.00	64	W	Cy.
Tuesday.....	.00	68	Nw	Cl.	.00	54	SW	Cy.	.00	70	SE	Cl.	.00	64	SW	Cl.	.00	56	W	Cy.	.00	68	Nw	Cl.	.00	58	W	Cy.	.00	62	SW	Cy.	.00	68	SW	Cy.
Wednesday.....	.00	70	SE	Cl.	.00	54	W	Cy.	.T	66	S	Cl.	.00	62	S	Cy.	.00	57	W	Cy.	.00	66	W	Cy.	.00	69	W	Cy.	.00	68	SW	Cy.	.00	64	W	Cy.
Total.....	.02				.0				.T				.00				.01				.00				.03				.00			.14				
EXPLANATION.—1. for clear; C, cloudy; Fr, fair; Fy, foggy; — indicates too small to measure. Temperature, wind and weather at 12.00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.																																				

EXPLANATION.—1. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature, wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 23, 1888.

Apples, bx com.....	50 @ 75	do evaporated.....	12 @ 10
do choice.....	— @ —	Peaches.....	9 @ 10
Apricots, bx.....	90 @ 1 25	do pared.....	— @ —
do Royals.....	1 00 @ 2 00	do evaporated.....	20 @ 25
Bananas, bunch.....	2 00 @ 4 00	Pears, sliced.....	4 @ 7
Blackberries, ch.....	— @ —	do dried.....	11 @ 12
Cantaloupes, cr.....	— @ —	do evaporated.....	11 @ 12
Cherries white bx.....	30 @ 1 00	Plums, evapoed.....	11 @ 12
do black bx.....	40 @ 75	do unpitted.....	4 @ 7
do Royal Ann.....	75 @ 1 00	Prunes.....	7 @ 10
Cherry plums.....	50 @ 75	do French.....	8 @ 11
Crabapples.....	— @ —	Zante Currants.....	8 @ —

RAISINS.

Oranberries.....	10 @ 12 00	Dehesa Chis, fcy.....	3 25 @ 3 50
Orange ch.....	4 00 @ 5 00	Imperial Chis.....	— @ —
Gooseberries lb.....	1 @ 3	st. fancy.....	2 00 @ 2 25
Figs, black bx.....	— @ —	Crown London.....	— @ —
do white bx.....	— @ —	Layers, fcy.....	2 00 @ 2 25
Grapes, white.....	— @ —	do Loose Muscatels, fancy.....	1 90 @ 2 10
do black.....	— @ —	do Loose Muscatels.....	1 60 @ 1 90
do Rose Peru.....	— @ —	Cal. Valencia.....	1 60 @ 1 80
do Muscat.....	— @ —	do Layers.....	1 50 @ 1 61
do Tokays.....	— @ —	do Sultanias.....	1 60 @ 1 75
Isabel.....	— @ —	Dried, sacks, lb.....	5 @ 6
Wine, Zinfandel.....	— @ —	Outside brands of raisins.....	— @ —
do Mission.....	— @ —	sell at from 25 cts to 50 cts less than above quotations.....	— @ —
Limes, Mex.....	3 00 @ 4 50	do Fractions come 25, 50 and 75 cents higher for halves, quarters and eighths.....	— @ —

VEGETABLES.

Artichokes, doz.....	— @ —	Asparagus bx.....	1 00 @ 2 50
do N. Avels.....	3 50 @ 5 00	do extra choice.....	3 50 @ 4 50
do Com.....	2 00 @ 3 00	Ozra, dry, lb.....	15 @ 20
do Panama.....	— @ —	do green bx.....	— @ —
Peaches, bx.....	1 50 @ 2 50	Crawfords, chl.....	2 50 @ 3 25
do choice.....	— @ —	Peppers, dry lb.....	8 @ 10
do Bartlett, bx.....	— @ —	do green, lb.....	10 @ 15
Persimmons.....	— @ —	Pumpkins pr tor.....	— @ —
Jap, bx.....	— @ —	Squash, Marrow.....	— @ —
Pineapples, doz.....	2 50 @ 4 50	fat, ton.....	50 @ 2 00
Plums lb.....	— @ —	String beans lb.....	3 @ 7
Pomegranates, b.....	— @ —	Tomatoes, box.....	— @ —
Prunes lb.....	— @ —	do choice.....	— @ —
Quinces bx.....	— @ —	Turnips chl.....	1 00 @ 1 25
Raspberries dr.....	90 @ 1 25	Beets, sk.....	1 25 @ —
Strawberries ch.....	3 00 @ 7 00	Cabbage, 100 lbs.....	1 00 @ 1 10
Watermelons, 100.....	— @ —	Jarrots, sk.....	30 @ 40

DRIED FRUIT.

Apples, sliced, lb.....	6 @ 6	Green Corn doz.....	10 @ 30
do evaporated.....	10 @ 11	do sweet cr.....	— @ —
do quartered.....	11 @ 13	do large box.....	— @ —
Apricots.....	8 @ 10	Green Peas, sk.....	75 @ 1 00
do evaporated.....	15 @ 17	Sweet Peas, sk.....	1 00 @ 1 75
Blackberries.....	12 @ 15	Lettuce, doz.....	— @ —
Cherries.....	12 @ 15	Lima Beans B.....	5 @ 25
Dates.....	9 @ 11	Mushrooms, B.....	— @ —
Figs, pressed.....	5 @ 6	Rhubarb bx.....	75 @ 1 25
Figs, loose.....	3 @ 4	Cucumbers, doz.....	15 @ 25
Neotaries.....	8 @ 11		

Ertel's Victor Hay Presses.

The following letter to George Ertel from his son, who is now in Southern California, explains itself:

GLINDORA, CAL., May 19, 1888.

My Dear Father:—I returned here Sunday morning from Banning and left on the early morning train for Santa Ana Monday morning, as Mr. Burdick had sent a telegram for me to come Monday morning sure, and it was a good thing that I got finished at Banning in time to meet his commands as he was in an awful stew about the presses, and had telegraphed Zeimet here during my absence to know if they had been shipped. The two presses at Banning Mr. Thayer and I set up and started in one day, Saturday, and, as usual, the parties were highly pleased with them. Mr. Thayer's partner telegraphed him at Banning to see a party at Beaumont Sunday, and he wrote me since that he sold him a press, and that he has only two presses left out of the carload. He thinks he will get out of presses before the second car arrives.

Well, at Santa Ana I had a picnic with the Whitman agents. They had an ad. in the Santa Ana paper, challenging and defying competition against the celebrated Whitman hay press, so I and Mr. Burdick in person went down to their office and invited them to bring down a Whitman press and work it alongside the Victor, and agreed to allow them the use of our team and hay, but they positively refused to accept, saying they did not have the time, and, furthermore, they did not have to work their presses alongside the Victor. Mr. Burdick got quite indignant at this, and told them they better take down their bills if they did not want to do as they advertised. We persuaded several other men to go down and try to have them bring down a Whitman press, but they would not, and said they might have sold some presses if they had got theirs in before the Victor was introduced. They tried to get a man by the name of Price, from Austin, Texas, to help set up and run a Whitman press, but he told them he could not do it and honestly tell people it was the best press, for he has run a Victor two years in Texas that he bought from Walter Tips, baling and loading a car of hay per day with it; says he baled 900 cars (but I think he made a mistake in the amount), and the press has not cost him 5 cents for repairs. He says all the Dederick and Whitman presses are lying idle in his neighborhood, and he himself has a Dederick press that he will sell for \$20. There was one Whitman in use at Santa Ana last year, but it broke down several times when they tried to bale wet hay with it in the morning, as you know it gets very foggy down there in the morning. A man who had some baling done by this Whitman said they never could start up before nine o'clock in the morning, until the hay got rather dry, as they were afraid of breakages.

Truly, your son,
CHARLIE.

REMEMBER.—We can make it an object for some friend going East to consult us before buying tickets.

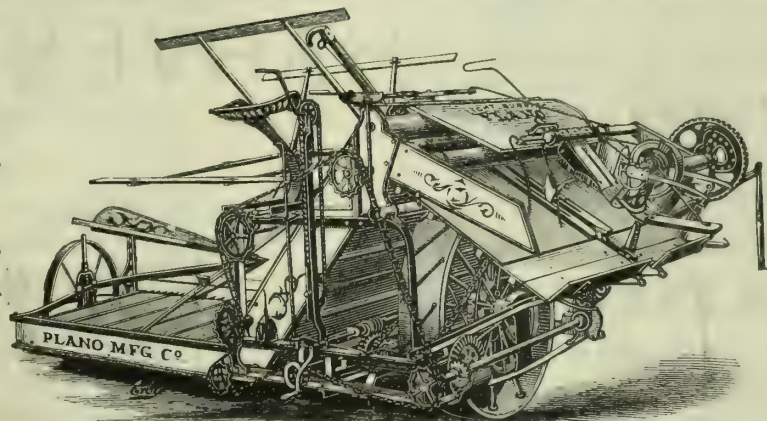
ALTHOUGH there are nearly 70,000 idle men in New York, immigrants continue to pour in by the shipload.

“PLANO” TWINE BINDER

IS FAMED FOR ITS

LIGHTNESS, DURABILITY, SIMPLICITY and CAPACITY.

Price, 5 1/2 feet, \$200.



Price, 6 1/2 feet, \$210.

The Light-Running All Steel “Plano” Twine Binder, 5 1/2 & 6 1/2 ft. Cut.

WE HAVE A CERTAINTY ON THESE POINTS OF SUPERIORITY:

There is not even one experiment about it.
The wear is very slight and is easily taken up.
It does not get out of

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Tahiti Orange Seed.

We are now prepared to furnish strictly reliable Tahiti Orange Seed (Decayed Oranges), fresh from latest arrivals.

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One Year from Cuttings. Address

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Sonoma, Cal.



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THE H. H. H. Horse Liniment puts a new life into the Antiquated Horse! For the last 14 years the H. H. H. Horse Liniment has been the leading remedy among Farmers and Stockmen for the cure of Sprains, Bruises, Stiff Joints, Spavins, Windfalls, Sore Shoulders, etc., and for Family Use is without an equal for Rheumatism, Neuralgia, Aches, Pains, Bruises, Cuts and Sprains of all characters. The H. H. H. Liniment has many imitations, and we caution the Public to see that the Trade Mark "H. H. H." is on every Bottle before purchasing. For sale everywhere for 50 cents and \$1.00 per Bottle.

For Sale by all Druggists.

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Manufacturers of all kinds of Perforated Metal, Lap and Lip Hoes, Screens, round and slotted, or any other kind desired for cleaning and separating grain. Farmers will please take notice that the metal screens do not clog or choke up as do the old wire screens heretofore in use. Also notify us of your requirements. Information by mail. California Perforating Screen Co., 15 & 17 BEALE ST., S. F.

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SACRAMENTO, CAL.

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MANUFACTURERS OF

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AND ALL KINDS OF

MACHINERY FOR MINING PURPOSES.

Flouring Mills, Saw Mills and Quartz Mills Machinery constructed, fitted up and repaired.

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BERMUDA GRASS SEED.

New Crop.

Choice Quality.

PRICE ON APPLICATION.

CATALOGUE FOR 1888, containing full and complete description of
VEGETABLE, FLOWER and TREE SEEDS,
FREE ON APPLICATION.

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Established 1853.

ADRIATIC and SAN PEDRO FIGS.

French Walnuts, Home-grown Oranges and Rooted Grapevines.

Illustrated Catalogue and Price List for the season of 1887-88 free to all sending for them. All Trees, Vines, etc., guaranteed free from scale and other injurious pests. A certificate of inspection furnished to all. A full line of Fruit and Ornamental Trees, Shrubs, Vines and Hothouse Plants.

E. C. CLOWES, Proprietor

(Successor to W. B. WEST).

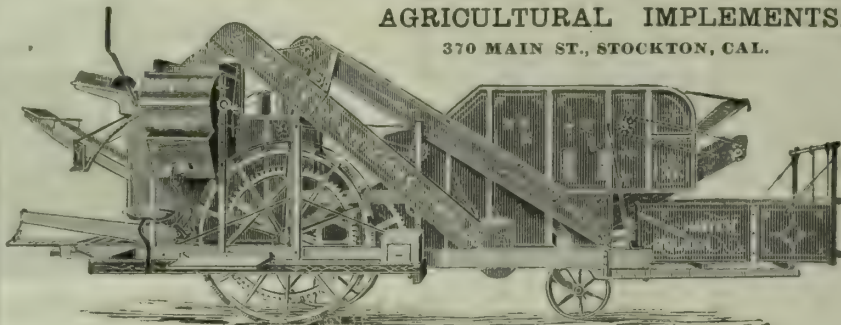
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OUR HARVEST QUEEN (COMBINED) HARVESTER.

Sizes—10, 12, 14 and 16-foot cut. Each Machine has Steel Shafting and Straw Dump, which saves all the Straw and Chaff. Header easily detached to ship or pass through 10 foot gate. Send for Price List and Testimonials to

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Stockton, Cal.

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BARN-YARD MANURE.

Owing to the gratifying success our product has met with during the past season, we feel greatly encouraged in offering our Fertilizers, and can guarantee our patrons that our former standard of excellence will be fully maintained.

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California Bone Meal and Fertilizer Co.,

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Free Coach to and from the House.

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OF CALIFORNIA,
SAN FRANCISCO, CAL.
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Authorized Capital.....\$1,000,000
Capital paid up in gold coin.....624,160
Reserved Fund.....40,000
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I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
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General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on Wheat and country produce a specialty.

Jan. 1, 1888.

A. MONTPELLIER, Manager.

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WINDMILL

Is recognized as the
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Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

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GENERAL OFFICE AND SUPPLIES (as always before),
LIVERMORE, ALAMEDA CO., CAL.

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120 Front St., San Francisco.

A FRUIT DRIER

Complete, which makes 20 pounds of Dried Fruit of superior quality in twelve hours, and at very little cost for

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Stationary Engines and Boilers.

Portable Straw-Burning Boilers & Engines.

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Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,

Including Grape Crushers and Stemmers, Elevators, Wine Presses and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.



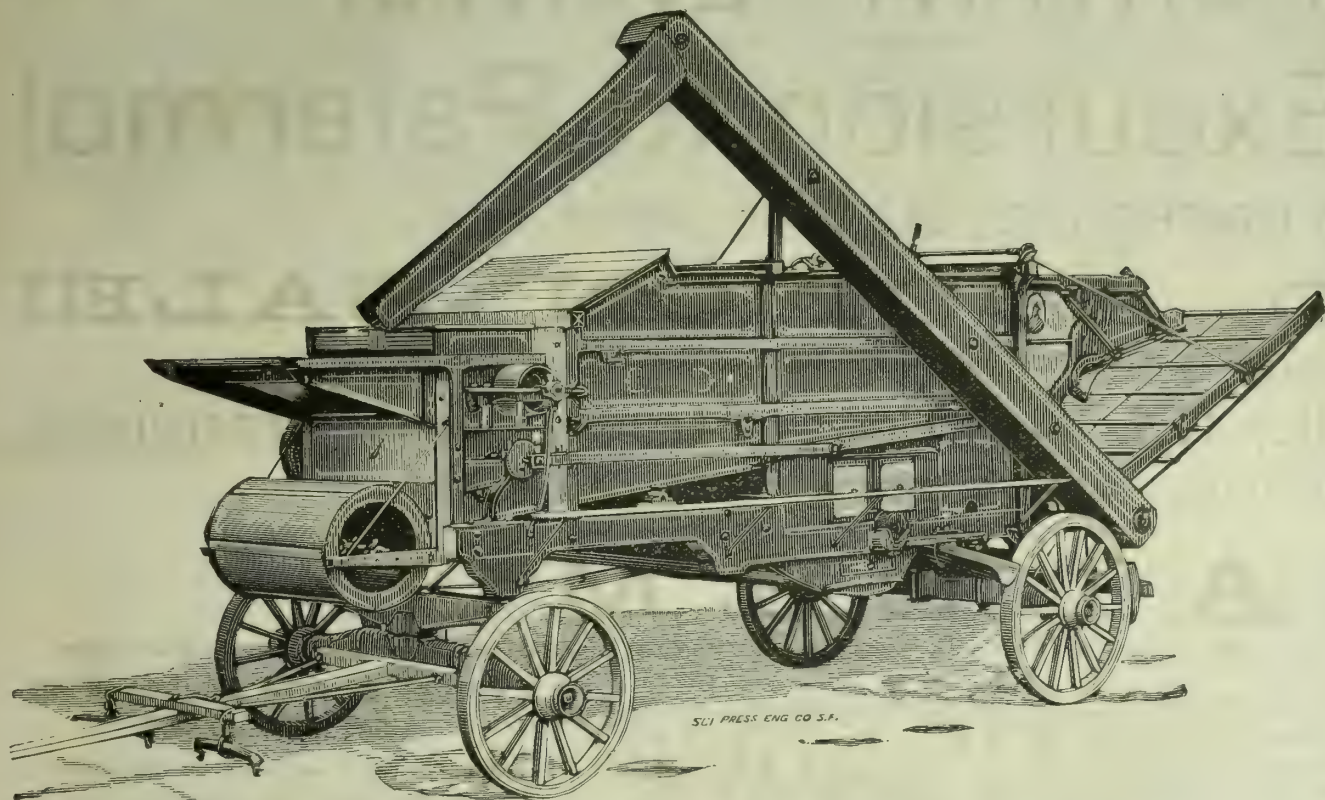
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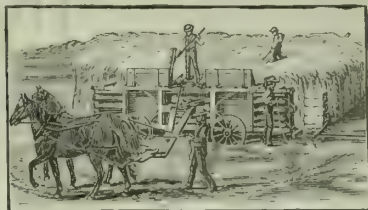
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JOHN F. LINCOLN, Manager.

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THE HURRICANE—Size A.

A mounted, horizontal double-ender. Size of bale, when in the press, 17x22x40 inches. Average weight of bale, 220 pounds. Capacity, from 16 to 25 tons per day. Uses 4 men and works with 2 horses. Requires no TRAMPING. Puts 10 tons or over in a box car.

Price.....\$1000.

THE HURRICANE—Size B.

Size of bale in press, 22x24x46 inches. Average weight of bale, 260 pounds. Capacity, from 20 to 35 tons per day. Uses 5 men and works with 1 or 2 horses, at option of baler. Requires no TRAMPING. Uses rope or wire. Puts from 7 to 8 tons in a box car.

Price.....\$1000.

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10 TONS BOX CAR \$500

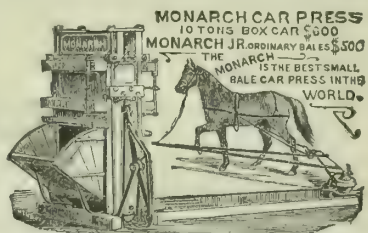
MONARCH JR. ORDINARY BALE \$500

THE MONARCH

IS THE BEST SMALL

BALE CAR PRESS IN THE

WORLD.



The SELF-TRAMPING JUNIOR MONARCH

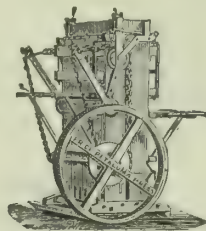
Size of bale in press, 22x24x46 inches. Average weight of bale, 260 pounds. Capacity, from 15 to 25 tons per day. Uses 3 or 4 men, at option of baler. Works with 1 or 2 horses. Uses rope or wire. Does its OWN TRAMPING. Puts from 7 to 8 tons in a box car.

Price.....\$500.

THE MONARCH.

Same principle as Junior Monarch, only smaller and heavier. Size of bale, when in press, 17x20x40 inches. Average weight of bale, 220 pounds. Capacity, from 12 to 20 tons per day. Requires 3 men and 2 horses. Uses wire only—rope will not hold. Does its OWN TRAMPING. Puts 10 tons or over in a box car.

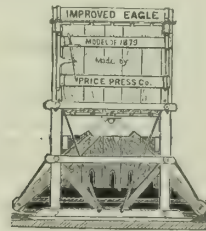
Price.....\$600



THE GENUINE PRICE PETALUMA.

Size of bale in press, 24x24x50 inches. Average weight of bale, 250 pounds. Capacity, from 10 to 18 tons per day. Requires 4 men and 2 horses. Uses rope or wire. Hay has to be tramped into the press. Puts from 5 to 6½ tons in a box car.

Price.....\$350.



THE IMPROVED EAGLE.

Size of bale in press, 26x26x50 inches. Average weight of bale, 235 pounds. Capacity, from 10 to 15 tons per day. Requires 4 men and 2 horses. Uses rope or wire. Hay must be tramped in the press. Puts from 4½ to 5½ tons in a box car.

Price.....\$250.

The above is the finest line of Baling Presses in the United States. They are nearly double the capacity of those of other makers.

For large, illustrated Catalogue of the same, address the

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San Leandro, Cal.

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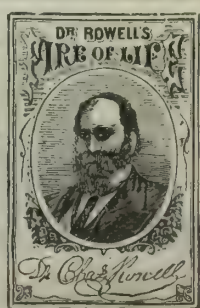
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Rheumatism, Neuralgia, Pneumonia, Paralysis, Asthma, Sciatica, Gout, Lumbago and Deafness.

Everybody should have it. G. G. BURNETT, Ag't 327 Montgomery St., S. F. Price, \$1.00. Sold by all Druggists. Call and see

DR. CHAS. ROWELL, OFFICE, 426 Kearny St., San Francisco.



SPECIAL OFFER.—I will ship in localities where, as yet, I have no AGENT, one sample Improved "New Becker" Washer at wholesale prices, Descriptive pamphlet free. E. W. Melvin Prop. Office, 806 J St., Sacramento, Cal.

BROWNE'S SQUIRREL AND GOPHER EXTERMINATOR.

Material used costs nothing
No Leather Valves or Bellows
To get out of order.

Every Machine guaranteed to give satisfaction or money refunded. Send direct to Patentee and Manufacturer to save agents' commissions.

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One door from Bank of California.

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RATES—\$1.00, \$1.25 and \$1.50 per day.
Free Coach to and from the Hotel.
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HORSE POWERS, WINDMILLS, TANKS and all kinds of Pumping Machinery built to order. Awarded Diploma for Windmills at Mechanics' Fair, 1886. Windmills from \$65. Horse Powers from \$50. F. W. KROGH & CO., 51 Beale Street, San Francisco.

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Booth's Sure Death Squirrel Poison

For Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and Farmers wherever used.

The Cheapest and Best.

Put up in 1-pound, 5-pound, and 5-gallon Tins.

Every Can Warranted.



Patented Jan. 23d, 1883.

For Sale by all Wholesale and Retail Dealers.

This Poison has been on the market less than two years, yet in this short time it has gained a reputation of "Sure Death," equalled by none. By its merits alone, with very little advertising, it is now used extensively all over the Pacific Coast, as well as in Australia and New Zealand.

SEND FOR TESTIMONIALS.

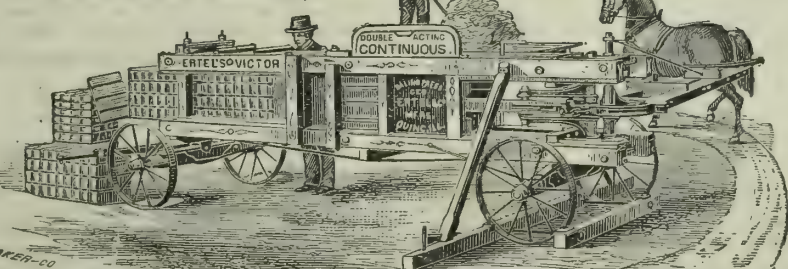
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BOOTH & LATIMER, San Luis Obispo, Cal.

Special Terms on Quantities in Bulk.

The Ertel VICTOR AUTOMATIC FOLDER,

THE LEADING BALER IN THE MARKET.



PROTECTED BY 44 PATENTED CLAIMS.

Double-Acting Perpetual Hay and Straw Press.

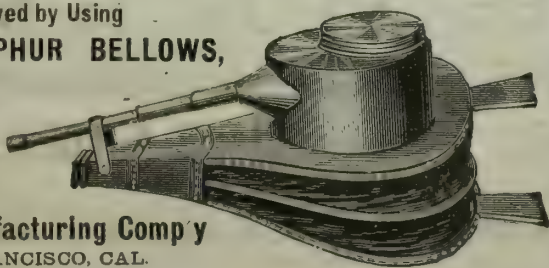
A Machine imitated but not equalled. Baling Hay or Straw faster, more compact, easier, more economically (to load 10 to 15 tons to the Car) than is done with any other so warranted or no sale. Circulars mailed free address, Geo. Ertel & Co., Quincy, Ill.

N. B.—The above Victor Baling Machine, making 16x22 size of variable length bales, is warranted to bale from 12 to 20 tons of Hay per day; loading from 10 to 15 tons to the railroad box car. Price low and satisfaction guaranteed. Represented and sold this season by Messrs. THAYER & PETERS, San Bernardino; N. MATHEWS, Los Angeles; BAKER & HAMILTON, San Francisco; and by GEO. ERTEL, the manufacturer, at Livermore, Cal.

25 to 50 per cent Saved by Using

"THE FAVORITE" SULPHUR BELLOWS,

The greatest invention of the age for SULPHURING VINES OR TREES. Patented Jan. 28, 1886. PRICES—No. 6, \$2.50; No. 8, \$3.00; No. 10, \$3.50. Sent on receipt of Postal Order or Check, or by Express U. O. D. All kinds of Bel-lows made to order.



California Bellows Manufacturing Comp'y
123 BEALE ST., SAN FRANCISCO, CAL.

"Palermo may be truthfully said to be to-day, in many respects, further advanced, at the end of less than 4 months, in its development than were some of the older settlements—Riverside, for instance—at the end of as many years."—Evening Bulletin, Apr. 25, 1888

IMPORTANT EVENTS!

Grand Excursion to Palermo!

WEDNESDAY, MAY 30, 1888, and

GRAND AUCTION SALE!

Of 5 and 10 Acre Lots in Subdivision No. 2, with Town Lots and unsold Colony Lots in Subdivision No. 1, at

IRVING HALL, No. 139 Post Street, San Francisco,

SATURDAY, JUNE 2, 1888, AT 10 O'CLOCK A. M.

PALERMO!

The Riverside of Upper California. A Gem Colony, Surpassing all others in Fertility of Soil, Beauty of Landscape and Abundance of Pure Mountain Water.

The Palermo Colony, consisting of 6,900 acres of the choicest Fruit Lands in the State, is situated in Butte county, California, in the heart of the Northern Citrus Belt, 170 miles north of San Francisco and 5 miles south of Oroville, on the line of the Northern California Railroad. At the town of Palermo there is now a depot and warehouse, with side-tracks and railroad switches, and within a few weeks a Postoffice and telegraph station will be established.

SOIL AND TOPOGRAPHY.

The soil is a rich red and black, gravelly loam, the adaptation of which to all sorts of fruits has been fully established. Over one-third or more of the tract, including nearly all of Subdivision No. 1 and every part of Subdivision No. 2, is perfectly level. The remainder consists of gently rolling hills and valleys, where are sites for lovely homes and picturesque villas. Scattered over the Tract are giant live and white oaks and pretty groves of smaller trees.

A Merchant and Still a Fruit Grower.

A most attractive feature of the Palermo Colony is the splendid system adopted by the Palermo Land and Water Company for planting and caring for the groves and orchards of non-residents at actual cost, thus enabling those who cannot well give up their business or occupations to still engage in the profitable enterprise of fruit growing. While a number of most desirable settlers have located at Palermo and are caring for their own little farms, the Company, under the supervision of the Horticultural Superintendent, H. H. Hunting, has done a vast deal of work for purchasers living outside of the State, many of whom will build handsome residences on their tracts and spend a greater portion of the year among their beautiful groves of oranges and other fruits.

Thirty Thousand Dollars Spent in Cultivation.

During the season just passed within which trees could be planted—since the formation of the Palermo Colony—nearly 25,000 trees (mostly orange trees three or four years old, of the finest varieties) have been set out, in addition to which the Palermo Nursery and Citrus Association has 30,000 more in its nursery to meet the demand for next season. Orders were given for double this amount of work, but owing to the lateness of the season it was deemed inadvisable to attempt to do any more planting. Seven and one-fifth miles of picket fences were built. Twenty-four miles of main and distributing ditches were dug, enlarged and cleaned. The system of irrigating through ditches is, however, only temporary, and was adopted to meet the present demands. By next season the company contemplates having pipe lines laid throughout the colony and townsite, and great reservoirs will furnish abundant water for every purpose.

TOWN LOTS!

The town of Palermo must of necessity be a place of considerable importance. Its situation in the midst of a district yet in its infancy of fruit culture, though destined to become a great and growing one, and possessing splendid railroad facilities, with the almost certain prospect of being on a new overland route through the Beckwith Pass, makes an investment there a safe and profitable one. The lots, which are perfectly level, are all 50 feet front and have a depth of 150 feet, except those fronting on Railroad avenue, which vary from 117 to 180 feet.

Lots in Alternate Blocks Only Will be Sold.

\$3.00 from San Francisco.

\$1.00 from Sacramento.

50 cents from Marysville.

TIME TABLE.

Leave San Francisco, 7 A. M.; Sacramento, 10:30 A. M.; Marysville, 12:30 P. M. Arrive at Palermo, 1:30 P. M. Grand picnic at Palermo, where excursion will remain until 5:30 P. M., leaving for Oroville at that time. Leave Oroville at 6 A. M. Thursday, May 31st; arrive at San Francisco about noon.

TICKETS should be procured before the morning of departure, as only a limited number will be sold that day. Tickets for sale, maps and catalogues at the office of

McAFEE BROS., 10 Montgomery St.,

NEWHALL'S SONS & CO., Auctioneers, 225-227 Bush Street, S. F.

WOODWARD & GAMBLE.

JAMES N. PORTER.

T. B. LUDLUM & CO.,

902 Broadway, Oakland.

1006 Fourth St., Sacramento.

Oroville, Cal.

AND FROM OUR REPRESENTATIVE AT THE DEPOT AT MARYSVILLE, WEDNESDAY, MAY 30TH.

A RESUME OF FOUR MONTHS OPERATIONS AT PALERMO.

On the 9th day of last January the first subdivision of the Palermo Colony, called Subdivision No. 1, and consisting of about 1800 acres of land, was put on the market. The sales which immediately followed have been steadily and continuous, although unaccompanied with any excitement or appearance of a boom. About three-fourths of this subdivision, apart from the townsite, has been sold to bona fide purchasers and settlers, as the catalogue map will show, and where the lots are large enough to admit it the name of the purchaser appears on the same. The prices obtained range from \$75 to \$250 per acre, being regulated entirely by the distance from the depot.

Eight and one-half miles of street grading has been done, and after the winter rains this work will be resumed, until throughout the colony the avenues and roadways will surpass those of Golden Gate Park. This work has given steady employment to 257 men.

IMPROVEMENTS.

Quite a number of good, substantial dwellings have been erected at Palermo, and but for the scarcity of lumber (something never before known in this splendid lumber district) others would have been built. A planing mill, which will employ from 30 to 40 men, is in course of construction, and a large hotel will be built by the Company and ready for occupancy the coming fall. It is intended to make this hotel the finest in Northern California, creating at Palermo unprecedented attractions to visitors, tourists and seekers after health in this great sanitarium.

SUBDIVISION No. 2.

Subdivision No. 2, lying along the railroad and immediately adjoining the townsite of Palermo, is as pretty a piece of perfectly level land as can be found in California to-day. It may truly be called the cream of the Palermo Colony. It shares every advantage that Subdivision No. 1 possesses, and its value, present and future, is established beyond peradventure. It comes as an offering to the public when this enterprise is no longer an experiment. Purchasers will have the assurance that no future subdivision can compete with it; since this is the only public sale that will ever be made of Palermo property, the inducements to at once accept the opportunity are unparalleled in the history of real estate transactions.

It will be the Last Subdivision Offered With Free Water.

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SINGLE COPIES, 10 Cts.

A Distinguished Aberdeen-Angus.

We have the pleasure of presenting on this page something grand in form, striking in pose

braska. This animal was winner of the grand sweepstakes over all ages and breeds at the Kansas Fat-Stock show of 1887; the *Breeders' Gazette* Challenge Shield for the best animal

herd of *any breed*, at the same shows. In addition, Black Prince was awarded 16 special premiums, alone winning in two weeks over \$2000. At the Chicago and Kansas City Fat-

The steer, "Black Prince of Turlington 2d," defeated all comers by "killing out" 70.77 per cent of net to gross meat, being a greater per cent than that of any other steer slaugh-



BLACK PRINCE OF TURLINGTON.

and forceful in spirit—a portrait of the greatest black polled steer which ever came to the block in America—the two-year-old, pure-bred Aberdeen-Angus Prince of Turlington 2d. He was the property of T. W. Harvey of Chicago, whose breeding farms are at Turlington, Ne-

braska, fed and bred by exhibitor, and of the sweepstakes for best two-year-old steer of any breed. He was also at the head of Mr. Harvey's herd, and won not only first premium for best Angus herd at both Chicago and Kansas City, but of the herd that won grand sweepstakes for best

Stock Shows of 1887 his winnings and that of the herd of which he was a member amounted, in two weeks, to \$4,435.50.

On the block at Chicago the four premiums offered were given Scotch cattle; two of them won by Mr. Harvey's Angus steers,

tered. He was closely pressed in this case, as he had been many times before, by his stable companions, "Sandy," champion steer of Kansas City, 1886, and "Pontiff," sweepstake two-year-old of Kansas City, 1887, they netting 70.67 per cent and 69.77 per cent respectively,

HORTICULTURE.

The Future of Citrus Culture in California.

[The following paper by L. M. Holt, editor of the *Riverside Press*, was read at the California Fruit-Growers' Convention, which convened at Santa Barbara on April 9th, under the direction of the State Board of Horticulture.]

The question of where oranges can be grown is one that has attracted the attention of the fruit-growers of California to a great extent during the past few months, and this question is intimately connected with the future of citrus culture in the State. There is one idea, I think, that has been entirely overlooked by the public discussions of this question, and that is, that more attention has been paid to the subject of where the orange tree can be grown than to where the orange fruit can be raised.

California is subject to cold waves during the winter time. There is particularly no portion of the State that is free from the cold wave. The question of average temperature cuts but little figure in orange culture, only as the question of minimum temperature is satisfactory. A cold wave that will destroy the crop will not materially injure the tree. Therefore the locality where the tree can be successfully grown might have such a minimum temperature that the orchard would never fruit in a profitable manner. A cold wave that would do no damage to the tree and no damage to the fruit in January, might ruin the crop if the same temperature should come in November, before the orange is sufficiently matured to resist the cold.

In November, 1886, a cold wave swept over Riverside, which sent the thermometer down to 27°, a point which would only cut back the tender shoots of the tree, and practically it would not injure the tree at all; and yet, the fruit in its immature state at that time was seriously affected. Of course, the mercury in different localities registered a different degree, but at that time there was probably no orange in the valley that was subjected to a lower temperature than 25°.

During the past winter the celebrated cold wave which swept all over the State, put the mercury down to 25° in Riverside, two degrees lower than the cold wave of 1887, and yet no damage was done, because the condition of the tree and fruit was such as to withstand the cold better in January than in November.

In neither one of these cold waves was there any damage done to the orchard. In fact, the mercury could have gone several degrees lower than it did and yet the trees would have sustained no injury of a permanent character.

The question, therefore, for the practical fruit-grower to study is to find the locality for the planting of the orange where the minimum temperature will be high enough to save the fruit as well as the tree.

There are a few propositions of a general character which are now recognized in connection with citrus fruit culture in California. One is, that the best localities for perfecting the orange and lemon are located away from the coast, in the interior valleys of the State. Wherever the orange has been grown, from Oroville to the Mexican line, every bearing tree, wherever located, has been a witness to testify to the correctness of this proposition. As a rule, all orchards located along the coast have been attacked by the common black scale, accompanied with the black smut or fungus growth, and every orchard located in an interior valley, as a rule, has been free from both. The one invariably accompanies the other, the black smut being the result of the black scale.

The same rule does not hold true as regards some other insect pests. The red scale and the cottony cushion scale are to be found in some central portions of California where the brown or black scale does not exist, although in Southern California it has been confined thus far to the coast valleys.

The markets of the United States demonstrate the fact that the oranges raised in the central valleys command higher prices than those raised along the coast. These interior oranges command a higher price in Chicago than any oranges shipped to that market from any portion of the world. It was these oranges, grown in the interior valleys, that competed successfully with Florida, and secured the gold medals for the best 20 varieties grown in California, in the United States or in the world. In making this statement I do not wish to reflect in the least upon the magnificent display of oranges from San Diego county at the New Orleans World's Fair. It is a well known fact that the line which separates the interior valleys from the coast valleys, so far as the citrus fruits are concerned, nears the coast as we progress southward toward the Mexican line, and that only a few miles back from the ocean, in San Diego county, we find as clean fruit as we do farther north, twice or three times that distance. It is also true that on the very coast, in San Diego county, clean orchards can be grown for many years, although eventually the scale, as a rule, gets possession of the trees. Hence, we find around the bay of San Diego very fine oranges grown on young trees. This does not conflict with the general rule which places the home of the orange, in California, away from the coast.

The time is coming when trainloads of oranges from California will be shipped across

the Rocky mountains, where now only carloads are sent. It is only about three years since oranges were first shipped successfully from Southern California to Chicago. It was then an experiment; a market had to be made in the Western States. It took time to make it, and yet the market has extended more rapidly than the bearing capacity of our orchards, and there has never been a time since the shipment of oranges on a large scale to the Western States commenced when the demand for good oranges did not exceed the supply. And yet the markets of the Northwest are only partially developed, and the East has not been touched at all.

We do not come in conflict with Florida in the orange markets of the North, because the Florida crop is marketed before the California crop is ready to market. Our shipments begin about the first of February, and at that time theirs is practically ended. The Florida crop of oranges comes into the market about the first of November, and continues for four months. The California crop commences about the first of February and continues about four months. Florida has the disadvantage of placing its fruit on the market during the four coldest months, at a time when the public do not appreciate acid fruits. The California crop comes upon the market in the spring, when the system demands an acid fruit, and at a time when there is practically no other fruit in the market with which it is brought into competition.

It is for this reason, and for another reason of actual superiority, that the California orange commands from \$1 to \$2 per box more in the market than is paid for Florida oranges.

As yet the supply of the California orange is not equal to the demand, and the supply is not increasing as rapidly as the public generally think. Orange-orchard planting has practically ceased for several years past along the coast valleys of Southern California, while it has received an impetus in the interior valleys during the past three or four years. There has been practically no increase of production of oranges in the coast valleys, and it is doubtful if there ever will be an increase in those sections. Hence, we must look to the interior valleys for the orange supply of the future. This supply, at present, comes from a limited area, and the future increase of oranges from those valleys will be slow, because it requires so many years to plant the orchard and bring it into bearing. Riverside illustrates this point very nicely, as is seen from the shipments from that valley during the past four years.

During the season of 1884-5, the shipment of oranges from Riverside amounted to 500 carloads.

During the season of 1885-6, the shipments were about the same.

During the season of 1886-7, the shipments did not reach 500 carloads.

During the present season, 1887-8, the shipments to date have reached nearly 500 carloads, with probably 200 or 300 carloads yet to go forward.

The total shipments of oranges from Southern California are not a great deal larger to day than they were four years ago, and yet while the increase is slow, it is certain, and in the four years to come we may look for a larger increase than in the four years past, because more young orchards will come into bearing.

The question of raising a superior orange in California is now settled. This State not only raises a superior orange, an orange that is king among oranges, but that fact is recognized by the markets of the United States, and there is no probability that the present century will see enough oranges produced in California to supply the spring markets of the Atlantic States. The Mediterranean orange is being practically driven from the market, while the Florida orange cuts no figure, as it is not a competitor.

Our people are learning rapidly where choice oranges can be raised successfully. Fortunes have been lost in learning this lesson, and other fortunes, probably, will also be lost in trying to demonstrate the fact that the California citrus belt is a large one. A few will pay heavy tuition to learn these facts, and the masses will take advantage of the facts thus learned.

Cultivation of the orange in favorable localities is probably the most profitable business to which an acre of ground can be devoted for horticultural and agricultural purposes. It takes time to develop an orange grove, and this fact, taken in connection with the fear of overproduction, keeps the masses from going into the industry, and hence the time when overproduction will come, if ever, is pushed far into the future.

The price of choice orange land in California is yet very low, as compared to the price it must attain when this industry and the markets become fully and thoroughly established. Riverside to-day has 3000 acres of orange groves, which will produce next year one carload to every three acres, and this crop will increase from year to year until an average crop of two carloads to the acre is reached, or 6000 carloads from the 3000 acres. The crop of these 3000 acres next year will pay \$200,000 in freight, an average of \$66 to the acre, and when the trees are in what may be called full bearing, they will pay freight at the rate of \$600 an acre, if the freight rates continue as they are to-day—\$200 a carload—while the average net income of the crop now is \$300 an acre, and similar markets which have prevailed here for the last three years will pay, when the trees come into full bearing, six times that amount, or an average of \$1800 an acre, this being reckoned as the net price of the crop upon the tree.

In fact, single orchards are now yielding that income.

I did not intend to make this paper a document for booming California, but a discussion of the future of citrus-fruit culture that left out the question of dollars and cents would be incomplete.

While I am sanguine of the future profits of orange culture, I cannot say so much for the future of the lemon business, and as this portion of the industry is as yet in its infancy, but is being developed in a satisfactory but very slow way, I only give that part of the subject a passing notice.

The very best of lemons can be raised in California. They will ripen, however, at the wrong season of the year, and the only question now for our people to ascertain is, how can the lemon be picked in December and marketed in June.

Sun-Scalding of Trees.

EDITORS PRESS:—State Inspector Klee's article in the last PRESS on the above subject is timely and right to the point. Fruit-growers cannot be too often reminded of the necessity of guarding against the injury from sun scalding in this warm climate. The rapid growth of the tree and the tendency to shoot up long slender limbs, exposing a large surface to the scalding sun, renders them peculiarly liable to injury from this cause. The preventives he recommends are good, as I know from long experience. Shading the young trees with a shingle, white-washing the exposed bodies and limbs of all trees with a common lime whitewash with a little salt added, will not only reflect the heat, but effectually clean them from the woolly aphids and the scale. I have whitewashed two orchards in my immediate vicinity for two seasons and the bark presents a smooth glossy appearance, and they are entirely free from insects though previously badly infested.

Keeping the tops of trees low down, encouraging the growth of a dense foliage for shade, is also an excellent preventive.

Mr. Klee seems to convey the idea in his "Physiological Reasons" that the sap ascends through the bark or between the bark and wood. Not so, however. The sap ascends by capillary attraction through the pores of the outer layer of wood, called the albumen. At the East it was customary in an early day to girdle, or "deaden" the oak and other trees on the openings, and sow to wheat, without any further clearing than the small undergrowth. Every woodchopper knows very well it was necessary to cut into the wood in order to deaden the tree. Even the little "sap sucker" knew from instinct that it was necessary to peck into the wood to produce the flow of sap.

After the sap has ascended and performed its functions of developing the leaf and fruit buds, a portion descends between the bark and wood to form an annular layer of wood. No doubt the damage is done at or about this time when the sun comes out in all his fervid vigor, and bakes and burns the bark to such an extent as to unduly heat the sap, and thus deprive it of its vivifying principle. I cannot understand how the sap can become soured, unless perforations, as Mr. Klee intimates, are made to admit the oxygen of the air, which is necessary to acidity. J. S. TIBBITS.

Santa Rita.

DATE-PALM FENCES.—We have avenues of date-palms in this State, notably the one on Col. Hollister's place at Santa Barbara, but we are not aware that any one has tried setting the plants closely enough together to form a fence or hedge, and yet this has been done in Florida, and a writer in the *Dispatch* of Jacksonville, says: "Mr. J. C. Thorpe of Sanford, then of Orange City, some ten years ago, transplanted into a row some little date-palms he had, and now they are something like two feet in diameter and ten feet high. No animal could get through the line. Their exquisite, creamy white blossoms have appeared for one or two years past. Think what a sight a close row of those palms would be, one pushing this way, another that, in the upward struggle for light and air." It would be easy to try it in this State. All it needs is patience to wait for them to grow. The plants can be easily secured in quantity by planting the seed of the dried dates of commerce in boxes of sandy soil. If kept moist, they germinate readily, and in the warmer parts of the State they grow quite rapidly. They should be potted off separately and planted out a year or two later.

FLOWERS IN WATER.—At a recent horticultural meeting flowers were exhibited in a glass filled with water and fitted with a wide and flat stopper. To the stopper the flowers were attached and then carefully introduced into the water in the globe, the stopper completely filling the mouth of the globe and being wide enough to stand safely. By turning the whole arrangement so that it stood on the stopper, the flowers were left completely surrounded by water. The water magnified the flowers, and a pleasing optical illusion is the result. Flowers thus immersed will keep twice as long as those in the air.

GENERAL CHIPMAN of Red Bluff has accepted an invitation to deliver the annual address before the San Joaquin Valley Agricultural Association at the District Fair to be held in Stockton next fall. The General is reputed to be a deep thinker and accomplished speaker.

THE STABLE.

New Running Stakes by the State Society.

The *Record-Union* has the following: "The desire of many breeders and owners of thoroughbred horses to return and race on this coast after the closing of what is called the Western circuit, i. e., Louisville, St. Louis and Chicago, and to encourage the continued increase in the breeding of this class of horses, has induced the Directors of the State Agricultural Society to offer three rich stakes for two and three-year-olds, to be run at the State Fair of 1889, and two three-year-old stakes to be run in 1890.

These events, with one exception, are for entries of colts in their yearling form. The exception is for two-year-olds, in order that there may be a large stake for three-year-olds in 1889.

These events will be continued and others added each year, so that after a few seasons nearly all the principal running events for the State Fair will have closed while the colts are yearlings, thereby placing all on an equal footing, so that superior breeding and proper training shall be the test at the age named in these events. This plan has built up and made valuable stakes in nearly every State East; whereas if they waited until the colts were tried, the entries would have been 50 to 60 per cent less. These stakes are so arranged as to permit declarations at stated times, at such figures as will permit the withdrawal of a colt for a small payment, all of which swells the fund.

This system is what has made young horses so valuable, as the stakes to be run for are growing with the animal, as it were, and, with the added money, gives the fortunate owner of the winner a handsome return for his investment. Then, in addition, colts entered in such events outsell those of the same breeding that have no engagements. The stakes opened for 1889 are as follows:

No. 1.—The California Autumn Stakes.—A sweepstakes for two-year-olds (foals of 1887), to be run at the State Fair of 1889; \$50 each, h. f., or only \$10 if declared on or before January 1st, or \$15 by May, 1889. Declarations void unless accompanied by the money; with \$500 added, of which \$100 to second; third to save stake. Winners of any stake race to carry three pounds; of two or more, five pounds extra. Maidens allowed five pounds. Three-quarters of a mile.

No. 2.—The California Annual Stake.—A sweepstakes for two-year-olds (foals of 1887), to be run at the State Fair of 1889; \$100 each, h. f., or only \$10 if declared on or before January 1st; \$15 by May 1st, or \$25 by August 1, 1889. Declarations void unless accompanied by the money; with \$600 added, of which \$150 to second; third to save stake. Winner of Autumn stakes to carry seven pounds extra; winner of any other stakes to carry three pounds; of two or more, seven pounds extra. Maidens allowed five pounds. One mile.

No. 3.—The California Breeders' Stakes.—(To close in two-year-old form this time only.) A sweepstakes for three-year-olds (foals of 1886), to be run at the State Fair of 1889; \$100 each, h. f., or only \$10 if declared January 1st; \$15 by May 1st, or \$25 by August 1, 1889. Declarations void unless accompanied by the money; with \$600 added, of which \$150 to second, \$100 to third. Winner of any stake race in 1889, of the value of \$1000, to carry five pounds; of two or more, ten pounds extra. Maidens allowed five pounds. One mile and a quarter.

For 1890:

No. 4.—The California Breeders' Stakes.—A sweepstakes for three-year-olds (foals of 1887), to be run at State Fair, 1890. (Conditions same as No. 3, except as to year.)

No. 5.—The President Stakes.—A sweepstakes for three-year-olds (foals of 1887) to be run at the State Fair in 1890. One hundred dollars each, of which \$5 must accompany the nomination; \$10 payable January 1, 1889; \$15, January 1, 1890; \$20, May 1, 1890; the remaining \$50 the day of race. Payments not made as they become due forfeit money paid in, and declares entry out; \$750 added. The entire stakes and \$500 of the added money to winner; \$150 to second; \$100 to third. Winner of Breeders' stake to carry seven pounds; any other three-year-old stake of the value of \$1000, five pounds; if two or more, seven pounds. Maidens allowed five pounds. One mile and a half.

The offering of these stakes will cause horses that have engagements therein, and at the Pacific Coast Blood-Horse Fall Meeting, to return after running in the Western Circuit in May and June. Engagements in these events will insure the attendance of a large field of horses that will fill other races, thereby increasing the number of starters each season; and the class of horses that will take part will have much to do with placing our racing on such footing as to merit the indorsement of the public. California is fast assuming the lead in the breeding of thoroughbred stock, and the action of the directors of the State Agricultural Society in this additional encouragement is commendable in the extreme.

The entries to these stakes will close with the regular program on August 1, 1888.

THE VETERINARIAN.

The Functions of the Stomach in Ruminants.

EDITORS PRESS:—Whatever pleasure the aspirant to a knowledge of veterinary science may receive from the study of the physiology of digestion in the horse, when he becomes acquainted with that of the ruminant (animals which chew their cud) he must be struck with the superior claims it has to be considered as one of nature's most beautiful works. Here a wide and luxuriant field is open to him for research, and his investigation is sure to be attended by the acquirement of knowledge, interesting and important. The consideration of a structure, so complicated, yet so beautifully adapted for the functions it has to perform, must fill every thinking mind with admiration and wonder. The first difference of structure we perceive from that of the horse, as it regards their digestive organs, is that the ruminant has no incisor teeth in the upper jaw, their place being supplied by a densely fibrous and highly elastic pad (dental pad). By means of the teeth in the lower jaw and the pad in the upper jaw, assisted by the lips, which are more muscular, harder and firmer in texture than those of the horse, the herbage is partly cut, partly torn up by the roots; it is slightly or scarcely at all masticated, but is mingled with the saliva, formed into a pellet and swallowed. At the base of the oesophagus (gullet), however, there is a great peculiarity of structure. As it approaches its termination, this tube enlarges and becomes thicker and stronger in its walls, and when it reaches the stomach it abuts upon two powerful muscular pillars, which, when open, leave a passage of communication between the gullet and rumen (first stomach) and also with the reticulum (second stomach); and, when shut, they form the floor of the oesophageal canal which leads on to the third and fourth stomachs. I will consider the physiology of this structure when I have explained that of the stomachs, which are in the ruminant four in number, viz., the rumen or paunch, the reticulum or honeycomb, the omasum or manifolds and the abomasum or true digestive stomach.

The rumen is the largest of all the stomachs. It is situated on the left side of the cavity of the abdomen, extending from the diaphragm to the pelvis, its inferior surface resting on the floor of the abdomen and its superior one being in contact with the left flank. It is divided by a large muscular band into two distinct sacs, and these are again subdivided, thus forming four compartments. These separations are for the purpose of retarding the food in its passage through the rumen, so that the process of maceration may be more effectually carried on. The rumen is composed of four coats, an external peritoneal, a muscular, a glandular and an internal cuticular. The internal coat is studded with numerous papillæ, which are most developed at the center of each compartment. They are erectile, and are for the purpose of protecting the follicular glands beneath them from being injured by the food as it passes over them. They also assist in retarding the food and in mixing it with the mucus alkaline fluid which is secreted by these glands. There are two openings into the rumen, one through the two pillars communicating with the oesophagus and the other (which is guarded by a valvular fold of the rumen, running obliquely across it) leading to the

Second Stomach

Or the reticulum. This stomach is situated anteriorly and rather to the right side of the upper left sac of the rumen and between it and the diaphragm. It is, I believe, considered to be the smallest of the four stomachs, and is composed of the same number of coats as the rumen, differing from it only in that its internal coat consists of numerous wide and shallow cells, which present a beautiful network appearance. On their sides and in their centers are developed innumerable papillæ which have undoubtedly a secreting or secreting function. It has two openings into it, one which I have already mentioned from the rumen, and the other through the posterior part of the two pillars communicating with the oesophagus.

The Third Stomach

Is situated posteriorly to the second, between the liver and the right sac of the rumen. It is of a most peculiar but beautiful structure, consisting of a series of folds or plaits, which are arranged in a perfect and exact order.

Thus, a long fold hangs down from the roof of the stomach, floating freely within it, and reaching down to its floor; on each side of this is another lesser one, and beyond that another, until the last one is very small. Then commences another group similarly arranged; this is followed by a third, and so on, until the viscous becomes filled, or, as it were, made up of them. These plaits or leaves consist of a folding or double reflection of the cuticular coat, with muscular fibers interposed; on their external surface are developed innumerable small prominences, which are of a very hard, firm texture, and become more so as they approach near to the edges, where they assume a hook-like shape. They are most numerous at the anterior part of the stomach, where they are most

required, and least so at the posterior part which communicates with the abomasum or

Fourth Stomach.

The abomasum is the true digestive stomach, for it is here that the food, which has been prepared by the other stomachs, becomes mixed with the gastric juice, and is formed with chyme. It is of a conical form, the base being anteriorly situated. It is placed posteriorly to the manifold, and to the right of the right sac of the rumen. It is lined internally by a villous membrane, which is arranged in longitudinal folds. These are most developed in the anterior or wide part, and, generally, there is one more particularly so at the entrance into the manifold, allowing the free passage of the food from it to the abomasum, but entirely preventing its return, and thus discharging the function of a valve. The abomasum communicates posteriorly by its pyloric extremity with the duodenum (the first of the small bowels); and here its muscular coat becomes thicker and stronger and forms a kind of sphincter. It is more largely supplied with blood and with nervous energy than any of the other stomachs. A further consideration of the subject will be given in another article.

DR. A. E. BUZARD, V. S.

No. 11 Seventh St., S. F.

Swellings on Cattle's Necks.

EDITORS PRESS:—"Subscriber" wishes information respecting swellings in cattle's necks. I cured a very bad case a short time ago by the following treatment:

In the first stage of swelling, before coming to a head, bathe well with hot water every two or three days to soften and loosen it. After bathing rub dry and rub on plenty of raw linseed oil all around the swelling. Try around it with the tip of the finger occasionally to find a soft spot, and when one is found, that is the place to lance it.

If the soft spot is high up on the swelling, a small seton would drain it better. Take a small, smooth stick about half an inch in diameter. Insert the point (rounded, not sharp) in the place lanced first; press downward on the inside of the skin of the neck till well down to the bottom of the swelling; then cut a hole through the skin at the bottom of the stick, and insert a strip of cotton cloth greased with lard and knotted at each end. Move it up or down every day or two to keep it loose. A little raw linseed oil rubbed on will keep it soft and take away the soreness.

In the second or tumorous stage, when the swelling shows black and discharges offensive matter, take about a four-ounce bottle of carbolic acid, pure; pour about one ounce into an old saucer; take a small stick about a foot in length; tie a bit of sponge on the end and dip the sponge in the acid. Then push it in the wound where the matter shows; press it steadily in. Dip your sponge in the acid often. Press in in different places—it will burn the blood and matter wherever it goes.

Repeat the application every three days. Do not try to wash it, as water will not touch the burnt matter.

After using the acid the fourth time, letting it rest three or four days, take a small amount of crude arsenic—about one-quarter as much as will lie on a ten-cent piece—and an equal quantity of wheat flour. Mix thoroughly; then add two or three drops of water to the flour and arsenic, and mold into three or four small pills. Press the pills into the wound in different places. It will make the neck swell a great deal, but it will eat out the cancerous growth without any other care.

The arsenic is for the worst cases. Be careful not to use more arsenic than here stated, as it may cut further than intended.

G. M. BROWN.

Santa Clara May 24, 1888.

A HORSE SURVIVES A FEARFUL WOUND.—The Sacramento Bee of May 16th states that a valuable horse, on Mrs. Davis' ranch near Lincoln, was lately found to have sustained a frightful injury. There was a deep wound almost directly between the horse's eyes, and it was at first thought that he had been shot. The animal was brought to this city, however, and put in charge of a veterinary surgeon, who probed the wound and ascertained that the opening was closed by some hard substance. When the horse's mouth was opened, it was found that the object producing the injury had penetrated so deep that it formed a lump in the roof of the upper jaw. The surgeon made an incision at the surface of the wound, and inserted a pair of forceps, with which he took a firm hold on the hard object. By exerting all his strength, he was able to extract a piece of wood, over six inches in length, and nearly an inch in thickness. It was deemed certain that the injury would prove fatal, but it was decided to make an effort to save the animal. The piece of wood, the surgeon says, did not miss the animal's brain the sixteenth of an inch. An opening was cut in the horse's mouth, that all pus might flow therefrom, and the wound was washed out regularly and is healing nicely. The horse submits to the treatment without objection, and with almost human intelligence. It is now assured that the animal will recover with no further damage than the loss of one eye—a result regarded as extremely remarkable by horsemen. It is not known how the injury was received, but it is believed that the horse, while at play, ran violently against a projecting board.

POULTRY YARD.

Suggestions for Success.

EDITORS PRESS:—As I am in receipt of many letters seeking information of me in the matter of successful poultry-keeping, and while perfectly willing to impart all I know of it, I yet find it quite a task to answer them severally, and so think that probably a very good way would be to answer them through the columns of the RURAL, whence they obtained their knowledge of me as a poultry-keeper.

I will describe as well as I can a small poultry ranch that should be a successful one. For the locality in which I live and have fowls, I think I could do it with some assurance, but for all parts of the State it may not be so easily done, as one section is dry and hot, another moist and cool, or windy, or possessed of some characteristic making a different course of management necessary. But there are in all cases certain general rules to be observed which, if they are followed carefully and persistently, will result in most cases in success, and where they do not result satisfactorily one can generally, by careful observation, if his heart is in the work, see wherein the fault consists, whether in too much management in one direction or too little in another.

If fowls are yarded they should be allowed to have a run during the winter or early spring to freshen themselves up and get a pick at the young green feed and get insects and worms. Although this is not strictly necessary, as I have kept them yarded in small space (20 hens in a yard 16x16 feet, with the house 6x8 feet inside the yard) for nearly three years without change, simply keeping their houses clean, and their yards also clean and dug up, using also straw plentifully to help keep the yards and houses dry and comfortable. The houses at any rate must be dry, and if their yards are unavoidably wet during the winter, they will pass much of their time in their house, making extra care of the house needful. If then, after selecting with what judgment you may, your fowls, if you are obliged to yard them and are limited in space, do not put more than 20 fowls in a yard, say 16x16 ft., and make your house 6x8 ft., with two roosts running lengthwise of the house. Put the door in the end between the ends of the roosts. Place the roosts not more than two feet from the floor and make them of 2x3 scantling rounded on top. The floor may be of lumber or of dirt raised above the level of the outside ground. Some prefer to lay a brick floor, as the hens cannot scratch it up in dusting themselves. If this is done and the bricks are covered with dirt or sand, it is easily cleaned.

The houses should be made with an open space on each side of the bottom and as near the length of the house as possible. This opening should be about two inches wide for the purpose of ventilation; also the space between the roof and the sides and ends of the house should not be closed, and then you will have all the ventilation that is desirable. I have never found it necessary or advisable to have one side of the house latticed. On the other hand, I cover all the cracks in the sides and ends except the openings I have mentioned. Fowls should not be exposed to a draught unless you want to invite roup. The passage of the air through the sides of the house at the bottom carries all odors arising from their droppings away, while the openings at the top are sufficient for the passing off of the heated air and the entrance of fresh, and as the roosts are only two feet from the floor they are out of all draughts.

For nests, an excellent way is to make an opening on each side of the door, down near the floor, for the hen to pass through into a box with a hinged cover placed on the outside of the house and up against it. Then, without having to enter the house, you can, by simply raising the cover, get your eggs. Make the nests, say 12x16 inches and 12 inches deep, with straw, sawdust or loose dirt for them to lay in.

I find that for drinking vessels there is nothing better than bright, clean coal oil cans cut in two, lengthwise, each can making two vessels. I do not use anything that I cannot wash out each time. I give them fresh water, and during the hot days they should have fresh cool water twice a day, the water kept shaded from the sun. The same kind of vessel is good to give them their mash in. This you should mix for them each morning, of bran or shorts, or both, mixed with middlings. During the cold weather it should be fed while warm; in the warm summer weather it does not matter so much, but in winter they should have it early and hot. At night feed dry grain varying in kind, but not much corn in summer, as it is heating and fattens too much.

As to the fatness of fowls I don't think or find that it hurts them as layers to be as fat as they can be, if they are fed largely in green stuff of almost any kind, either beet or carrot tops, grass, corn, or watermelon rinds, or whatever one has to give them, but give them all they will eat clean and this is a good rule with other food.

One vitally necessary thing in their care is cleanliness. Keep their yards and houses, fences and roosts clean; use coal oil and white-wash freely inside and outside. Give your fowls a dust bath in their yards, of say three

parts dry dirt and one part ashes with sulphur. Provide them plentifully with ground or broken suitably, and coarse, sand or fine gravel. For only 20 or so fowls you would probably have scraps of meat and vegetables from the table sufficient for them. If not you can get cracknels in cakes and feed them chopped up twice or three times a week. Keep in this way carefully and watched closely I don't see how one can fail of success.

Lodi, Cal.

T. B. GEFFROY.

HOW TO PRESERVE EGGS.—Take a teacupful of salt, and lime the size of an egg, and pour boiling water on them. When cold, drain off the liquor and put it on your eggs. If too strong, there will be a crust on top; if so, add more water. This is for two gallons of liquor. There is no receipt that beats this, and it can be relied upon. Eggs put down in August and used in April are just as fresh and make just as nice frosting as newly laid ones.

THE DAIRY.

Testing Dairy Value of Cows.

As we shall probably ere long come to the adoption of accurate methods of testing dairy cows exhibited at our fairs, it will interest readers to see the "rules for dairy tests" [adopted by the Ayrshire Breeders' Association, for which we are indebted to the secretary, C. M. Winslow of Brandon, Vt.]

Believing that the value of a cow for the dairy is not only her ability to produce a large quantity of milk, but also her ability to convert the largest percentage of food into milk solids; also believing that due regard should be given to the cost of production, and that dairy tests at fairs and cattle shows should be so conducted as to bring out these points, therefore—

Resolved, That the Ayrshire Breeders' Association recommend the adoption of the following rules to govern milk, butter and cheese tests at all fairs and dairy shows, and thus by official tests give the awards to the breed or single animals that show their superiority as profitable dairy cows:

Rules.

- 1st. A statement as to when the cow dropped her last calf, date of last bull service since calving, method of care, treatment and food since last calving, of kind and quantity of food in full consumed for 10 days previous to commencement of the test, must be made under oath.
- 2d. For each 10 days since calving..... Points.

" " 30 days of gestation.....	2
" " every pound of milk given in 24 hours.....	1
" " " butter from 100 lbs. of milk.....	10
" " " cheese curd from 100 pounds of milk.....	5
- In all..... 19
- 3d. Cost of product to be taken into account in making the award upon the following scale, viz.:

For every 10 cents cost for 100 pounds of milk over \$1 per 100 pounds, deduct.....	2
For every 10 cents cost for 100 pounds of milk under \$1 per 100 pounds, add.....	2
For every 1 cent cost for one pound of butter over 20 cents per pound, deduct.....	2
For every 1 cent cost for one pound of butter under 20 cents per pound, add.....	2
For every 1 cent cost for one pound of cheese curd over 10 cents per pound, deduct.....	1
For every 1 cent cost for one pound of cheese curd under 10 cents per pound, add.....	1
- In all..... 10
- 4th. Quality and chemical analysis of butter and cheese curd to be taken into consideration in making the award.
- 5th. Cows to be fed, milked and cared for by competent persons satisfactory to owners, and selected by and under the personal supervision of the superintendents. Food consumed during the test to be of such kind and quantity as the owner may designate. The food to be charged at cost price to the owner.

BUY A HORSE THAT IS INTELLIGENT.—The Boston Post says that in selecting a family horse the first requisite is intelligence. If the animal be intelligent he is pretty sure to be safe, whereas even a gentle horse who is stupid is always a source of possible danger. He may be so lazy and lifeless that the most timid woman would not fear to drive him, and yet if he lacks mind he will be pretty sure to kick the carriage to pieces or run away whenever anything breaks. On the other hand it is almost impossible to scare a really intelligent horse. He may be disconcerted or alarmed, but he won't lose his head. It is, however, astonishing how little interest in this all-important question of intellect the usual horse-dealer takes. The reason probably is that he feels perfectly competent to manage any horse, no matter what the animal's character may be, and he regards him simply as a beast of burden and not in the least as a companion or a friend. An acquaintance of mine sent a very shrewd jockey to Kentucky for the purpose of selecting a saddle-horse. He brought back a handsome animal, thoroughly trained and perfectly satisfactory to his new owner, but anybody who had studied horses' eyes would have seen at a glance that the high priced "saddler" was a fool; and so he turned out to be, for he was easily frightened, and he finally ran away and had to be sold in disgrace.

IMITATION IVORY.—Much of the so-called ivory now in use is simply potato. A good sound potato washed in diluted sulphuric acid, then boiled in the same dilution, and then slowly dried, is all ready to be turned into buttons, poker chips and innumerable other things that ivory was used for once upon a time.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Farmer's Trust.

We briefly noticed the convention held at Topeka, Kansas, early last month, to form a farmers' trust, and the subsequent filing of a charter for "The Farmers' Federation of the Mississippi Valley," with a capital stock of \$20,000,000 in shares of \$10 each.

The Kansas City *Democrat* has published an account of an interview with the acknowledged father of the movement—Hon. Walter N. Allen, of Meridan, Kansas—extracts from which will give a fair notion of the proposed ends and methods of the new organization. Mr. Allen said:

The beef, hog and grain trusts have taught the farmers how to protect themselves. * * * The Legislature can give us no relief, and we can gain nothing by denouncing these trusts. The remedy is in our own hands, and if we fail to apply it we deserve to be slaves.

It is our plan to appoint agents to sell our produce, and local agents to gather it together and to ship it to the various markets; to create an executive board and a bureau of statistics which shall collect crop reports, regulate shipments and establish prices. We may have an over-production, but, by keeping the surplus off the market, we can always maintain fair prices for what there may be a demand for.

Of course it will take a very large amount of money to put this plan into practical operation, and we expect to raise the operating expenses necessary in this way—incorporate the trust, with a capital stock of \$20,000,000, to be issued in \$10 shares, \$10,000,000 of the stock to be held in reserve, and \$10,000,000 to be sold to actual farmers and stock-raisers, at 50 cents or less on the dollar. The stock is to be proportioned to the respective States and Territories according to their farming population and productive power, and equally distributed in counties, townships or districts. The money received in this manner will be used in inaugurating the Farmers' Trust.

The agents, who will be appointed at Kansas City, St. Louis and other commercial points to sell our produce, will have fixed salaries, but will be required to collect the usual commissions for selling produce. The commissions paid for marketing cattle, swine and sheep at Kansas City, Chicago and St. Louis, in 1887, were \$2,883,816; add to this sum half as much more for Cincinnati, Omaha, Indianapolis, Cedar Rapids, Louisville and St. Joseph, and we have the total commission for selling cattle, swine and sheep of the Mississippi valley, \$4,325,725. The annual production of wheat, corn, oats, rye, flax and barley in the Mississippi valley is estimated at 3,000,000,000 bushels. It is safe to say that three-fifths of this amount is sold in the public markets, on which the commissions are paid by the producer, amounting to about \$6,000,000, making a grand total of commissions paid on livestock and cereals, \$10,000,000 annually.

This entire business of selling could be done under our proposed trust system at a cost not to exceed \$1,000,000 annually. The sum collected by our agents as commissions, after deducting the amount necessary for the payment of salaries and running expenses of the trust, would be paid into the treasury for the benefit of the stockholders, and should this plan be generally accepted and the farmers and stock-raisers market all their produce through our agencies, it would effect a saving in commissions of \$9,000,000 annually, and in two years, at this rate, we would have in the treasury \$18,000,000 placed to the credit of the stockholders, which could be paid out in dividends or appropriated in the purchase of stockyards and grain-elevators, and thus another great saving would be accomplished by reducing stockyards and elevator charges. * * *

The keystone to the arch of this combination is the local shipping agent, who can always be reached by telegraphic communication, and through whom all shipments of farm products will be directed by the Executive Board. At the present time there are less than one per cent of the farmers and stock-raisers who do their own shipping. They are obliged to depend on local buyers to gather up their produce and ship upon the market. Under this system, no outside local buyer could compete with our shipping agents. If 80 per cent of the farmers should refuse to subscribe stock, and remain outside of the association, they would only deprive themselves of being equal beneficiaries of the trust, but could not defeat the object for which the trust was inaugurated; for this 80 per cent would be compelled, through interest and necessity, to market their produce through the trust agencies, thus giving the trust control over shipments, and power to regulate the supply and govern the market, while the entire agricultural class would be benefited by receiving a more uniform and reasonable price for their products; but special pecuniary advantages would accrue to the stockholders of the organization.

The closing hours of the Topeka meeting were spent in considering the report of the Committee on Resolutions. After a long discussion, the following was adopted:

In view of the great importance of the matters which this convention was called to consider, it is wise to give them careful consideration and take time enough to do it, therefore.

Resolved, That the further consideration of the pending resolutions be postponed to an adjourned meeting of this convention, to be held in Topeka, Kan., Wednesday of the third

week in November, 1888, at which time and place the National Farmers' Convention will be in session.

Resolved, further, that only farmers and those persons who are working with them and for them be admitted members of the adjourned meeting.

Resolved, further, that a committee be appointed by the president of this meeting, to consist of one member from each of the States now here represented, except Kansas; that two committeemen be appointed from this State, and that one of them shall be the Hon. Walter N. Allen, the originator of this movement; that the committee be instructed to investigate the subject matter before this body, and report to the adjourned meeting.

The chairman accordingly appointed the committee, as follows: Kansas, W. N. Allen and W. A. Pfeiffer; Indiana, Col. William Crimm; Nebraska, Gov. Butler; Iowa, Henry Wallace, of Des Moines; Missouri, Judge C. F. Moulton; Illinois, S. T. K. Prime, of Dwight; Minnesota, Gen. James H. Baker, of Mankato.

A Trip to Oregon.

Leaving on the 6:30 P. M. express from San Francisco, we arrived at Sacramento about 9, and proceeded by way of Marysville after the usual half hour's customary delay. Just why an express train should take this roundabout way for Oregon, whereby two or three hours at least are lost at the commencement of the trip, we are not advised. About daylight we passed Redding, now the county seat and a place of growing importance at the extreme northern limit of the Sacramento valley, 234 miles from San Francisco. For a period of five or six hours the route close along the Sacramento river is one of the most beautiful and delightful that it has ever been our pleasure to travel through. We doubt if any other railroad in the world affords such rare, entertaining and beautiful scenery incessantly for the same period of time in passing. The water in the upper Sacramento is as pure and pearly as that of the Merced in Yosemite valley, and seems as tempting to the taste.

The lands near Mount Shasta are suggestive of the title "sweet, juicy mountains." Sissons looks like a mining town of the largest type of early days, situated on wooded and cleared flats. It is being built up in view of the fine lumber district by which it is surrounded. The mountains here seem flattened out, affording long and often quite broad valleys, covered with meadows which are clothed in bright green grasses, and bright with beautiful wild flowers, lending a similar charm to the meadows of New England in early June, over which Mr. and Mrs. Bobolink delight to hold sway, and charming all listeners to their sprightly songs as well as themselves, no doubt.

Mr. Shasta and the higher peaks were shut off from our view by clouds and swift-moving mists both on the occasion of our going and coming.

Leaving Sissons some four hours are occupied in passing between beautiful hills and ridges and some quite large valleys, some portions of which showed evidence of alkaline soil and a growth of sagebrush, but the greater portion was covered with prolific-growing alfalfa and beautiful meadows similar to those mentioned. Cole Station was reached about 1 o'clock. It is located in California, 6½ miles or so from the Oregon line.

Although cloudy and threatening weather had been experienced from Sissons, the first rain caught us about three minutes after we passed the Oregon line, and the landscape from that time on was refreshed with occasional showers.

Climbing over the Siskiyou range, its grand views of hills, woods, tunnels, fills, and trestle-work, sharp curves, precipices, forests, trestles, deep ravines, and even mountains below us, we still observe denser forests and higher and more precipitous mountains above us, through which our heavy, panting engines took us gracefully, proved to us the most interesting portion of our trip from the valleys of California to those of Oregon.

Ashland, one of the southernmost cities in Oregon, rests like a queen on the hillside, overlooking one of the greenest, richest, most beautiful and fertile landscapes it has ever been our privilege to behold. It seems fairly surrounded with beautifully clustered and picturesque gems of scenery.

For 300 miles northward along the railroad is strung a succession of similarly situated towns, all of which look new, prosperous and promising of future growth and advancement.

The ride all through the valleys and over the ridges in Oregon, owing to the nearness and novelty of the low hills and forests, the exceedingly fresh and verdant growth of grasses and other agricultural products was never tiring. It seemed to reveal to us in our ride, of some 300 miles from Ashland to Salem, observing the diversified growths of the rich lands supplied by natural irrigation with the present sparsity of population, that the half cannot yet be told of the future outcome of such a climate and such rich agricultural lands as are possessed by Oregon. In the language of Hendrik Hudson, the discoverer of Hudson's river, expressed to his companions: "It is a good land to fall in with boys, and a pleasant land to see."

At Turner we were approached by an intelligent, pleasant-looking farmer, and asked if our name was "D." He proved to be Brother

Hilleary, who was on the lookout for a pilgrim from California of our dimensions, and we had pleasant company for the next six miles to Salem, where Brother Hayer, Worthy Lecturer, introduced us to Brother Boise, Master of the State Grange, and we were wheeled away to the Master's delightful home in the suburbs of Salem, and a few minutes later found ourselves in the State Grange, receiving the warm, hearty greetings of the noble, stalwart Patrons of Oregon.

Arriving Wednesday morning, we were privileged to enjoy two days only of the three days' session. We wish that every Patron of California could have been present, for in no other way could they realize the faith, hope and charity with fidelity evidenced by our brothers and sisters of Oregon throughout their entire harmonious session; nor the kind manner in which Californians who give the true password and signal in their camp are received; nor the generous, prompt and unprejudiced manner in which they expressed their cordial disposition to work and co-operate with their Californian brethren.

We owe many thanks to Bro. Boise and members of his family for entertainment in their cultured and happy home, as well as to Brother and Sister Stamp, Brother and Sister Hayes, Brother and Sister Hilleary, and we feel like expressing personal thanks to the assemblage of brothers and sisters, without exception, whose hearts were so full of kindness and generosity to the California representative during our short visit.

We passed just five days and six nights on the journey, four nights being spent on the sleeping car, two nights on the rail and three days in Salem, but it seems as if we got a month's enjoyment out of it though.

Leaving Salem at 6:30 P. M. on Friday, we arrived in Oakland at 7 A. M. on Sunday.

We were personally at a disadvantage during our visit to Salem from the effects of a severe cold, which went with us and returned with us to California. Hereafter we shall endeavor to make further mention of our experiences and observations while in the land of our good Northern friends.

Sutter County Farmers' Union.

The annual meeting of the Farmers' Co-operative Union, of Sutter county, was held at Yuba City on the 19th ult. The *Farmer* reports the meeting as follows: There was a good attendance, 371 shares being represented out of 491 subscribed. The business of the last year was shown to be satisfactory. The capital stock of the union was originally placed at 1000 shares, with a par value of \$50 per share. Of this but 491 had previously been subscribed, when no further attempts were made to dispose of the balance. It having become desirable that the remainder of the stock should be taken, and the reasons therefore stated by President Carpenter, Chandler, Ohleyer and others, when the stockholders at once came forward and subscribed for the 509 shares as fast as their names could be taken down. After this, a proposition was submitted to amend the Articles of Incorporation, which was unanimously approved. The election of directors resulted in the choice of the old board, viz.: George W. Carpenter, B. F. Walton, John H. Kimball, James Littlejohn, A. H. Wilbur, A. L. Chandler and Geo. Ohleyer, by a unanimous vote of the stockholders, no others having been placed in nomination.

SISTER E. Z. ROACHE has been appointed District Lecturer for Santa Cruz county. The full import of this information will be realized by those who have attended the State Grange and heard Sister Roache declaim. Bro. Steele informs us that the sister read the Declaration of Purposes at Watsonville Grange picnic with such life and vim that even those slow to comprehend could readily grasp the wisdom of this wonderful document, and Patrons of long standing appreciated the truths therein set forth more than ever before.

FOR ASSEMBLYMAN.—We are pleased to see the nomination of Vital E. Bangs of Stanislaus county for the assembly by the Democrats. Mr. Bangs is one of our best informed and progressive farmers and a prominent member of the Grange. If both parties would nominate such men we would surely be well represented in the Legislature.

GOOD TIMES IN VARIOUS GRANGES.—The Patron this week gives pleasing accounts of the Temescal Harvest Feast, the Merced reunion, and of sundry picnics—Watsonville; Sacramento county, Magnolia and Grass Valley—beside an extended report of Grange doings in Oregon, which, for lack of space, we can barely thus allude to.

THE "RURAL" AS A LIVE-STOCK JOURNAL.—One of the leading cattle-breeders of the great West writes: "I am much pleased with your paper and to know that the stockmen of your coast can avail themselves of a home paper of such great merit."

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

CHERRIES FOR CHICAGO.—*Haywards Journal*, May 26: Last Thursday at noon a carload of cherries was started from San Leandro for Chicago by the Gregory Bros. Co. of Sacramento. This is the earliest shipment of a carload of fruit ever made from California to the East. The cherries were of the finest quality, of the best varieties, and came from the orchards of Messrs. Huff, Faerrily, A. Rogers, W. Hulbert, H. W. Meek, Henry Marlin, E. T. Crane, F. Bryant, M. Wicks, H. F. Crane, W. F. Saunders and Joe Garcia.

PRESENT FRUIT PRICES.—The way the fruit-buyers are gathering up all our fruit is an indication that they cannot get enough. The rivalry between the cannery agents and the fruit-buyers is very keen. The ruling price for Black Tartarian cherries is four and five cents, and for Royal Anns six cents, while even as high as seven cents has been paid. The failure of the Luak cannery dropped the price of apricots half a cent. But the price is firm at 2½ cents, San Jose buyers bidding freely at this figure. . . . The demand for cherries is greater than previous years, and as for apricots, they are more than holding their own; in fact, the price is much better than last year. We are aware that there is a shortage in the crop in most places, but the increasing demand for cots by the canners will always make this fruit exceedingly popular. It is no uncommon thing to clear \$100 an acre on cherries, and we know of several instances where the fruit sold realized \$500 an acre. This is particularly the case with Royal Anns.

Calaveras.

THE CROPS.—*Murphys Cor. Angels Record*, May 20: The season in the mountains will be marked by increased production and more remunerative returns than for years past. It has, so far, been favorable for the hay and potato crops. This is acceptable, as last year the crop was almost an entire failure. In the vicinity of Murphys I am sorry to record a partial failure of the hay and grain crop, the last rain coming too late to be of much benefit.

Contra Costa.

DANVILLE ITEMS.—*Cor. Martinez Gazette*, May 20: Hay is going on. A larger acreage than usual will be cut this year, but the amount of hay will not be so great. The wheat surplus also will be light, but fruit and fruit trees do not suffer perceptibly. Thorough cultivation holds the moisture near the surface, and many almond and apricot trees have young shoots of this year's growth two feet long already. We have just returned from a careful examination of the young orchards of this vicinity, and find every one with a clean glossy bark and bright leaves, indicating a vigorous growth. . . . A. T. Hatch's young orchard near Alamo is an ornament to the valley. The trees being well selected, set out and now thoroughly cultivated, look as thrifty as any one could desire, and almost every tree is living, notwithstanding we have not had a drop of rain since the trees were put in their places. . . . Stock is looking finely, and this cool weather is making pasture last well. The outlook now is for plenty of fall feed. . . . Several almond crops have already been contracted for at 12½ cents per pound, and the trees are fairly well loaded.

LIVE STOCK FOR JAPAN.—*Martinez Item*, May 22: Mr. Ridgway of the Cook Stock Farm was down yesterday looking after the shipment of some fine stock to Japan. The herd consists of two Shorthorn cows that will weigh about 1600 pounds, four Devon heifers, beauties, one Shorthorn bull weighing over 1800, and two Devon bull calves, nearly a year old, perfect in form and color. This stock is all thoroughbred and registered in the herd-book, and brought top prices. B. Hirosewa of Yachigashira, Awamori Ken, Japan, made the purchase, to whom all will be shipped in a few days by steamer to Tokio, Japan. . . . In addition to the cattle a horse bought from Mr. Conway of Danville will be shipped. He is a two-year-old by Electioneer and he by Electioneer, for which Mr. Conway received \$475.

Fresno.

CHIMNEYS FULL OF HONEY.—*Selma Irrigator*: Our friend E. F. Hammers is in a bad fix. A few weeks ago he ceased to use the fireplace at his residence. During the late cold snap he undertook to build up a fire in the grate, but the chimneys refused to do their work and the fire smoked him out. On investigation he found that a swarm of bees had taken charge of the two chimneys in his house and that they were both full of honey. So tightly are the chimneys filled up that he is unable to smoke them out and they are too lively bees to be run out.

Humboldt.

OATS AND FEED.—*Eureka Standard*: J. O. Dinmore, who owns a splendid farm on Hol river near Junction station, says he has never seen oats looking better than they do this year. Oats is the principal grain grown in this neighborhood and he thinks the yield will be unusually large. He says from what information he can get he believes grass on the ranges will be much shorter than usual. Mr. Dinmore is a thoroughly practical man and believes stockmen would do better to have fewer stock and take better care of them. There is no money in having more live-stock than you can feed well.

Lake.

CROP NOTES.—Lakeport *Avalanche*, May 24: Trees of all kinds are loaded with fruit, much of it not yet half grown. There should be a portion picked off as the trees will not be able to develop so large a crop, and by thinning it out the fruit will be much better. Peaches, apricots, almonds, and indeed all kinds of trees are looking fine and full, and Lake county will badly need some proper means to care for the products of the present year. . . . In Scott's valley the hay is turning out from 1½ to 2 tons to the acre. All other crops look well and promise nearly a full yield.

Lassen.

DISTRICT FAIR ASSOCIATION.—*Alturas New Era*: The Board of Directors of the 11th District Fair Association held their annual meeting at the office of the secretary in Susanville, May 5th, all the members being present. The bid of Susanville being the largest one presented, the fair for this year, commencing September 24th, was located at that town. All of the former officers were re-elected as follows: J. W. Thompson, President; J. D. Byers, V. P.; D. C. Hyer, Treas.; R. L. Davis, Sec.; J. R. Murray, Ass't Sec. The speed program was arranged and \$10,000 in purses provided for. The premium lists amount to \$5000; total, \$15,000. The board adjourned until August, 1888.

Los Angeles.

THE POMONA CANNERY.—*Progress*, May 24: The work of building the Pomona cannery is progressing rapidly. The brick walls will probably be finished this week, and work upon the roof and floors will be immediately begun. Mr. Sanborn, who is to have supervision of the cannery, has been here three weeks, and is looking after the building. A large fruit evaporator arrived last week, and more apparatus is expected next week. A large quantity of jars for canned fruits are already here. Mr. Sanborn assures us that the cannery will be in readiness for all the fruit this season.

Mendocino.

FROM HOPS TO ALFALFA.—*Mendocino Republican*: On the land that has been planted to hops in this county may be raised the finest alfalfa. This our farmers are taking cognizance of and have this season put in considerable of that seed. They recognize the fact that instead of being an unsalable article, as is too frequently the case with hops, the hay can always be sold at a profit. Then, also, there is good pasturage in the alfalfa fields after three cuttings of hay have been hauled therefrom. With the growing of this crop we will have a different industry opened up in this country. Just now, and for the last three months, Ukiah folks have eaten butter made at or near Petaluma, in Sonoma county, and at Point Arena, in this county. Time and again have our merchants had to reply: "No butter; can't get any." Now this is all wrong. With valley land that is second to none on the continent, watered as it is every winter by never-failing rains, the idea of buying this necessity outside of Mendocino county is most absurd. Around Point Arena the capitalists are those who have paid close attention to the dairy business. In the eastern part of the county hops have financially ruined some of our most estimable citizens.

Monterey.

CROP OUTLOOK.—*Salinas Index*, May 24: A gentleman who took a trip through the southern portion of Monterey county last week reports his observations as follows: The early-sown crops in Long valley and peach trees look well. There will be plenty of hay and considerable grain, if the present cool weather continues. In Priest valley the crops look better than at a corresponding date last year. The prettiest fields of grain I have seen are in Indian valley. Vineyard, Ranchita and Hog canyons have very good prospects. In Cholame the early-sown grain looks well, and with favorable weather will produce a good crop. The general outlook in this portion of the county is favorable. Many fruit trees have been set out and the country is otherwise improving.

Napa.

FAIR ASSOCIATION.—*Napa Register*, May 18: An adjourned meeting of subscribers to county fair stock was held in the Court-house last Saturday afternoon. D. L. Hackett presided, and A. H. Conkling acted as Secretary. F. L. Coombs, chairman of Committee on Grounds, reported several offers from land owners. The report was received and referred to the nine directors chosen the week before, who will visit the various sites proposed, and decide which is most suitable. . . . Immediately following the adjournment of the stockholders meeting, the directors met and elected officers as follows: President, L. L. James; Vice-president, F. W. Loeber; Secretary, A. H. Conkling; Treasurer, W. J. McCollum. A certificate of incorporation has been received from the Secretary of State and By-Laws for the association are in the hands of the directors. After they have been perfected and approved they will be submitted to each stockholder for his signature.

THE GROUNDS SELECTED.—*Register*, May 25: A committee of the directors of the Agricultural, Horticultural and Vinicultural Association Friday concluded negotiations with Isaac McCoombs whereby 65 acres of land taken from the northerly half of the McCoombs farm, one mile northwest of Napa, have been leased for a term of five years at an annual rental of \$10 per acre, with the privilege of buying at any time during the term of said lease for \$400 per acre. This gives the Association abundant

room for a one-mile track and the necessary stands, buildings and other conveniences. The site is high, central, and is not only located on the main traveled dirt roads of the valley, but takes in as well enough of the railroad to command direct shipment to and from the grounds. . . . The work of surveying and building track will without doubt be entered upon at once.

Nevada.

EXTRA BARLEY.—*Grass Valley Tidings*, May 26: A sample of barley from the farm of Hon. Wm. George, at Indian springs, was brought to town to day by B. A. Van Slyke, lessee of the place. It was plucked at random from a ten-acre field and shows as high as 17 stalks to the root (or seed) and the heads are large and filled out plumply. Mr. Van Slyke tells us that it will thrash 40 bushels to the acre. This was planted early in season and went through the cold snap; but the damage resulting from the frigid temperature has been more than made up by the manner in which it has "stooled out"—for in many cases the stalks run as high as 25 to the seed, and will average ten stalks. Barley is always a good crop in the foothills.

Placer.

BARLEY.—*Auburn Republican*, May 23: This office is in receipt of specimens of barley grown by W. M. Holmes at the Grizzly Bear ranch, on the road to Forest Hill, which ought to be sent to the eastern fairs. The heads are four inches long, well filled and plump, and the beards measure nine inches in length, which gives a small bunch the appearance of a whisk-broom. It is growing on new land, and John McAninch says it is one of the finest fields of barley he ever saw.

CHERRIES.—A magnificent box of Black Tartarian cherries, received by express from Ira Avery, are the most luscious ever tasted. Mr. Avery's cherry orchard stands with Robert Hector's, the two largest and finest in California to-day. . . . Some specimens of Black Tartarian cherries from Dr. H. H. Clark's ranch, near Auburn, are equal to Avery's or Hector's, and prove that the river bottoms are not alone adapted to possibly the most profitable of our foothill fruits, the cherry.

WHEAT IN WESTERN PLACER.—*Auburn Herald*, May 26: Owing to the cool breezes that have prevailed for the last three months, the outlook for a good harvest is much better than it was in April. The moist southern wind has brought forward the grain wonderfully. The heads of wheat have filled out and the kernels are plump and heavy. Had the hot, dry weather of April continued, the crop of many farmers, especially those on the red lands, would have been a complete failure; but now all except those whose grain was winter sown, are satisfied that the crop of 1888 will be better than it has been for the last three years.

Sacramento.

THE NEW CANNERY.—*Record-Union*, May 26: Articles of incorporation gave been filed in the office of Secretary of State of the Sacramento Packing and Drying Co. The purposes for which the corporation is formed are to pack and dry fruits, vegetables, fish, meat and game, and buy, sell, and handle fruit, fish, meat and all kinds of produce. Principal place of business, Sacramento. Directors—John M. Avery, Wm. Schaw, C. H. Cummings, Jos. F. Hill, A. S. Hopkins, Edward Dieterle, Sacramento; Jos. Routier, M. C. Pike, John Studarus, Rountier's; Wm. Johnstone, Geo. A. Smith, Courtland. Capital stock, \$50,000, divided into 5000 shares of the par value of \$10 each. The capital stock actually subscribed is \$30,100.

Santa Cruz.

PAJARO STRAWBERRIES.—*Courier-Item*: The strawberry fields of the Pajaro valley are a wonderful sight. One farm has 110 acres of solid berries; another has 60 acres, and so on down. No finer drive could be desired than that out on the pretty tree-lined Lake avenue, with comfortable homes, flower gardens and orchards on each side, to where Laguna Grande lies, blue and beautiful. From Laguna Grande the water is raised by steam pumping works for the irrigation of the strawberry farms of Ira Thurber, R. W. Eaton and others; it is carried by an elevated sluice and distributed as wanted, with frequent facilities for shutting off. To accommodate this system of irrigation the land is carefully graded, so as to have the proper inclination, and the rows of plants, with trenches between, are laid out so perfectly in accord with this system that a bird's-eye view of them looks like an immense page of problems from Euclid. The cultivation is absolutely perfect, and is done by Chinamen, for whom, on the two farms of Thurber and Eaton, hastily visited on a recent trip, we found neat and comfortable quarters provided. The great red globes of the ripened berries gleam out from every little cluster of leaves, and the whole is a tempting and beautiful sight. Watsonville shippers of the fragrant and appetizing berry are rejoicing over the fact that facilities for getting the crop to market in good shape and at propitious hours are, this year, much improved.

Sonoma.

ARMY WORM.—*Santa Rosa Democrat*, May 26: From O. H. Hoag, who returned from Sonoma Saturday, it is learned that the army worm has appeared in the Drummond and Shaw vineyards, coming from Napa valley. In some spots the devastating insect is accompanied by a small black bug.

HANDSOME EXOTICS.—Mr. Dunn, the county gardener, has just received several varieties of handsome shrubs for propagation on the Court-

house grounds, the most curious of which are two varieties of the African variegated holly, from the banks of the Ganges river. They are said to be of the first importation ever received in this country. The leaves are beautifully traced with white and yellow, and their points are tipped with thorns. During the winter months they blossom and bear a small red berry.

THE VAN ALLEN CANNERY.—*Healdsburg Enterprise*, May 23: This cannery began operations on Thursday morning with about 40 hands, mostly women and girls, and although it was but a trial, everything worked to entire satisfaction. But a small supply of cherries being on hand, operations were discontinued early in the forenoon. So completely had everything worked that in this short time 144 crates of 12 cans to the crate had been put up and were ready for shipment. . . . When this cannery is working to its full capacity it will employ from 225 to 275 hands, to whom the price paid ranges from \$1 to \$2.50 per day, according to the work. The capacity will be from 10,000 to 14,000 cans daily.

Tulare.

"SPLENDID WHEAT."—*Visalia Delta*, May 24: Three bundles of splendid wheat fully five feet in height, may be seen at the real estate office of G. A. Botsford. It was grown on the farm of T. W. Standart, two miles north of Huron, and we have seen none grown elsewhere this season that equals it. The heads are large and the grain well filled, although not yet quite ripe. When matured, there will probably be no grain in the county better than in the field from which was taken the sample sent us.

A GENUINE THERMAL BELT.—As proof that the thermal belt of this valley is such, may be mentioned the fact that tomato vines two and three years old are still living after last winter, which was an extremely cold one. A number of these vines were killed but there is a large area in which an ordinary frost will not injure the most sensitive plants.

BALD BARLEY.—*Visalia Times*, May 24: Wm. Taylor on Tuesday last brought to this office a sample of bald barley, now growing on the ranch of Joel Smith, one mile from Huron. The stalks are fresh and green, all of three feet in length, and contain heads that are well filled with grain. The sample is a fair average from a 70-acre field that promises to yield not less than 60 bushels per acre. Mr. Taylor is of the opinion that 1200 tons of wheat and barley will be harvested this season in the vicinity of Huron.

COYOTES SMOTHERED.—Jasper Harrell was quite successful in exterminating coyotes this week. They have been making sad inroads among his chickens and goats, and he concluded that the only way to get rid of them was to make a search for their hiding-places and destroy them by the wholesale. A few days ago he discovered one of their dens in the ground, gave it a thorough smoking, and on digging into it the following morning, was delighted to discover that he had put a quietus on nine of the thieving curs.

Yolo.

THE MEXICAN BEARDESS BARLEY.—In regard to the quarter-section of this variety of barley mentioned in our "Agricultural Notes," May 12th, the *Woodland Mail* further says: "The magnificent crop is remarkably clean, no oats or other species of grain appearing. The uniformity of growth, the apparent vigor and strength of the stock, the fullness and evenness of the heads are features which an old farmer would remark as something unusual in such a season as this. The head of this barley has very much the appearance of 'Bald barley,' but differs from Bald barley in that the kernel when threshed is like the ordinary bearded barley, while the other threshes out more like wheat or rye. It is claimed that this variety is superior to the bearded for several reasons. It is known to stand the north winds and not thresh out. The stock is strong and when well ripened the heads will not droop down below the reaper blade and be lost, as is often the case with the bearded varieties. It grows a strong stalk and cattle readily feed upon the stubble. Being free of beards, it makes the best hay in the market."

THE BANEFUL BARBS.—*Mail*, May 26: A few nights since a mule belonging to J. W. Norton, who lives this side of Winters, got its head fastened in a barbed wire fence in such a manner as to cut its throat and neck so that it was found dead next morning. The animal was valued at \$250.

Yuba.

MARYSVILLE AHEAD ON CHERRY PLUMS.—*Appeal*, May 25: A correspondent of the *Record Union* says: "The first plums of the season were picked on the ranch of G. D. Kellogg, at Newcastle, on May 18th. They were of the cherry plum variety and very highly colored." J. W. Hicks of the Briggs orchard beat that record by five days. He picked on the 13th inst. over 30 pounds of cherry plums, which were shipped by express to A. Lusk & Co. They were well ripened and very palatable.

NEVADA.

AGRICULTURAL SOCIETY FORMED.—*Silver State*, May 24: An Agricultural Society has been organized at Elko, and Gov. Stevenson has appointed J. R. Bradley, W. T. Smith, T. T. Harris, T. E. Clagnon, Ed. Odell, F. Honeyman, A. B. Miller and Isaac Griswold as trustees of the association.

News in Brief.

FRESNO is to have a new postoffice building that will cost \$20,000.

THE day's wages of a skilled mechanic in Astoria will buy a barrel of flour.

THE Orphans' Home of Los Angeles realized \$4500 from the late flower festival.

WORK has been begun on a coal-bunker at San Diego that will hold 1000 tons.

THE entire business portion of Tipton, Tulare county, was destroyed by fire last Sunday.

THE Central Pacific Railroad Co. is having an artesian well bored at Battle Mountain, Nev.

PASADENA is to have iron works, the machinery and tools to be brought from Pennsylvania.

THE towns of Wellville and Allentown, N. Y., were severely damaged by a cyclone on Monday.

A BILL has been favorably reported in the Senate to reduce the limits of the Round Valley Reservation.

FOREST FIRES are destroying much good timber on the Northern Pacific in Western Washington Territory.

A PITTSBURGH steel-casting company has an order from the Australian gold mines for a carload of patent corrugated rolls.

THE first case of drowning at Santa Cruz beach was that of John Murphy, who tried to swim out to one of the rafts while intoxicated.

EVERYTHING at Mt. Hamilton is in readiness and the Lick Observatory will be turned over to the Regents of the University in a few days.

W. G. CURTIS, superintendent of track of the Southern Pacific Company, has been appointed assistant to general manager Towne.

THERE is no doubt, says the *Yuma Sentinel*, but that work will be commenced on the railroad between San Diego and Yuma early in September.

THE Glucose Trust recently formed, with headquarters at Chicago, has been dissolved. Each factory will hereafter transact its business independently.

A BILL has been favorably reported by the House Committee on Military Affairs to place Major-General John C. Fremont on the retired list of the army.

A SECTION of giant fossil fish jaw-bone was dug up at Santa Cruz last Saturday. It was found in a well 57 feet from the surface imbedded in limestone.

TRAVEL to and from Los Angeles is increasing daily. The trains are so long that they have to be run in two sections for a great portion of the distance.

THE Watsonville schools are having a vacation to give the boys a chance to hoe and weed sugar-beets, it being impossible for the beet-raisers to obtain sufficient help.

THE present season of rain is the first thorough soaking that Nebraska has had in two years, and with a moderate rainfall during the season, big crops will be inured.

By a railroad collision at Walnut Station, Arizona, brakeman Howell was killed and the engineer, fireman and two brakemen injured. Twelve cars were ditched and broken.

ACCORDING to the records, there has been a rainy season in the latter part of May and early part of June in Nevada every year since the signal office was established at Winnemucca.

IT is reported at the headquarters of the National Educational Convention that about 10,000 or 15,000 people will be present at the National Teachers' Convention in July in this city.

EXCELSIOR GEYSER, in the National Park, M. T., is discharging a column of water 16 feet in diameter and 300 feet high. The eruptions occur every 45 minutes and last from three to five minutes.

SENATOR STANFORD states that in the Leland Stanford Jr. university girls are to have equal advantages with the boys, and all facilities will be provided for them for fitting themselves for every employment suitable to their sex.

ST. VINCENT'S ORPHAN ASYLUM at San Rafael is being investigated by Governor Waterman's orders. Charges of cruelty and neglect have been made, and judging from the newspaper reports, are not without foundation.

THE *Portland Oregonian* says: The pamphlet of the State Board of Agriculture will be issued in a few days. It will be the most comprehensive descriptive work on Oregon yet published, giving full information and slighting no portion of the State.

THE new Union depot of the narrow gauge and broad gauge railroads at Santa Cruz will be located considerably farther south of the present broad gauge depot, in the region so long occupied by large lumber-yards, entrance being had from Pacific avenue.

At a meeting of the Executive Committee of the California Commissioners to the Australian Exhibition it was announced that everything possible had been done by the Commissioners to excite interest in the exposition, but so far they had only succeeded in enlisting about 20 exhibitors comprising machinery, flour, mining, leather, wine and canned goods interests. The Chairman spoke in strong terms of the apathy in regard to the matter which he and his associates had encountered. This might possibly be due to the late hour at which the matter was brought prominently forward, and, also, perhaps, to the fact that Eastern shippers had forwarded some large exhibits which prohibited their friends on this side from sending. Still it was not yet too late for business-men to seize what was practically a big, unique, free advertisement of their specialists and California's resources.



Overworked.

Up with the birds in the early morning—
The dewdrop glows like a precious gem;
Beautiful tints in the skies are dawning,
But she's never a moment to look at them.
The men are wanting their breakfast early,
She must not linger, she must not wait;
For words that are sharp and looks that are sur'y
Are what the men give when the meals are late.

Oh, glorious colors the clouds are turning,
If she would but look over hills and trees;
But here are the dishes, and here is the churning—
Those things always must yield to these.
The world is filled with the wine of beauty,
If she could but pause and drink it in;
But pleasure, she says, must wait for duty—
Neglected work is committed sin.

The day grows hot, and her hands grow weary,
Oh, for an hour to cool her head
Out with the birds and winds so cheery!
But she must get dinner and make her bread.
The busy men in the hay-field working,
If they saw her sitting with idle hand,
Would think her lazy, and call it shirking,
And she never could make them understand.

They do not know that her heart within her
Hungers for beauty and things sublime;
They only know that they want their dinner,
Plenty of it, and just "on time."
And after the sweeping and churning and baking,
And dinner dishes are all put by,
She sits and sews, though her head is aching,
Till time for supper and "chores" draw nigh.

Her boys at school must look like others
She says, as she patches their frocks and hose,
For the world is quick to censure mothers
For the least neglect of their children's clothes.
Her husband comes from the field of labor,
He gives no praise to his weary wife;
She's done no more than has her neighbor,
'Tis the lot of all in country life.

But after the strife and weary tussle
With life is done, and she lies at rest;
The nation's brain and heart and muscle—
Her sons and daughters—shall call her blessed.
And I think the sweetest joy of heaven,
The rarest bliss of eternal life,
And the fairest crown of all, will be given
Unto the wayworn farmer's wife.

—E. H. Wheeler.

Melissa.

The young stranger reined in his horse at the top of a little hill, and gazed with pleasure upon the sylvan scene. Just before him two mountain creeks formed a junction. The larger one he had been following for some hours, and now, from his left, a noisy tributary came rushing down from its rugged ravine, roaring with impatience at the huge boulders of granite which obstructed its way. To the right, on the opposite side of the main stream, a yellow bluff rose abruptly to a great height, crowned with a stately fringe of redwood trees. On the very edge of the precipice, a great madrone tree thrust its fantastic bulk out over the creek flowing more than a hundred feet below. The rain had washed the earth from its contorted roots, and it seemed in imminent peril of plunging into the abyss. On every other side, the forest hedged in a little clearing at the junction of the creeks. In the clearing there stood a large cabin, built of split boards and shakes. Its only color was the dark hue given by the weather. A rude fireplace of bowlders and clay rose at one end of the building, terminating in a chimney of sticks and mud.

Night was fast closing in. The yellow rays of the declining sun touched the tops of the trees on the bluff. The traveler thought it time to apply for shelter, as he was in a strange and wild country. He rode gently down the slope, and drew up at the cabin door.

"Hallo."

The door opened, and a tall, sallow woodman appeared. His long, untrimmed beard gave him a haggard look. The stranger told his needs, and indicated his willingness to pay for such accommodations as could be afforded him.

"Stranger," said the woodman, "if you're willin' ter put up with mount'n fare, an' say nothin' about pay, we'd be right glad ter hev yer stop. 'Light, an' make yerself ter home. I hain't got no hay for th' critter, but you kin stake him out in the feed yander. I see you got some grain tied ter yer saddle."

Still further pressed by the hospitable mountaineer, the stranger dismounted, and, uncoiling a picket rope from the pommel, led his horse to a level patch of grass near the creek, where he fastened him, after relieving him of the saddle.

As he followed his host into the cabin, he saw in the room, and peeping at him from various doors, a boy and four girls, the eldest about 12 years of age. Their yellow hair hung about their faces, thick and straight; their clothing was simple, and of neutral tint; and their bare

feet showed an intimate acquaintance with the rude country about their home. They gazed bashfully at the stranger, and were admonished in low tones by their pale and careworn mother.

Then there was an unusual stir in the little household. The good woman drew out the table, and spread upon it a tablecloth of snowy whiteness—the best of her little store of linen. The few cherished bits of tableware were carefully brought forth; the reserved stores of the slender larder were drawn upon; all in honor of the stranger, who looked with thoughtful admiration upon their gentle and generous hospitality.

When supper smoked on the board, the stranger was given the honored place. The host looked over the table with satisfaction.

"You done well, Charity," he said.

The stranger praised his entertainment, and amused his kind entertainers with cheerful accounts of the world beyond the mountains.

At intervals, indistinct sounds came to his ears from another room, and he perceived that all the children were not at the table. Occasionally the father and mother would glance at each other uneasily, and the latter would silently go to the room whence the sounds proceeded.

Supper over, the mountaineer and his guest sat before the fireplace, where sticks of pitchy fir were burning with intense glow and heat. The host filled his pipe thoughtfully. There was a pathetic look on his face. He placed a glowing coal in the bowl and drew deep puffs.

"It's Melissa," he said at last, turning to the stranger with a sigh. "My oldest gal, Melissa. She's bad." The stranger perceived at once that he meant that she was very ill. "She's mighty bad," he continued, in a low tone. "I'm dreadful afraid she's a-goin' to peter out. Char'y don't give up hope, though. Melissa's only fourteen year old. Stranger, I wish you could 'a' seen that gal four year ago. The peartest little thing you ever see—beat the rest all holler. She'd run an' climb, an' sing, an' allers ready ter help her mother. It come to an end mighty sudden, pore little gal." The mountaineer paused, and brushed his sallow cheek.

"Mebbe you noticed that big old madrone a-growin' out over the edge or the bluff across th' crick. Well, jess take another look at it to-morrow mawnin'. Four years ago las' spring there was a ter'ble savage old Californy lion round yere. He 'bout cleaned out the young colts, I reckon. Them critters is awful fond o' cold-meat. There was old man Pardee, an' Jack Briggs, an' Tom Baily, an' some others, all lost colts; an' the mares ud be found all scratched up in the mawnin'.

"Well, one day Char'y an' me went up to old man Pardee's, an' lef' the child'en to home. We never 'spected no danger. There was five of 'em. Melissa was ten, an' Toby, my boy, he was 'bout six. Barby wa'n't born then. Well, about the middle or the afternoon, the little gale was a-playin' outside, an' Melissa was sorter fixin' up things 'bout the house so's ter surprise her mother like when she got home. Pretty soon she tuk an' idee to go up around the bluff ter the open land up above an' get some wildflowers fur a bokay, 'cause she knowed th' ud please her mother. Well, she went up to the trail above yere, an' picked quite a bunch o' posies; an' by the time she was close on to the big madrone at the top or th' bluff. So she set down on it, fur the butt run out mighty nigh right straight, an' began ter fix up her bokay.

"While she was a-settin' there, with her feet over the edge—fur Melissa wa'n't afraid o' nothin'—and kinder singing to herself as she fixed the posies, she chanced ter look down, an' what d'you s'pose she seen? Stranger, she see little Toby down ter the crick with a fishin' pole a-tryin' to fish as he'd seen me do, an' 'bout a rod behind him she see a long yellor critter, with a long tail thet kep' a-switchin' from side ter side, an' th' critter was a-crawlin', crawlin', down on to little Toby; an' she see it a-pattin' its chin on the ground, an' hitchin' its hind legs up under it, an' a-tremblin', jess ready ter spring! It was that savage old Californy lion!

"It was a desprit thing, but Melissa, she sorter woke up in a minit, an' what do you s'pose she done? Holler, an' run back round the trail? No; she knowed by thet time the lion ud hev little Toby. She let herself down over the edge, hangin' on to the roots o' the madrone, an' when there wa'n't nothin' more ter hang on to, she turned around, with her back ter the bluff, an' let go! Thet's what Melissa done!

"My God, 'twas a ter'ble fall! Fur a little ways she slid down all right, an' then there was a place nearly up an' down, an' she fell 40 feet on to the rocks, an' then rolled, an' tumbled, an' fell again, an' at last dropped inter deep water at the bottom, with a whole slide of rocks an' dirt smashin' after her. Stranger, I never could see how she kin ot alive, but she wa'n't even stunned. She cud swim like a fish, an' she paddled across inter the shaller water, tryin' ter holler all she could. The next minit she was hurryin' Toby up ter th' house, an' the lion was bouncin' off in the brush, pretty well scared, I reckon.

"Char'y an' me, we got home fore long, an' found the child'en all in th' house, an' Melissa settin' down lookin' awful white an' covered with blood, from soratches as we thought. We got some water an' washed her, and then we see she was bleedin' inside. Ever sence that day she hain't been well; sorter pined away like. We tuk her ter town ter the doctor for awhile, but he could't do nothin'. We feel dreadful

sorry 'bout it—can't help it, you see. She used ter be so peart. The next day after it happened I found her bokay of posies lodged in a riddle down the creek. Char'y's got it yet, I reckon."

The mountaineer brushed his cheek again, and smoked rapidly, gazing in the fire. At last he went on:

"The teacher of the school yere has bin awful good to Melissa. She's a young woman from Santa Cruz—what I call one or the fust-best; kind an' pleasant, but lots er spirit, too. You see Melissa wa'n't able ter go ter school, so what does the school ma'am do but come down yere o' Saturdays, or mebbe Sundays, an' talk ter Melissa an' read to her, an' teach her little things about knittin' an' all that. It's done Melissa a heap o' good—sorter cheered her up like. The school ma'am's an awful good young woman."

At this moment the mother came softly forward and leaned over her husband's chair.

"Well, Charity, how's Melissa?"

"She doesn't feel any pain now. She wants to come out and see the stranger."

"So she shall, so she shall," said the mountaineer, rising and placing his pipe on the rude mantel. He went into the adjoining room, and after a time reappeared, bearing in his arms a piteous burden wrapped in a white blanket. So pale and fragile did the sick child appear, that it seemed as if a single rude breath of air might extinguish the flickering spark of life. Her eyes were large and brilliant, and unlike her sisters she had dark hair, which formed a startling contrast to her marble face. Her father held her tenderly as he resumed his seat before the fire. The other children gathered around, silent and on tiptoe. Toby, a sturdy, ruddy boy, stood beside his father, and gently arranged a stray lock of his sister's hair. The stranger recollected that the sister had sacrificed herself for this brother.

"This is my Melissa," said the mountaineer, with assumed cheerfulness. "She wanted ter come out an' see the stranger. Tain't every day that we hev some nn come from town to step in an' tell us the news, is it, little gal? So we mus' make the best of it. The stranger kin way 'om Santa Clara valley on horseback. You jess orter see his horse, Melissa; it's the prettiest critter you ever see. We mus' see him to-morrow mawnin'. He's a dark bay, an' his coat is jess like silk."

"He's gentle, too," said the stranger. "He will follow me about just like a dog. If I get tired riding, I jump off and walk and he follows me until I get ready to ride again. Why, Melissa, he's so gentle that you could ride him, and if he thought you weren't used to being on horseback you'd see how carefully he'd step, so as not to frighten you. My sisters often ride him, and he is always delighted when he sees one of them with her long riding dresses on, because then he knows that he will have a lump of sugar."

Melissa smiled at that.

"Is it warm in Santa Clara?" she asked, in a weak voice, scarcely more than a whisper.

"Yes, it is warm and sunny there, and there are gardens of beautiful flowers and orchards full of fruit. I wish you could come and see us, and my sisters would show you all the pretty places."

"It is very cold here," said poor Melissa.

In a short time she became weary, and her father, with infinite tenderness, carried her back to her room.

"I like the stranger," she whispered in his ear. "I want to see him when he rides away to-morrow."

The stranger was shown to a little, low-roofed bedroom, and when his host had left him, looked curiously about at the queer, home-made furniture and simple ornaments. He extinguished his candle and lay down. Through the little square window he could see somber treetops outlined against a starry sky. The roar of the brawling creek was a lullaby and he slept.

In the night an icy hand clatched his own. His bewildered and awakening senses perceived a tall figure bending over him.

"Stranger," said the hollow voice of the mountaineer, "Melissa's goin'. She's goin' fast." There was inexpressible grief in the tone. "She's bin callin' for the teacher," he went on. "She wants ter see her. Couldn't I git yer ter go up with yer horse an' fetch her down? She's stoppin' to old man Pardee's."

In another moment the stranger was out under the stars. The solemnity of the forest and the night was awful. The old moon hung in the west above the trees. A ghostly breeze passed moaning through the woods. In the dusky shadow, his horse started up at his approach, and met him with a low whinny. He threw the saddle on and mounted.

"'Bout a mile above yere," said a voice from the cabin door. "A house ter yer left with an openin' back of it."

The stranger rode on, over the bridge and along the unknown road. It was very dark among the great trees, but he pushed on rapidly. At last open ground appeared at his left, and a rude, long, low house in gloomy shadow touched with rays of moonlight. He drew rein before the door. Three large animals rushed forward, with deep, hoarse bays and uplifted muzzles. He leaned forward and struck resounding blows on the door. A growling voice was heard within. A light flashed from a window. The door opened, and a tall old man appeared, shading his candle with his hand. A long white beard flowed from beneath his chin, and his

iron gray hair was like a mane. So wrinkled was his face, that it seemed as if centuries and not years had beat upon it. He gazed with astonishment at the mounted stranger looming tall in the moonlight.

"Is this Mr. Pardee?"

"It is, so it is," replied the old man. "What kin' I do fur ye?"

The stranger quickly told his errand. "Sho, now; so the pore little gal is goin' under. It's a great pity, so it is. I'll tell Miss Fairchild to once." The old man disappeared with his light. The stranger dismounted, and the hounds came to lick his hands.

The light reappeared. A pale young lady wrapped in a dark cloak, stepped from the door, and gazed earnestly and anxiously at the stranger.

"Is poor little Melissa worse?" she asked, sorrowfully.

"I fear so. She has asked for you. I came to tell you. Will you mount my horse? You are not afraid to ride?"

"No, if he will carry a woman."

"He has—many times. But the saddle?"

"I can use it without the least difficulty."

He assisted her to mount. She gathered up the reins with a practiced hand, and the next instant had departed at a gallop into the black woods.

"Smart gal, so she is," murmured the old man. "Won't yer come in stranger? We'll hev a fire an' a cup o' coffee."

"No, thank you. I will walk back, now. Good night."

He walked away, escorted by the hounds to the edge of the woods. When he reached the cabin, the moon had sunk, the stars were pale, and the cold dawn was trembling in the sky.

He entered softly. The hour had come. Through an open door he saw the mother seize her husband's arm, and heard her voice in the agony of hope yielding place to despair. But the mountaineer, with the tears running down his sallow cheeks, and in a voice of utterable sorrow, said:

"No, Charity, she's plumb dead now, Charity—she's plumb dead now."

But the pale young teacher, kneeling by the death-bed of poor Melissa, rose up like a comforting angel to whisper sweet words of consolation to the mourning parents. The stranger could only wait silently with reverential wonder to do her bidding, for he was young and had never looked upon sorrow. When the bright morning had come, with all its cheerful sights and sounds, she beckoned him softly to look at the little dead heroine. The face was like marble delicately sculptured, illuminated by a serene smile of indescribable sweetness, as if at the moment of parting the music of celestial choirs had fallen upon her ears.

The stranger reverently gazing could but turn to his pale companion and murmur one word:

"Peace."

The stranger tarried to attend the simple obsequies. From distant mountain ranches and from cabins in the remote woods the sincere and kindly people gathered. There was then no church and no minister in that wild region. An aged man read the burial service, and sweet-voiced children, led by their gentle teacher, sang a hymn for their departed companion.

The mountains are no longer wild and inaccessible. The ax has swept their slopes, and the screaming locomotive rushes through the canyons; but in a dusky clump of fragrant mountain laurels, in peace undisturbed, there is a little green mound, and deeply carved on a mossy trunk the name MELISSA.—C. E. B. in *Oberland* for June.

The Starr-King Monument.

The S. F. Bulletin publishes the following communication from "one who remembers Starr King:"

I learn from the president of the Starr King Monument Association that the funds thus far collected for the purpose of building a monument amount to nearly \$9000, and that a further sum of \$3000 is needed to erect a suitable bronze statue mounted on a granite pedestal and placed in Golden Gate park. Mr. King's patriotic services to our State and nation occurred more than a quarter of a century ago. A new generation of men lives to-day on the scene of his labors. It is, therefore, incumbent on the men who lived in his time to erect the tribute to the memory of this patriot. Can you call the attention of the patriotic citizens of 1860 and 1865 to this matter, that the project may not fail?

The editor observes that the amount wanting would be speedily contributed were those who knew Starr King, and who are fully cognizant of his services to his State and country, to do what every one of them thinks should be done, and confidently affirms that when his friends realize how slight an effort is needed, the money will be forthcoming.

Any subscriptions sent to Mayor Pond, treasurer, or J. B. Stetson, president of the Starr King Monument Association, San Francisco, will be duly acknowledged.

WINTERING MELON-VINES.—"When I was a younger man than I am now," said Mr. E. W. Maclin the other day, "I was once on a visit to an old gentleman who lived on a ranch up in Nevada county. He showed me his trees and vines and at last we came to his water-melon patch. 'I am afraid I won't have a very big crop of melons this year,' he remarked; 'these vines do not appear to be doing very well.' My

sympathy was aroused at once and I thought I would cheer him up a little, and so I said: 'Oh, well, never mind. Take good care of the vines through the winter and perhaps they will do better next year.' I did not at that time understand the pitying look which spread itself over his countenance, but since then I have turned rancher myself."—*Auburn Republican*.

Preached a Funeral.

Young Will Penson, son of old man Bob Penson, sickened and died. Mrs. Penson, the young man's mother, was anxious that a preacher named Dabbs should deliver the funeral oration. Old man Penson went to the preacher and said:

"Parson, my wife is putty nigh dead with grief."

"Yes, brother, I know that."

"An' the children air awfully stirred up."

"Oh, yes, brother," the preacher responded.

"Wall, now," said old Penson, "I'm mighty glad you understand the thing so well, fur in this here funeral ter-do, I don't want nuthin' said that will jerk the pillar out frum under the head uv dozin' grief, an' cause a fresh outbreak."

"I understand that, brother."

"All right, then," said the old man, Penson, "I want you to preach my son's funeral."

The preacher came. The neighbors had come and arrayed themselves into the most dismal of all assemblages—a country funeral. The grief-stricken mother, whose life had been centered in her son, mourned in a corner of the room, and the children, struck with awe, hung back and whispered to each other.

The preacher arose and began to speak of the dead boy; extolled his virtues and spent many words in illustrating his manly qualities. The mother groaned. The preacher, seeming to take encouragement, began to draw about him the mechanical appliances of emotion. The mother shrieked. The friends began to wipe their eyes. The preacher threw himself back and began to paint an awful picture of death, and gave his hearers a startling etching of the necessity of repentance. The mother groaned in anguish. The father ominously shook his head. The preacher raved. He walked the floor and shouted with mourner's bench declamation. The mother fainted. The father shook his head and muttered something.

At the grave the mother had become almost calm; the preacher began to speak of the noble qualities of the boy. The mother fainted again.

One day, two weeks after the burial, old man Penson called on the preacher.

"Why," said the man of text, "I did not expect to see you so soon. Anything you feel like giving me is all right, but we can afford to wait awhile."

"We have waited long enough for what I owe you," said old man Penson. "I owe you a blamed good whuppin' an' it's got to be paid right now."

"Why, I don't understand you, sir."

"Yas, mebbe not, but I understand you. When I axed you to preach the funeral sermon uv my boy you said that you wouldn't stir my folks up. I had talked ter my wife about grace an' resignation till I had got her almost resigned, but you come an' knocked it all down. You told her about despair when I wanted you to tell her about hope. You painted a picture uv what we had lost when I wanted you ter show what our son had gained. Take off your linen, cap'n, fur I'm goin' ter use you rough."

"Why, I surely don't understand you."

"Wall, you will. You shove out the black boxes of sorrow whar you mout unfold the bright packages of hope; you—"

He seized the preacher, choked him, beat him, and then threw him out of the house. Penson was arrested and tried, but the humane jury rendered a verdict to the effect that it is a minister's place to brighten instead of to blacken; that he should console instead of deepen sorrow.—*Arkansas Traveler*.

OBSENE PICTURES AMONG SCHOOL CHILDREN.

—Parents have to keep a close watch over the children, indeed, if they would fully know the various temptations that are thrown in their way. The devil seems to be busying himself nowadays to insnare the youth and secure the ruin, especially, of our young girls. It has got to be quite the thing lately for manufacturers of fancy brands of tobacco, cigars and cigarettes to send over the country whenever their goods go great numbers of photographs representing women and girls in all sorts of positions and situations, from the common, vulgar, to the absolutely indecent and obscene. A teacher caught a boy in the act of presenting one of these "fancy" pictures to a girl on the school-ground in this city the other day. The picture was that of a woman entirely nude, except as to head-gear. The teacher, after taking the picture from the boy, instituted an investigation among the children, and to his astonishment found a dozen more pictures of the same obscene character. The question naturally arises, how do these pictures get into the hands of the school boys? The teachers and parents should forthwith inaugurate a vigorous war upon these pictures and see if they cannot be kept out of the schools. This is a form of wickedness that will do mortal injury if left to run its course.—*Santa Maria Times*.

A BILL has been favorably reported appropriating \$150,000 for a public building in Sacramento.

YOUNG FOLKS' COLUMN.

An Admonition (After Mother Goose.)

[Written for the RURAL PRESS by M. S. P.]

I know a little man, and I know a little girl,
To whom he has given his heart, heart, heart.
He is very often with this dear little girl,
And they don't live so very far apart, part, part.

Now this dear little man had better look out,
Else he'll get punched in his head, head, head;
For she's got another beau who might get mad,
But you needn't tell them what I've said, said, said.

Robbie and the Bear.

The following is for the boys. We find it in an Eastern paper, and if it is not true, it is good enough to be:

During the cold weather of April the two oldest sons of Isaac Roberts, living over at Twin Lake spring, near Northwood, started out for a fox hunt with two sons of a neighbor. They left the Roberts' farmhouse, and just as they were about ready to go, Robbie, a lad of 12, asked them to take him along. The older brothers objected. Nobody wanted to be bothered by a boy tagging along. Besides, there weren't sufficient snowshoes for all, and the big boys couldn't get along without the shoes.

The father, willing to humor the youngest of the family, told them to take him along and put him on a runaway with "the old musket." The old musket is a feature of every farmhouse up this way. It can be purchased for \$2.50, and it shoots No. 10 snipeshot and 000 buckshot with equal inaccuracy. Accordingly Robbie was armed with the musket, which he carefully loaded with about a handful of powder and buckshot, and after rolling up an old blanket to put around him while waiting on a runaway, he started off with the boys. Although he could keep a runaway as good as a man, the older boys were provoked at having their father insist on sending the boy, and they therefore posted him when about two miles from home at the foot of a ridge, in about the last place a fox, even when driven to desperation, would be likely to run. Foxes naturally take to the top of a ridge. But it was on the sunny side of the ridge and was a comfortable place to stay, and Robbie didn't know but that it was all right.

Leaving the boy hidden, as they told him, among the bushes at the roots of a hemlock stump, the elder lads went on to enjoy their fox hunt, and for the next hour Robbie heard nothing of them. By that time, he had got tired of sitting still, and ventured very cautiously at first to stir around a little. First he moved from the shady to the sunny side of the stump, then he climbed on to the log. About this time he heard the dogs a long way off in full chorus. He grabbed the old musket with firmer hand than he cocked it ready for action, but the hounds passed out of hearing along the top of the next big ridge, nearly a mile away, and Robbie saw nothing of the hounds or fox.

However, he expected the fox to turn on them pretty soon, and come sneaking back, down across the hollow, as the lads had said it would do, along the very hemlock log; and so a short time after the hounds were gone, Robbie was not at all astonished to hear something on the crust of the snow, down in the thicket toward the brook, and later to catch a glimpse of something black coming right toward the top of the hemlock tree he was guarding. The tree had been cut the summer before and the limbs were all there, but he could see the thing was black. That pleased Robbie all the more; a black fox would bring an immense price. But the noise was all too great for a fox, and Robbie noticed this, but only with curiosity. Pretty soon the beast came around the old top, and walked out in plain view.

It was a bear a year old. Seeing Robbie with gun up it stopped and equatted down on its haunches and stared as if in amazement, but not for any length of time. Robbie had a deadly aim across his knee and pulled the trigger. The roar of the old musket was heard at the Roberts' home, two miles away. Robbie tumbled off the log instead of the bear as if he had been shot. But the bear, which was only about three rods away, had seven buckshot in him, one of which pierced his brain, while Robbie had merely a black and blue bruise on his shoulder, which he now speaks of with pride. Another buckshot had opened the bear's carotid artery and it bled freely. This suggested a joke to Robbie. By the aid of a broken limb, which he used as a handspike, he rolled the bear against the log and then covered it with snow, leaving the blood plainly showing on the snow where the bear fell. Then he wet his cap and the musket in the blood, threw them down on the ground and scampered off for home.

Five or six hours later the big boys came along on their way home. They had tried two foxes, but both had run into rocky holes from which neither pickax nor fire could dislodge them. The boys were tired and discouraged. It was too bad, they thought, to have to go out of their way to pick up Robbie. Reaching the old hemlock, they saw the blood, the stained gun and the soaked cap, but did not see Robbie's tracks homeward bound, because he had followed the trail made when coming. To say that they were horrified scarcely hints at their feelings. Both brothers burst into tears.

"A panther did it," said one, "and buried him here."

They began to dig him out, and then, to their surprise, they uncovered the bloody head of a bear. They dug out the brute and then searched around for Robbie without avail. Not yet reassured, but hoping he might have gone home, they hastened away to find their hopes well founded. The bear was thin and weighed but a little over 100 pounds. It had been on the other side of the brook from Robbie and had gone his way when he heard the hounds.

A WISE TEACHER'S TALK ON HUMANITY.—A boy in school was having a very funny time by sticking a pin into the legs of the boy who sat next him and laughing at his antics. The teacher caught a sight of the proceeding, and taking a pin went to the first mentioned boy and said: "Would you like to have a pin stuck into you like that?" He laughed as though he thought it might be a capital joke, whereat the teacher used the pin rather freely, and his jumpings and squirmings, accompanied by his "Ows!" and endeavors to save himself by the use of his hands, attracted the attention of the whole school. The teacher finally asked him what was the matter, and why he did not sit quietly, and when he stated that he couldn't, "it hurt so." The teacher said: "Well, that is just the way it feels to other people. Have you had enough of it?" He was very decided in his opinion that he had, and the teacher took occasion to say a few words to the school in regard to their treatment, not only of each other, but of the lower animals. She said: "I saw a boy kill a toad last night, and I wondered if he knew the toad was a help to us, and if he thought of the toad's sufferings." Most of the boys looked thoughtful, a few laughed, and the very boy that killed the toad raised his hand and said: "What good can a toad do?" Upon the teacher's inquiry among the scholars she found that only a few knew anything of the good that a toad does in the garden. It was the means of a reform in that direction, and a talk on the uses of birds revealed the fact that very few of them knew that a bird is of any use whatever.—*Philadelphia Call*.

GOOD HEALTH.

For Sprains.

EDITORS PRESS:—Take the strongest vinegar you can get; add all the salt it will dissolve. Heat and saturate flannel cloths, and apply to the hurt as hot as the patient can bear. Then envelop in dry flannel. Repeat the process every 10 or 15 minutes until the pain is relieved. As one of my ankles is just recovering from a severe sprain, I can testify with a clear conscience to the efficacy of this remedy. We have used it in our family ever since I can remember.—D. J. O., *Spadra, Cal.*

GOOD AND BAD NEWS.—Good and bad news has a contrary action on the heart. Bad news weakens the action of the heart, oppresses the lungs, destroys the appetite, stops the digestion and partially suspends all the functions of the system. An emotion of shame flushes the face; fear blanches, joy illuminates it, and an instant thrill electrifies a million of nerves. Surprise spurs the pulse into a gallop. Delirium infuses great energy. Volition commands, and hundreds of muscles spring to excite. Powerful emotions often kill the body at a stroke. Chilo, Liagoras and Sophocles died of joy at the Grecian games. The news of defeat killed Philip V. One of the Popes died of an emotion of the ludicrous on seeing his pet monkey robed in pontificals, occupying the Chair of State. The Doorkeeper of Congress expired on hearing of the surrender of Cornwallis. Eminent public speakers have often died in the midst of an impassioned burst of eloquence, or when the deep emotion that produced it has suddenly subsided. Lagrave, the young Parisian, died when he heard that the musical prize for which he had competed was adjudged to another.

BIRD SKINS AS GRAFTS FOR WOUNDS ON HUMAN BEINGS.—Dr. Redard has communicated to the Paris Academy of Medicine some observations regarding the advantages of the skin of birds for grafts on wounds of human beings. He takes the skin from beneath the wing of a chicken, carefully securing the adjacent cellular tissue, but avoiding the adipose tissue. The transplanted pieces varied from a sixth to a third of an inch in size, and they were maintained in position by means of a little cotton wool and iodoform gauze. The skin of birds and fowls has the advantage of being supple, delicate and vascular, and is readily adapted to the surface of a wound, where it adheres without undergoing absorption. In a case of severe burn of the scalp, of eight months' standing, in a child two years old, he obtained rapid cicatrization by means of grafts from a fowl. The wound measured 3 inches by 2½, and completely healed in two months.

INTELLECTUAL LABOR AND LONG LIFE.—Among artists, Michar Angelo lived to be 90, Sir Christopher Wren to be 91. Titian is said to have been engaged in painting a picture now in the Academy at Venice where he was cut off by the plague at 99 years of age! Conrad Roesel of the Hague, who lived to be 100, and Ingres to 86, Tintoretto 82, Claude Lorraine 82,

Greuze 79, David 77, Turner 76, Horace Vernet 73, Lebrun 71, Poussin 71, are instances only of greatness in art, but greatness in enduring vitality. If we take poets, we find that Rogers lived to be 93, Sophocles 90, Colderon 87, Juvenal 86, Anacreon 85, Voltaire 84, Metastasio 84, Euripides 78, Goethe 83, Klopstock 79, Wieland 80, Lamartine 78, Beranger 77, and Victor Hugo 83. If we turn to philosophers and men of science we find among our contemporaries M. Chevreul, the French philosopher and chemist, who on the evening of his one hundredth birthday occupied the President's box at the opera; and if we look into the past we find the names of Fontenelle, who died at 100; Hoyle (who wrote the treatise on whist) at 98, Hobbes at 92, Morgagni at 89, Ried at 86, Dr. Heberden at 90, Sir T. Watson at 90 (?), Sir William Lawrence at 84, Royer-Collard at 82, William Harvey at 80, Schelling at 79, Cousin at 76, and, greatest of all, Plato at 82; and among great composers, Auber died at 88, Cherubini at 82, Rossini 77, Haydn 77, Gluck 79, and Meyerbeer 72. What a stupendous amount of brainwork, and brainwork of the highest kind, is represented by these names, all of whom exceeded the allotted threescore years and ten, but who are lost sight of in the delusive method of averages! Of the longevity of judges and dignitaries of the church, who also represent a great amount of useful brainwork, evidence has already been given.—*Nineteenth Century*.

DOMESTIC ECONOMY.

Cooking German Carp.

EDITORS PRESS:—In writing about the German carp, Mr. Wier says he cannot tell how to cook them so as to be palatable. As I have had a little experience I will tell how I manage them.

As soon after they are caught as possible they should be put in a tub or canful of fresh water and left to stand an hour or two, after which the water should be changed and left on them another hour. Then, if they are cleaned and put into some nice fresh water with a little salt in it, and left in that all night, they will have lost all that muddy taste which is so unpleasant.

Then I take an iron bake-pan and put them in, heads and tails, as close as I can pack them—two layers deep, if I have that many, and season them well with pepper and salt. Half fill the pan with water; cover it, if you can, with another pan or something, and set them in the oven and bake two or three hours, taking care that a little water is always in the pan until time is almost up. Then take off the cover and let them brown a little. The bones will all be soft and the meat first class in flavor. All this seems like a good deal of trouble, but it is not much trouble to fish-lovers. And as to those of us who live far from fish markets, a good mess of carp, cooked as above described, will be relished by all. MRS. J. HILTON.

BUTTERMILK BISCUIT.—Three cups of buttermilk, one cup of butter, one teaspoonful of cream of tartar, half a teaspoonful of soda, a dessert-spoonful of salt and flour enough to make the dough just stiff enough to be rolled out.

JELLY PIE.—One cup of jelly, two cups of sugar, four eggs, half a cup of butter, cream the sugar and butter, add the well-beaten yolks of the eggs, then the whites, and last the jelly, flavor with orange, and bake about three-quarters of an hour.

DOUGHNUTS.—Two cups of water, one cup of sugar, two tablespoonfuls of shortening, one quart of sifted flour, two tablespoonfuls of baking powder, or two tablespoonfuls of cream of tartar and one tablespoonful of soda and a pinch of salt. Flavor to taste.

GERMAN TOAST.—Cut in thin slices a loaf of bread, soak half an hour in sweet milk; beat two eggs, a small spoonful of butter, a tablespoonful of cornstarch in milk, and after taking the slices out of the milk dip them in this mixture and fry brown; sprinkle with sugar and cinnamon.

SNOW PUDDING.—One-half a box of gelatine in a pint of boiling water; when dissolved and nearly cold beat briskly with the whites of four eggs two cups of coffee sugar and the juice of a lemon; make a custard of the yolks and pour over it; add the grated rind of the lemon to the custard.

MINCED BEEF.—Three pounds of raw beef chopped fine; five soda crackers rolled fine, two eggs well beaten, 1½ teaspoonfuls of pepper, three slices of pork chopped, one-half cup of milk, and salt to taste. Mix all thoroughly, make into a loaf. Bake two hours. This should be sliced cold for tea or luncheon.

ROAST PIGEONS.—Pick, draw and truss them, keeping on the feet; chop the liver with some parsley, add crumbs of bread, pepper, salt and a little butter; put this dressing inside; slit one of the legs and slip the other through it; skewer and roast for half an hour; baste them well with butter. Serve with bread sauce.

OATMEAL GRIDDLE CAKES.—To a pint bowl of cold oatmeal mush, stir in about a half a cup of hot water (use only enough to moisten it and beat smooth), add three eggs, beaten light; add cold milk to make a thin batter, one teaspoon of baking powder, one-half cup of flour; if they break in baking add more flour. Bake on a griddle.



A. T. DEWEY.

W. B. EWER.

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Business Announcements.

[NEW THIS ISSUE.]

Agricultural Implements—Hawley Bros. Hardware Co. Windmills—Pacific Manufacturing Co. Stockton Combined Harvester and Ag'l Works. Agricultural Implements—Arthur Bull. Cattle and Goats—M. Wick, Sundale, Cal. Steam Generator—E. H. Farmer, Gilroy, Cal.

See Advertising Columns.

The Week.

Our April weather is appearing late in May. Surely the weather clerk has slipped his calendar back a peg. We expect "hay rains," of course, but not in such measure and over such a wide area as this year. If the refreshing had come six weeks earlier it would have reclaimed much lost grain, which it is now too late to save, but, as it is, the showers and the lowering weather have accomplished considerable—though not nearly so much as the hay and grain-buyers and the bag-sellers would have us believe. But let it improve the outlook as much as it can, it is not likely to make it any too good this year. Some damage has been done to hay, and possibly some to ripening cherries, which may burst their jackets; but, on the whole, it does not appear that even late May rains are objected to seriously.

The grand gala season of the schools and colleges is in the full, and the "sweet girl graduate" and the brand-new men are all about us. Our private schools seem to be thriving with the good times and the increase in population. May they never grow less.

On the Thirtieth of May.

We go to press Decoration Day under dripping clouds. Such weather, rare indeed in California at the close of May, is common enough in the older States when the G. A. R. goes marching out to the cemeteries to strew memorial blossoms on comrades' graves, and perhaps to this reminder of the Eastern climes—wherein the war for the union was chiefly waged—may be partly due the unusually deep and lively sense of the anniversary's import which to-day moves one, born and raised in New England, who five and twenty years ago was wearing army blue in the Old Dominion.

It may well be that hearts as truly patriotic beat beneath some butternut as beneath some indigo blouses, and we are now a re-united people, and the animosities attendant upon war are never to be rekindled; but the great distinctive principle for whose vindication the war was fought to its victorious close—the principle of National unity, established through so vast and precious sacrifice, must never be let go nor lost sight of in our thought. Extinct be sectional selfishness and party ambitions; and as our great National holidays come round, may we—old and young—be uplifted in spirit to a grander sense of America's place and mission in the great family of mankind.

As love of home and family may, in time of national peril, become as naught and be swallowed up in love of country (as it was here in rebellion time), yet be none the less real; so there is a patriotism which, with all its pride in native land and all its self-devotion to her service, is yet in nowise narrow nor provincial, but subordinates love of country to love of man—a patriotism which is perfectly genuine, yet merges in humanity.

Amid the waxing ferment and clamor of a presidential year; and in view of the larger problems, ethnic and economic, which come to the surface in labor movements, socialistic agitations, and diplomatic and ecclesiastical workings the world over, let us cultivate in ourselves and encourage in one another that soldierly temper and frame which recognizes the truth that we are not our own, our party's, nor even our country's, but owe a still higher allegiance to Truth and Right.

In the spirit of that paramount loyalty to the Most High are the patriotic words of George Wm. Curtis, which thrilled the wires last night from ocean to ocean, and stir true hearts to-day throughout Columbia: "The course of American history does not depend upon Presidents, but upon the people. * * * Conventions may well heed the memory of that host of heroes whose graves to-morrow will be strewn with flowers. In no country was there ever a more beautiful benediction upon patriotism or a more touching tribute of National gratitude. It was country, not party; it was duty, not ambition; it was liberty, and union, the impregnable bulwark of liberty, for which they made the costly sacrifice. They were patriots to whom America meant not only nationality and justice and equality and obedience to law, but also political progress, the righting of public wrongs, the ability of the people to see their own errors and constantly to strengthen by purifying their own Government. They died to serve these great ends. Let us live to serve them as we scatter flowers upon their graves. Let us baptize ourselves in their spirit and with their abiding faith in the people, seeing everywhere the signs that the America of their hope shall be the America of our children."

RUSSIA seems to be ahead of us in some things. For instance, while in New York State the bull-butterfacturers are asserting that they have a right to space at the Exhibition of Food Products in Albany next September, and are bulldozing the Attorney-General about it, word comes from Moscow that several wealthy merchants of that city having been convicted of adulterating tea, one of them has been deprived of his civil rights and banished to Siberia for life, and others sentenced to different terms.

FINE GOOSEBERRIES.—We have received from James Galloway of Haywards a sample of fine large gooseberries, wholly free from mildew, which he is growing from cuttings received from his uncle's garden in Dublin, Ireland, and which he calls "Royal Giant." He thinks so well of the variety that he proposes to offer the cuttings for sale next spring.

Eastern Shipment of Fruit.

The California Fruit Union, at the meeting of its directors in Sacramento last Saturday, gave final form to the arrangements of this season's business. Most of the day was given to the discussion of the two following resolutions, which were finally adopted.

1. The auction plan exclusively shall be tried in Chicago as long as in the discretion of the Executive Committee it is in the interest of the Fruit Union to do so. And our agents have the privilege of withdrawing any line of goods, should bids for same be less than the limit fixed by the owner, and may afterward offer the same at private sale.

2. That any member of the Fruit Union be allowed to attach any car to the Union's trains when presenting an affidavit and other satisfactory evidence that the same has been actually sold, upon the payment to the Union of the sum of \$30 for each car so offered, said payment to be made in advance of shipment; the shipper to pay also to the manager any sum paid by the Union for expedited service on such cars in advance, timely notice to be given to the manager of the intention to ship such cars.

The adoption of the first resolution insures a trial of the auction plan of sale at Chicago, and the fact that Capt. Weinstock was selected as Eastern manager, upon the resignation of the place by Mr. Hatch, especially insures the full and fair trial of the auction method, because Capt. Weinstock proposed it, and fully believes in its efficacy. Capt. Weinstock goes East to perform this duty without compensation, merely taking the cost of his expenses from the union. This decision seems final, for it was telegraphed from Sacramento on Tuesday that Porter Brothers have been appointed the Chicago agents for the California Fruit Union, and have signed a contract to handle no fruits save by the auction plan. Mr. Weinstock started for Chicago Tuesday evening.

The adoption of the second resolution presents a way in which cars of fruit may be sent East and escape the sale by the Union and still secure the low rates of freight pertaining to train-loads. It is expected that purchasers for such car lots of fruit will be chiefly in cities where the Union has no agent, and thus the general distribution will be promoted.

The prospect now is that there will be large amounts of fruit sent East this year, and it is hoped a wider scattering of it than heretofore.

SWEET POTATO VARIETIES.—Prof. Hilgard has received a letter from Dr. E. L. Sturtevant of South Framingham, Mass., asking for samples of California-grown sweet potato plant and tuber to aid him in the preparation of a monograph on the sweet potato, which he now has in preparation. Dr. Sturtevant writes that he has heard that several varieties of peculiar excellence are grown in California, and he is naturally anxious to include them in his study of the subject. He desires both the potato itself and a specimen of the foliage. We make this notice of Dr. Sturtevant's request because we think by calling attention of our readers to the subject better samples can be had than by collecting them in San Francisco. It is not necessary that the largest tubers be sent, but those that fairly represent the product of any variety, and if growers will take and press specimens of the foliage when it is at its best, and take the tubers later, perhaps, very interesting samples can be had. Sweet potato growers who will aid Dr. Sturtevant in this interesting effort may write to him about packing and forwarding of samples. We have long known Dr. Sturtevant as a painstaking investigator and an acknowledged authority on agricultural matters, and we would like to have him secure all the California agricultural material he can use.

NEW ZEALAND APPLES.—A few days since Mr. F. Canham called our attention to some shapely and handsomely colored apples at his snug little fruit-shop opposite the Palace hotel. On trial they proved to be not only good looking, but firm and well flavored; and they had come all the way from Pokeno, Auckland, N. Z., where they grew this A. D. 1888.

THE PERMANENT EXHIBIT AT SACRAMENTO.—The Sacramento Improvement Association has decided to open the new Exhibition Building Saturday evening, June 21, when displays will be made of the products of farm, vineyard and orchard by many of the Northern California counties. There are to be appropriate exercises afternoon and evening.

Savings in California.

The American Agriculturist for June makes an allusion to California which may be of great value to us in inducing competent and thrifty laboring people to think about our State as a future home. The following is the allusion made:

The returns of savings banks from California lead the list, the average being \$788 for each depositor. In France more than 2,000,000 depositors are credited with \$503 each. In Rhode Island the average is \$501; in Vermont, \$361. New York has an average of \$349, and New Hampshire, \$335; Massachusetts has \$309; Maine, \$328, and Connecticut, \$255. France, as is well known, is one of the most thrifty countries in the world, and the saving habits of her laboring classes are remarkable. The large average shown by California is proof of the claim that is so often put forward for that State, that wages are as a rule higher there than elsewhere, and that the expense of living, particularly of food, is less than on the Atlantic sea-board, and that the climate is such that labor is employed during all the year. There are none of those long breaks in employment which occur in the States of the eastern and central parts of the Union. The grain-fields are plowed and sown between November and February, then follows the care of orchard or vineyard, until the period of haying and harvest in May. This harvest period lasts along until it rounds out the year in October.

These are really the facts in the case, and, to use a peculiar phrase, they are rapidly becoming more so. The securing labor in the orchards and in other agricultural enterprises, sometimes however secures a change of location more or less great, to secure employment. This is however becoming less year by year, as the fruit area is extending farther into the grain regions. It is a fact that laborers are well paid in California—better paid than anywhere else in the world, and if a man will let whisky alone and stand to his employer with loyalty, he can enroll himself very soon in the ranks of savings bank depositors. California is a good place for a good laboring man—and for his sisters and his cousins and his aunts. One of the crying needs of the State in city and country, is a supply of faithful and loyal maid servants, and such can get wages far above anything they can command elsewhere. We can hardly have too many laboring men and women if they are of the right kind, but if they are strikers or drinkers or unwilling to render fair service for liberal pay, this State is too small for a single one more of them.

THE LUSK CANNERY TO CONTINUE.—At the assignee's sale on Tuesday of this week, a syndicate, composed of Sydney M. Smith, president of the Cutting Packing Company, Jacob Levi of H. Levi & Co., George C. Moore of E. L. G. Steele & Co., and Isadore Jacobs of A. Lusk & Co., purchased the property of the bankrupt J. Lusk Canning Company for \$48,000. The property transferred consisted of nine acres of real estate at Temescal, with factory and all pertaining; 24 acres of growing crops, factory buildings and plant at San Lorenzo, valuable labels, etc. By the terms of sale the outstanding contracts for fruit might be accepted or rejected by the purchasers. As we go to press on Wednesday afternoon it does not appear that this matter is decided, and the contracts are probably still hanging between the assignee and the owners of the plant, though decision will not be long deferred. Different opinions are expressed as to whether the syndicate will prefer to escape fulfilling the contracts of the Lusk Company or deem it advantageous to secure them.

REDUCING FREIGHT RATES.—A material reduction of rates on hay, grain and vegetables from all points on the northern division of the Southern Pacific to San Francisco is announced. Some weeks ago the R. R. Commissioners called the company's attention to the fact that the freight charges on these commodities were much too high and a 10 per cent reduction was asked for. On the 28th ult. Secretary Gaskill received a letter from Freight Agent Martin inclosing a copy of a new schedule to go into effect June 1st, showing a reduction of from 8 to 10 per cent. From Gilroy the new rate is \$2.40 a ton; Sargent's, \$2.50; Miller's, \$2.50; Watsonville, \$2.85, and Aptos, \$3. The stations south of Gilroy send the greatest quantity of grain and hay to this city, and as the reductions from those points are more marked than from points north of Gilroy, the farmers and shippers there will now be able to market their produce to advantage.

At the Presidio.

No doubt many of our readers have heard of the Presidio of San Francisco, but few know of the many interesting and beautiful scenes which are to be found there. The Presidio is of course one of the spots where grim-visaged war holds sway and where Uncle Sam puts on his most austere countenance, and yet in times of peace (may they never end) the Presidio has charms which even a "peace commissioner" might heartily enjoy. In fact, the U. S. reservation is one of the most charming places of public resort in the city of San Francisco.

And yet there much of the "pomp and circumstance of glorious war"—just enough to fire the soldier's heart and to inspire the young with dreams of prowess. There are now quar-

and the Government intends the people to enjoy it. Every Friday afternoon the band plays in the neat pavilion shown in the engraving, and the walks are filled with gaily dressed visitors. The scene is only rivaled by the brilliant Saturday afternoons at the Golden Gate Park. Besides the handsome trees shown in the picture, the Government has made extensive plantations in the interest of arboriculture, and many lessons in tree growth on sandy sites may be learned by the forester.

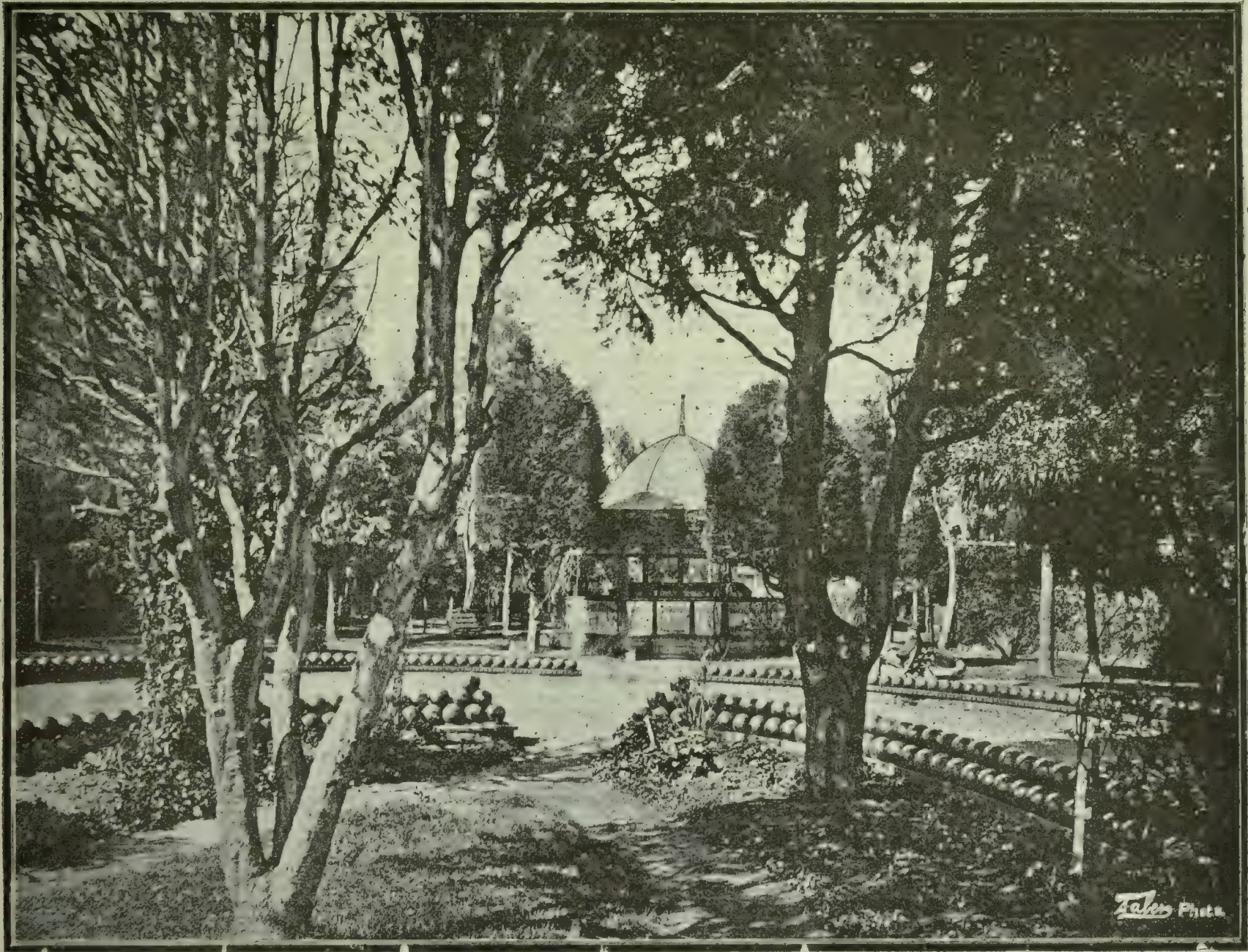
The site shown in the picture is just in front of the officers' residences, which are upon the right of the picture. Continuing directly backward from the pavilion, as shown in the picture, is the alameda, a beautiful shady walk which leads to the official headquarters. There is quite a little city of buildings on the Presidio

lodgings for the soldiers. A short distance from the Presidio was the *castillo* or fort. That at San Francisco was regarded as the most formidable, but in the present age would be in the way as a heap of rubbish. When General Figueroa was Governor of California he issued an edict to the commander of this Presidio not to grant or sell any lands around the station, the included portion being kept solely for the use of the Government. The United States Government has perpetuated the ordinance. Until the coming of General Howard the Presidio was headquarters of the Division of the Pacific, but to secure better accommodation and for convenience in transaction of business, the Division headquarters are now established in the Phelan building on Market street, in San Francisco. It is the idea to make the Presidio

ENTOMOLOGICAL.

The Plum Curculio.

EDITORS PRESS:—Will this pest ever reach California is the question. This question was asked of the writer by Prof. Van Deman, U. S. Pomologist, last winter, he being aware that I had made that insect a special study for years. The question is a hard one to answer, and the best answer I can now give is, that it will be in due course of time. At least, after due consideration of the habits of the insect, I will say that it will be introduced, and that it is most certainly strange that it was not introduced into California years ago, or so soon as any shipments were made by the transcontinental railroads. For, as is well known, this beetle changes from the larva in autumn, and the beetle at once seeks a cover in which to



A GLIMPSE OF THE PRESIDIO GROUNDS, SAN FRANCISCO.

tered at the Presidio five batteries of the First U. S. Heavy Artillery, each battery with three officers and 35 men; one battery of light artillery mounted, with four officers and 67 men; two troops of the 2d U. S. Cavalry, each with three officers and 65 men, and two companies of the First Infantry, each with three officers and 35 men. In command is Col. W. Graham, Brvt.-General.

The evolutions of these troops will always interest the visitor. The day opens with dress parade at 9 o'clock, though just at present being the target season the booming begins at 7 o'clock and continues until 11 o'clock. After July 1st the target practice will be abandoned, and then daily drills will be held each day, except Sunday, from 10 to 11:30 A. M. Guard mounting takes place each day after dress parade. Every Sunday morning the troops are inspected. So much for the formal martial exercises.

Our engraving shows the more peaceful features of the Presidio. Were it not for the serried rows of iron cannon balls, each eight inches in diameter, which line the walks and roadways, the scene might be taken for a pleasure garden. Such, in fact, it is in times of peace

reservation. Besides the handsome residences of the officers and the headquarters, there are the officers' club-house, the recreation building, the court-room, the church, the school-house, the library, the offices of the engineer the quartermaster and the commissary, the commodious barracks of the soldiers. In other parts of the grounds there are the guard-house, the magazines for ammunition, etc. All these details of the establishment will have interest to the visitor, and our readers who come to see the sights of San Francisco should not forget the Presidio.

The history of the Presidio is interesting in this connection. Under the old Mexican rule Upper California was divided into four military districts, the headquarters of which were denominated the Presidio of the district or jurisdiction. At each, troops were stationed. These presidencies or presidios were San Francisco, Monterey, Santa Barbara and San Diego. The buildings were alike in all and consisted of a square of about 100 yards east, inclosed by a wall of unburnt bricks called *adobes*, about four yards in height; within was the church, the residence of the commandante, a warehouse and

the great barracks for the troops of this division, and possibly as many as 5000 men may in the future be quartered there.

EMANCIPATION IN BRAZIL.—The Brazilian Parliament has approved the Government bill completely abolishing slavery, and it was sanctioned by the Regent on the 13th of May. This action met with extraordinary manifestations of rejoicing. President Cleveland sent the Brazilian Minister of Foreign Affairs a congratulatory dispatch upon the occasion, adding an expression of personal hope and expectation that the freedom thus extended will result in the increased happiness and prosperity of the empire.

HAMBERG, one of the men who swindled the Oregon farmer, F. M. Parker, out of his ranch, has been sentenced to one year in jail and a fine of \$19,000; in default of payment he is to be imprisoned in jail at the rate of one day for each dollar, or a term of 53 years. W. J. Pilcher, one of Hamburg's partners in the plot, received a year's sentence, with \$5000 fine, and Walter Neustadt, the other, a \$3000 fine with the same term of imprisonment.

hibernate during winter. As Prof. Riley says: "She seeks any kind of suitable shelter in which to hibernate during winter." Therefore, it would be strange if she did not seek shelter in some of the varied and most suitable things for that purpose of shelter, and he skipped here during winter in some of them?

But this is not saying that California will, at some future time, be scourged by this most noxious insect to the grower of stone fruits, for there are other points having a strong bearing on this question. I for one don't believe that the plum curculio could survive and propagate its kind in this climate, for the following reasons: It has been proven that this beetle whenever the weather is mild in winter leaves its hibernating shelter to feed. In the Eastern States the temperature in winter is seldom warm enough for it to do this, while here, nearly every day in winter time is warm enough for it to do so, therefore it is reasonable to suppose that if they are active and feeding all winter, that they would become exhausted and die of old age before there was any fruit large enough for her to deposit her eggs in.

This is no fanciful idea, but is a reasonable one to all who have given attention to the life and habits of insects. Such students have learned that it is a fact that they can only live in the active state for a certain limited period, and during that period they must feed (if they feed at all in the adult form), lay their eggs and die. Then it follows that if the plum curculio can

only live a month after leaving her winter quarters, then by change of climate, if she leaves her winter quarters three months before there are any fruits ready to receive her eggs, she must die before laying them.

The best answer we can give then to Professor Van Daman's question is that we in California need have little fear of the introduction of the plum curculio unless she changes her habits. If she could breed in this climate she would have been here long ago.

D. B. WIER.

115 Montgomery street, S. F.

This statement will be read with deep interest by our growers of plums and prunes. Mr. Wier has been known for years as a curculio expert throughout the Eastern States. We hope that his diagnosis of the reasons why the beetle cannot succeed in this climate my prove everlastingly true.

The Plum Aphid.

EDITORS PRESS:—Will some of your readers please say what is the best mode of clearing off the green lice from the under side of plum tree leaves.—C. R., Martinez.

Among the washes being tested this week on the plum trees of the University orchard the Ongerth wash, one part to ten of water, seems to work perfectly when the spraying is thorough. The aphid is easy to kill if you touch it, and we have no doubt other preparations will also succeed. Time enough has not elapsed to determine whether any harm will be done to the fruit.

State Inspector Klee, in his last bulletin, recommends the following for plum aphid and woolly aphid, above ground: Four pounds of resin; three pounds of sal-soda; water to make 4½ gallons. Dissolve the sal-soda in a few pints of water; when thoroughly dissolved, add the resin. Heat until dissolved, and add water finally. Use 1½ pints of solution to the gallon of water. Use a temperature of about 100° Fahrenheit.

The Melbourne Exhibition.

Frank McCoppin, United States Commissioner to the Melbourne Exposition, has issued the appended circular for the guidance of persons who contemplate sending exhibits to the exposition:

OFFICE OF THE COMMISSIONER FOR THE UNITED STATES TO THE MELBOURNE EXPOSITION,
312 California street, San Francisco, May 10, 1888.

Gentlemen: The United States Government has made an appropriation of \$50,000 toward the expenses of the American Department at the International Exposition to be held at Melbourne, Victoria, opening on the 1st of August and continuing until the 1st of January next. The President has appointed the undersigned as United States Commissioner to this exposition and placed at my disposal the balance of the appropriation, viz.: \$27,000, to be disbursed at Melbourne for the purpose of giving every advantage to the United States Department that can possibly be obtained by liberal display in arrangement and decoration.

Communications have been entered into with the agents of the Oceanic Steamship Company in this city, who have arranged that all shipments for exhibition shall be taken at a reduction of 50 per cent on ordinary rates.

A special rate of \$300 for the passage from this port to Sydney and return has been made by the Oceanic Steamship Company, good for return in eight months.

It is important to understand that shipments to leave by the steamers of May 31st or June 28th—the earlier the better.

Exhibits of raisins and other dried fruits which may not be ready for shipment until the product of the present season is harvested may be shipped as late as the steamer of September 20th. Spice will be reserved for these exhibits if notice be given in time, and the finest display possible will be made by the commission at Melbourne, considering that they will not arrive at the exposition building before October 20th, and that there will be only 70 days from that date until the close of the exposition.

A liberal appropriation of space has been made by the Victorian Government for the accommodation of American exhibitors. Intending exhibitors who have no agents in Melbourne can consign their exhibits to the Commissioner of the United States for the exposition at Melbourne, who will take charge of and attend to their proper disposition.

The exposition building, for the convenience of foreign exhibitors, has been declared a bonded warehouse, and all goods will be received without payment of duties, and unless sold—in which case local duties will be charged—will be returned to the owner in bond.

The attention of the citizens of the Pacific Coast is earnestly solicited that they should exert themselves to the utmost, during the short time of the commission in this city, to procure for the United States Department as abundant a display of the manufactures and products of the country as practicable.

The merchants of San Francisco have organized a committee to assist the commissioner in obtaining exhibits, as follows: Chamber of Commerce—Hugh Craig, F. A. Haber and I. C. Moore; Board of Trade—George W. Meade, J. B. Stinson and Eugene Beck; Produce Exchange—R. B. Forman, Byron F. Stone and C. F. Bassett; Manufacturers' Association—William Harney, Charles J. Woodbury and Isaac Hight; Mechanics' Institute—David Kerr, George H. Hopps and Irving C. Stump. Hugh Craig, 312 California street, is the chairman of this committee.

These gentlemen have expressed their desire to assist in forwarding the interests of the commission, and will be pleased to facilitate the forwarding of exhibits if notified thereof, and answer any inquiries regarding the same. Your obedient servant,

FRANK MCCOPPIN.

FRUIT MARKETING.

The Supreme Court on 'Fruit Sold by Contract.

The selling of fruit by contract is so generally indulged in and all the laws bearing thereupon are of such interest to our wide community of fruit-growers that we give in full the following decision of the Supreme Court in the case of Blackwood vs. Cutting Packing Company, which was handed down May 19, 1888. It is long, but should be read and preserved by all orchardists:

Action for the price of apricots alleged to have been sold to defendant. Defense, the breach of an implied warranty as to quality.

The contract was in two parts. The part signed by the defendant was as follows:

"SAN FRANCISCO, Sept. 17, 1881.

"Bought of W. C. Blackwood his crop of apricots, at Haywards, for the seasons of 1882-83-84-85-86, not less than 75 tons and not exceeding 200 tons per annum at three cents per pound, f. o. b. (free on board cars at) Haywards.

"CUTTING PACKING COMPANY,

"By A. D. CUTLER."

The part signed by the plaintiff was similar to the above, except that it said "sold my crop of apricots," and "sold Cutting Packing Company."

The court below gave judgment for the defendant, and the plaintiff appeals.

1. The first question is, whether there was any warranty. The defendant relies upon Section 1768 of the Civil Code, which is as follows:

Section 1768: "One who agrees to sell merchandise not then in existence thereby warrants that it shall be sound and merchantable at the place of production contemplated by the parties and as nearly so at the place of delivery as can be secured by reasonable care."

The plaintiff contends in the first place that apricots are not "merchandise." A walk through the markets would probably convince him that he is mistaken. It is said, however, that such fruit comes under the head of "produce." Very likely it does; but we think the word "merchandise" is used in the above section in a large sense, and covers all kind of personal property which is ordinarily bought and sold in the market. Whether it covers more than that need not be decided in this case. This point of plaintiff is not unlike saying that a promissory note between farmers is not a negotiable instrument, because such an instrument is a creation of the law between "merchants."

And we think also that the future crops of fruit come under the head of merchandise "not then in existence." Section 1770 covers the case of an article manufactured to order; and Section 1771, the case of merchandise "inaccessible to the examination of the buyer," which probably refers to merchandise in existence. Taking the three sections together, we think that the one above quoted applies to a case like the present.

It is argued for the plaintiff, however, that the transaction was a sale and not an agreement to sell, and that, therefore, the section does not apply.

The fundamental difference between a sale, properly so called, and an agreement to sell is that in the former case the title passes and in the latter case it does not. The inquiry in this regard, therefore, must be as to whether the title passed. And it is to be observed that the point of time to which the inquiry must relate in the present case is the time the contract was entered into.

Some question is made by counsel as to whether the title to a thing which is not in existence can pass. But we shall assume in favor of the plaintiff that the fruit to be produced from trees already grown and the property of the plaintiff has such a potential existence as to be the subject of sale.

It seems well settled that the question as to whether the title has passed is one as to the intention of the parties. And such intention is, as a matter of course, to be gathered from the language of the parties considered in the light of all the circumstances of the case. But in the absence of anything showing a contrary intent, there are certain circumstances which have a controlling force, and these exist in the present case.

(a) There was at the time to which the inquiry relates neither delivery of the goods nor payment of the price. The contract says that the fruit was bought "at three cents per pound, f. o. b. (free on board cars at) Haywards." This, as we construe it, is an expression of intention that the price was to be paid or to become due when the fruit was delivered to the carrier at Haywards. But the result would be the same if the words quoted do not express such an intention, for if the time of payment be left indefinite the law implies that it is to be on the delivery of the goods. (C. C., Sec. 1784; Dyer vs. Daquid, 70, 111, 307; Case vs. Dewey, 55 Mich., 118.) In common phrase, the terms were cash on delivery; and where such is the case the delivery of the goods and the payment of the price are conditions concurrent. And if the condition of payment is not waived the title does not pass until the price is paid. (Peabody vs. Maguire, 79 Me., 585; Evansville R. R. vs. Erwin, 84 Ind.,

464-65; Turner vs. Moore, 58 Vt., 456; Adams vs. O'Connor, 100 Mass., 515; Hoffman vs. Culver, 7 Bradwell, 454.) It frequently happens that the seller will deliver the goods notwithstanding the failure to fulfill the condition of payment, and in such cases the question arises as to whether such delivery is not to be considered a waiver of the condition. Some courts hold that in the absence of circumstances showing a contrary intention the condition is waived and that the title passes. But where, as here, there was neither delivery nor payment, there can be no doubt but that the title does not pass. (Dixon vs. Duke, 85 Ind., 435-36.)

(b) There are other circumstances which constitute more specific criteria than the above. The goods were not in a condition in which the buyer could be called upon to accept them. Benjamin gives the following rule in this regard:

"Where by the agreement the vendor is to do anything to the goods for the purpose of putting them into that state into which the purchaser is to be bound to accept them, or, as it is sometimes worded, into a deliverable state, the performance of those things shall, in the absence of circumstances indicating a contrary intention, be taken to be a condition precedent to the vesting of the property." (Benjamin on Sales, Book 2, Ch. 3.)

In this case the seller was to give the necessary cultivation to the orchard, pick the fruit, pack it in suitable boxes or baskets, and deliver it to the carrier at Haywards.

(c) There is yet another circumstance. The portion of the crop to be delivered had not been identified. What was contracted for was to be "not less than 75 tons, and not exceeding 200 tons per annum." Possibly it might be argued that if any crop should turn out to be less than 75 tons, the buyer would not be bound to accept any portion of it. It is not necessary to consider that question. It certainly cannot be maintained that the same result would follow if the crop of any year should turn out to be more than 200 tons. At the time of the formation of the contract (to which the inquiry must relate) it could not be known what number of tons would be produced. Even if the fruit had been then ripe and hanging upon the trees it could not be known what portion was to go to the defendant until it was weighed.

In this regard Benjamin gives the following rule:

"Where anything remains to be done to the goods for the purpose of ascertaining the price, as by weighing, measuring, or testing the goods, where the price is to depend on the quantity or quality of the goods, the performance of these things also shall be a condition precedent to the transfer of the property, although the individual goods are ascertained, and they are in the state in which they ought to be accepted." (Benjamin on Sales, Book 2, Ch. 3.)

So far as concerns the proposition that where weighing or measuring is necessary to the identification of the goods, the title does not pass until they have been weighed or measured, the American cases are generally in accord with the above rule. (See Hires vs. Huff, 39 N. J. L., 10; Galloway vs. Weck, 54 Wis., 608; Commercial Bank vs. Gillette, 90 Ind., 268; Hutchinson vs. R. R. Co., 59 N. H., 489; Fry vs. Mobile Bank, 75 Ala., 474; Allen vs. Melton, 64 Tex., 218; Hubler vs. Gaston, 42 Am. Rep. 794; The Elgee Cotton Cases, 22 Wall., 180.)

In California the cases are to the same effect. (See Horr vs. Barker, 8 Cal., 608; McLoughlin vs. Piatti, 27 Cal., 463; Caruthers vs. McGarvey, 41 Cal., 15.) Some of the American cases are not in accord with the rule laid down by Mr. Benjamin in this; that if the goods are identified it does not matter that weighing or measuring is necessary to ascertain the price or the quantity. And this seems to be the law in California. For the Civil Code contains the following:

Sec. 1140. "The title to personal property, sold or exchanged, passes to the buyer whenever the parties agree upon a present transfer, and the thing itself is identified, whether it is separated from other things or not."

This action does not dispense with identification. On the contrary it requires it. It only dispenses with segregation when the property is otherwise identified. Therefore, where the identification consists in the segregation, weighing or measuring they are still necessary. And the present case was of the latter character.

As against these controlling features of the transaction, the plaintiff has only the language of the instrument. The term "sold," it is said, indicates a consummated sale. But this word is not conclusive. (Anderson vs. Read, 106 N. Y., 344-45.) In McLoughlin vs. Piatti (27 Cal., 458) the agreement was that in consideration of a certain sum, the receipt of which was recited, the owner "granted, bargained and sold" the property to the buyer, yet it was held to be a mere agreement to sell. And in the Elgee cotton cases (22 Wall., 180) the language was even stronger.

We think, therefore, that the title did not pass, and that consequently there was no sale, but a mere agreement to sell. Hence the case falls within Section 1768, and a warranty that the goods should be sound and merchantable was implied.

2. The court below found that the goods were not sound or merchantable at the place of production, etc. (Folios 93-95 and 98.) It is contended that this finding is not sustained by the evidence. But we think the evidence is amply sufficient.

S. Roper, who has been in the fruit business

for 12 or 14 years, and who was shown a sample, testified: "They are not really good for anything. They would not pay to dry. I suppose that animals would eat them." (Fol. 207.)

John A. Emerson, who had been in the fruit and produce business for 20 years, and who had seen a portion of the crop, and was shown a sample while on the stand, testified: "A very few boxes were very good apricots, but the majority of them were very small, very inferior, something that I could not sell unless at a very low figure. * * * I should not consider those in Exhibit H as merchantable. (Fol. 230-31.)

William Jacobs, who was in the fruit business, and who had seen a portion of the fruit, testified: "They were not even fit for pie-fruit. I would not consider them fit for pulp that we squeeze into jelly." (Fol. 240-41.)

"I say that those apricots that I saw of the crop of 1882 would not be salable to canners in this market or anybody else." (Fol. 244.)

And to the same effect was the testimony of other witnesses who were competent to give an opinion on the subject, and who had either seen portions of the crop or were shown samples of it. (See testimony of Prather, fol. 261; of Code, fol. 275-76; of Kimball, fol. 292; of Morse, fol. 299-300; of Cowing, fol. 317; and of Fowler, fol. 326.) The fact that most of the witnesses testified that the fruit might have been used for pie-fruit, or for pulp, does not help the plaintiff's case. Very inferior fruit may be used for pulp. And it was in evidence that: "There is only a small quantity used by canners for pulp. Fifty tons would be enough for the whole city" (fol. 241-2); and that "pie-fruit" is merely the inferior fruit which is found in most groves. It is not sold as such (fol. 269 to 272). Upon the same principle it might be contended that if the fruit could have been fed to hogs, it had a value, and was, therefore, not within the warranty.

Undoubtedly the testimony of some of the witnesses was toned down on cross examination, and some of them seem to have had an indirect interest in the question. But the question of credibility was, under our decisions, for the court below. At the very least, there was a substantial conflict in the evidence.

The fact that the orchard was properly cared for; that the trees were open to the inspection of the defendant, and that it was acquainted with the climatic conditions, etc., seem to us to be entirely irrelevant.

3. It seems to be contended, though not very strenuously, that the defendant accepted a portion of the crop, and that thereby it waived its rights in the premises. The facts in this regard are as follows:

When the first shipment reached the defendant it wrote to the plaintiff that the fruit was "by no means of proper quality, nor sound nor merchantable. Yet as these had been allowed to come to the city before we discovered their inferiority and unfitness and unmerchantable condition, and could not have been returned to you except at an entire loss to yourself, we made such disposition of them as we were able to make."

Subsequently the parties entered into a written contract whereby it was agreed that the defendant should send an agent to pick out such portions of the crop as was considered fit to be used. This contract provided that the receipt of the first shipment referred to in its letter above quoted, "shall not be regarded as an acceptance and shall not in any manner operate to waive any of the rights of said company;" and further, that the picking out and taking of such portion of the crop as should be picked out by the agent "shall not, nor shall any action hereunder be deemed or taken to be an acceptance by said company or a waiver, or to operate in any manner so as to affect, change or impair the rights, duties or obligations of either of the parties under said first-mentioned agreement." With reference to the remainder of the crop the contract contained the following:

"The remainder of said crop shall be forthwith picked, pitted and dried in the sun on said premises by said Blackwood on his own account and at his own cost and expense, subject to such rights or obligations with reference thereto as either party may have under said first-mentioned agreement."

The defendant sent its agent to the orchard, and he picked out all of the crop which was considered fit for use. This, together with the first shipment, amounted to 89,000 pounds, for which the defendant paid at the rate provided for by the first contract. The remainder was dried by the plaintiff as provided by the second agreement, and the suit is for the price of such remainder at the contract rate, less what the dried fruit was sold for.

We are unable to see that there was any waiver of defendant's rights under the first agreement. It was expressly agreed that the receipt and disposal of the first shipment should not be considered an acceptance. And had it not been for the second contract the defendant would doubtless not have taken any more of the apricots.

We, therefore, advise that the judgment and order denying a new trial be affirmed.

HAYNE, C.

We concur:

FOOTE, C.

BELCHER, C. C.

BY THE COURT.

For the reasons given in the foregoing opinion, the judgment and order denying a new trial are affirmed.

California's Population.

No State in the Union has increased in population for the last two years as fast as California. In 1880 the national census credited the State with a population of 864,694. In 1885 a State census was made by estimate, and this gave the population at 1,079,000. Since then the population has increased faster than in any two years of the past 10. During the last winter Surveyor-General Hammond saw the necessity of making as correct an estimate as possible of the number of the present population, that measures desired by Congress might be better urged. To that end examinations were made of all county registers, county books of statistics, and school census reports. From these and other sources a careful estimate was made, resulting in the conclusion that the present population of California was not less than 1,250,000. This shows an increase of 180,000 in two years. From present indications immigration hither will be larger this coming season than ever before. But the State is now just beginning to fill up. It can easily support many times its present population.

The following table presents some interesting comparisons:

State	Sq'r Miles.	Population '85.
Illinois	55,414	3,386,350
Indiana	33,809	2,000,000
Maryland	11,124	1,000,000
Massachusetts	7,800	1,941,465
New Jersey	7,320	1,278,033
Connecticut	4,750	672,300
New Hampshire	9,491	362,336
Rhode Island	1,052	304,284
Vermont	10,212	350,000

Total.....11,293,768

This table tells its own story. The area of Illinois, Indiana, Maryland, Massachusetts, New Jersey, Connecticut, New Hampshire, Rhode Island and Vermont is 14,619 square miles less than that of California, yet these States have an aggregate population of 11,293,768, while California has but a population of 1,250,000. Is it not safe to say that in a very few years at least 4,000,000 people will be residents of this State? And even then our population will not be so large as that of Pennsylvania, which has a territory of only 46,000 square miles. The possibilities of this State are simply marvelous. It has such an area of tillable land, its soil is so fertile, its farming industries are so varied, that it can maintain a larger number of agriculturists than any other State. But not only this. From its situation it will in time be an immense exporter of manufactured articles. Where now there are 10 mills there will be hundreds. The population will be centered in cities. The rumble and clatter of machinery will be familiar sounds in localities where they are now almost unheard.

These changes are bound to come and will come speedily. The tide of immigration has but just begun to set toward California. We are but the vanguard of the throngs that are coming.—*Hollister Free Lance.*

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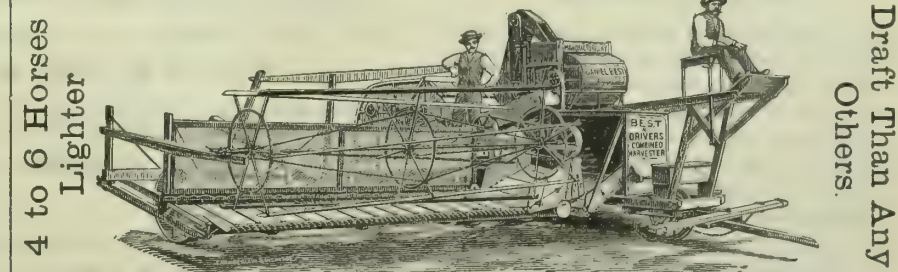
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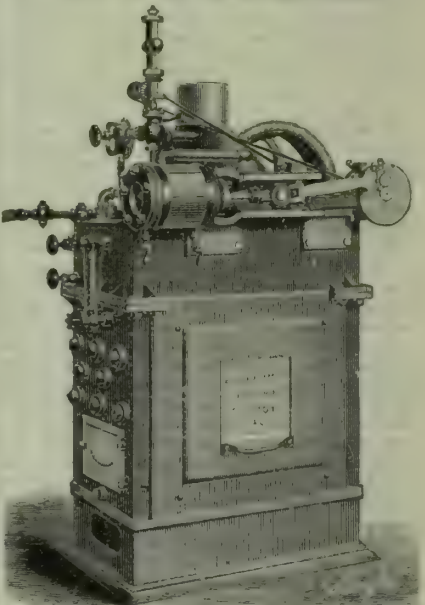
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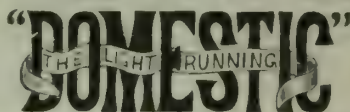
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State Horticultural Society.

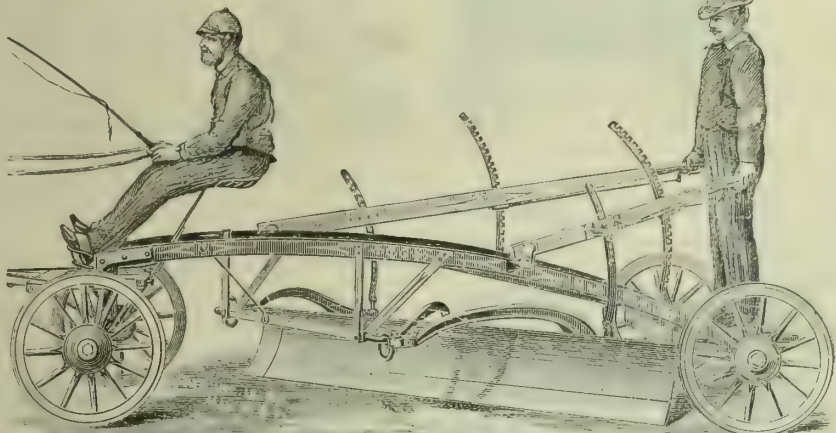
The State Horticultural Society held its regular meeting in this city May 25th, President Hilgard in the chair. W. M. Bramhall was proposed for membership.

Vice-President Hatch submitted a fruit-can label, which had been sent him from Colusa where it had been received from a party in Kansas. The label bore mark of a Cincinnati printing firm, and the name "Sacramento Valley Fruit Packing Co.," purporting to be located at Colusa. The fruit had been sold in Kansas, and as it was of an inferior quality, the California label had been used to facilitate its sale. As no such fruit-packing company exists in California, and, moreover, as Colusa has not among its industries a cannery, the label was stigmatized as a fraud. A resolution to that effect was unanimously adopted.

The Labor Question.

The labor supply for the fruit harvest was discussed at some length, and nearly all those present took part; but no facts except such as have already been mentioned in the RURAL were brought forward, except that there seemed to be indications that possibly considerable numbers of Japanese could be obtained in the future. The indications were general that the Chinamen understand the situation and propose to demand higher wages than heretofore.

Two fruit-cutting and pitting machines were shown. One the Lillie pitter and splitter, which has already been to some extent in use in this State and was highly commended by L. M. Moulton; the other, exhibited by D. N. Dilla, is a machine of which the manufacture is just beginning in this State, but which the inventor says has given satisfaction in Delaware. The latter machine is also to be fitted with an at-



THE LAMBORN ROAD MACHINE.

tachment for paring. These machines were examined with much interest and variously commented upon.

L. M. Moulton illustrated a canvas fruit-catcher, which he expected to use this season. It is to be suspended under the tree, and then the tree given a jar with a mallet sufficiently hard to bring down the ripe specimens upon the canvas, down the concave surface of which they will run to a basket properly placed. Mr. Moulton promised to report results attained with his device.

Fruit Prospects.

Notes were given by different parties concerning the fruit prospects. The general deductions were, that apricots will be but a partial crop, and growers will dry the fruit rather than sell it for less than 2½ cents per pound, and some are holding for 3 cents or more. The prune crop was reported only moderate and prices advancing. Peaches will be abundant and fine. The discussion of the labor supply and devices for labor-saving, will be continued at the meeting of June 29th.

THE TARIFF.—The tariff discussion continues at Washington, without definite result so far. We are glad to see that Congressmen Thompson and Biggs are standing out against the caucus of their party for the retention of the duty on fruit products of California, and will not vote for the Mills bill unless these changes are made. The votes of our two Congressmen appear to be so necessary that it is reported that their demands will be conceded to. This will be good as far as it goes.

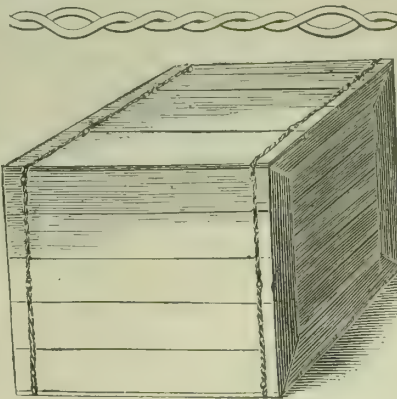
GRAPE-GROWERS AND WINE MAKERS.—A publication which will be widely useful, is a "Directory of Grape Growers and Wine-Makers of California," which has just been prepared by Clarence J. Wetmore, Secretary of the Viticultural Commission, and issued as a public document. Its uses are obvious and we doubt not copies can be had from Mr. Wetmore at the offices of the Commission, 204 Montgomery street, S. F.

PORTLAND'S INDUSTRIAL FAIR.—The Industrial Fair Association at Portland, Oregon, has secured seven acres of land centrally situated, upon which the corner-stone of the Fair building is to be laid in about a fortnight. The stockholders have just voted to increase their capital stock from \$100,000 to \$150,000, and mean to have the pavilion and other buildings done in season for the fair next autumn.

Twisted-Wire Box Straps.

Our attention has been called to a recent invention for the strapping of boxes, whereby breakage of cases is prevented and packages are made proof against the rough handling received in transportation.

The ordinary straps heretofore in use have had their disadvantages. They either consumed too much time in applying them to the cases, or their great cost placed them hopelessly beyond the reach of shippers of the cheaper commodities. The inventor of this article has



The Twisted Box Strap and Its Method of Application.

utilized wire to accomplish a saving of money, time, and labor.

The wire is ingeniously twisted, as shown in the engraving, giving it great strength, and at intervals of four inches space is allowed for the

insertion of the nail, while in other straps the hole has to be previously drilled or punched.

This strap come in coils of from 4000 to 5500 feet, and is protected by a heavy coat of lacquer, so that it can be kept any length of time without rusting.

It is furnished in two weights. The lighter will hold with perfect safety packages of 150 pounds, while the heavier will securely hold cases of any size.

Shippers of the heavier fruits, vegetables and other produce may find a cheap and reliable article of this kind valuable in packing securely for long-distance shipments. We understand that A. I. Hall & Son, San Francisco, the Pacific Coast agents, will send samples and prices on application.

A Road Grader.

We give herewith an engraving of the Lamborn road machine, an Eastern machine which has been in use and is highly esteemed in many Eastern and Western States, as we learn by the circular furnished us by Truman, Hooker & Co. of San Francisco, who have the sale of the machine. The engraving shows sufficiently the general plan of the grader. Fuller information can be had by sending to Truman, Hooker & Co. for their illustrated circular, which gives the desirable points in the construction and operation and illustrations of its method of handling dirt. It is worthy the attention of those having road making, ditching or leveling to do.

OUR friend Joseph Sexton, not content with sending us the superb samples of double carnations mentioned in the PRESS of May 26th, dropped in upon us early this week with a handsome loquat branch, bearing 20 or more of the juicy yellow plums, and a ripe specimen of the cherimoyer, grown upon his grounds at Goleta. The photinia fruit and foliage hangs in the window of the State Board of Trade, but the custard-apple was referred bodily to the home board, which reports unanimously "delicious," with thanks to the donor.

TAHITI ORANGES.—J. Ivancovich & Co. of this city has been furnishing the Palermo Nursery and Citrus Association with several barrels of decayed Tahiti oranges, from the seeds of which it is hoped much good nursery stock will take its rise.

San Diego Flower Festival.

The flower festival given by San Diego ladies the second week in May for the benefit of the Woman's Home, added one more to the floral triumphs of the season. The display was made in a large rink, which was crowded days and evenings. There were a rose booth, a bulbous booth, cut flower booth, small flower booth, Mika booth, and National City, Coronado and Del Mar booths, besides those for refreshments. In a number of these the attendants wore bewitching fancy costumes.

In the Manager's booth a bed of delicate heliotrope, tinted with flowers plucked from Coronado Beach and bearing in letters of white blossoms the words "Southern Institute," was much admired.

The wildflower glen, with varied foliage and bright blossoms from the fields, arranged by Misses Hatch and Hornbeck of Mission Valley, was unique and beautiful.

One of the novelties in the amaryllis booth was a husk of seed from the date-palm, in appearance resembling an ear of corn without the silk, only somewhat flattened. The kernels are as distinct and the husks as abundant as they are in maize. The "sea onions," also, from Coronado Beach, attracted considerable notice.

In the exhibit from Sweetwater Valley nursery a full-rigged ship, composed of straws, dried grasses and everlasting flowers, which appeared to ride on billows of fern and maiden-hair, was praised highly.

Among the numerous floral designs, two anchors—one of evergreen and white roses, with the letters "Central W. C. T. U.," and the other (sent to the ladies of the bulbous booth by Mrs. H. Weston and Mrs. E. E. Haviland of Del Mar), consisting of geraniums, sweet peas and marguerites, with a floral cable of honeysuckles, marguerites and other flowers binding it to a ship of callas—were especially commended.

In the cut-flower booth was a spinning-wheel of red geraniums, marguerites, smilax and fuchsias.

Another fine piece of floral workmanship was a flower stand about seven feet high, containing 24 different varieties of roses, interwoven with cypress evergreens, the work of Miss M. A. Steel and Mrs. J. A. Rice of National City.

The exhibit of the San Diego nursery—embracing delicate ferns and flowers of common varieties, yet of the finest quality and exquisite tints—was unpretentious yet singularly elegant, and reflected credit on the taste and skill of its projector, Miss K. Sessions.

A large American flag, draped over the National City booth, was conceded to be the finest piece of all. It was the work of Mrs. J. C. Crenshaw. "With what seeming carelessness was it done—as though Freedom's emblem idly fluttered there in the throbs of some May morning's breeze. More than one thought 'How beautiful,' but when they examined and found it to be of red geraniums, white roses and purple sweet peas, they wondered."

The lettering on the wall back of this booth—"National City," in Mandarin oranges on a background of glossy green orange leaves—was very pretty.

We have named but a few of the designs, and cannot begin to give credit to the host of fair enthusiasts who, "for sweet charity's sake," gave time, and thought, and labor to the display and entertainments—which it is pleasant to learn, yielded a net return of over \$2000.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING MAY 22, 1888.

- 383,103.—INSERTED SAW-TOOTH—F. W. Cook, S. F.
- 383,345.—RHEOSTAL—F. J. Crouch, Eugene City, Ogn.
- 383,105.—ELECTROPHORUS—J. D. Cu'p, San Felipe, Cal.
- 383,220.—DISTRICT TELEGRAPH CALL BOX—J. B. Gill, S. F.
- 383,293.—LIFTING-JACK—M. Hedges, Murietta, Cal.
- 383,295.—POWER MECHANISM—W. A. Howard, Petaluma, Cal.
- 383,179.—TRACTION ENGINE—D. B. James, Visalia, Cal.
- 383,301.—SOLDERING MACHINE—J. S. Johnstone, Portland, Ogn.
- 383,228.—COIN ACTUATED BILLIARD MARKER—E. C. Jones, S. F.
- 383,230.—STATION INDICATOR—J. C. Ludwig, S. F.
- 383,233.—COMBINED HARVESTER—D. C. Matteson, Stockton, Cal.
- 383,159.—SAFETY CATCH FOR CABLE R. R.—Chas. Vogel, S. F.
- 383,161.—WIRE SCREEN, ETC.—D. Wesemann, Los Angeles, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates and in the shortest possible time.

A RICHLY carved cereal cabinet, valued at \$2000, which was to have been sent to the Melbourne Exposition, was destroyed in a fire last Monday evening at the West Coast Furniture Co.'s factory in this city.

CONVINCING GUARANTEES

Which are Justified by a World Experience.

TO THE PUBLIC:

Having branch houses and laboratories in seven different quarters, and therefore having a world-wide experience, we, H. H. Warner & Co., justify ourselves in making the following statements:

First.—For the past decade we have held that 93 per cent of diseases originate in the kidneys, which introduce uric acid into the system, a poison that is injurious to every organ, attacking and destroying first the organs which are the weakest. We have also held that if the kidneys are kept in perfect health most of the ordinary ailments will be prevented, or, if contracted, cured. Other practitioners have held that extreme kidney disease is incurable. We have proof of the contrary, however, in hundreds of thousands of cases in every section of the globe.

Second.—The kidneys being the sewers of the human system, it is impossible to keep the entire system in good working order unless these organs are doing their full duty. Most people do not believe their kidneys are out of order because they never give them any pain. It is a peculiarity of kidney disease that it may long exist without the knowledge of the patient or of the practitioner. It may be suspected if there is any gradual departure from ordinary health, which departure increases as age comes on.

Third.—We do not cure every known disease from one bottle. This is an impossibility.

Fourth.—Warner's Safe Remedies have been recognized by the doctors and the people all over the globe as standards of the highest excellence.

Fifth.—We make the following unqualified guarantees:

GUARANTEE 1.—That Warner's Safe Remedies are pure and harmless.

GUARANTEE 2.—That the testimonials used by us are genuine, and so far as we know, absolutely true. We will forfeit \$5000 for proof to the contrary.

GUARANTEE 3.—Warner's Safe Remedies have permanently cured many millions of people whom the doctors have pronounced incurable. Permanent cures are always convincing proofs of merit.

Sixth.—Ask your friends and neighbors what they think of Warner's Safe Cure.

REV. J. P. ARNOLD, Camden, Tenn., had fearful abscesses caused by kidney disease. In 1878 and 1881, other running abscesses appeared. He was fully cured in 1882 by Warner's Safe Cure, and in 1888 reported himself sound and well, and he is over 70 years old. MRS. ANNIE JENNESS MILLER, mistress of Dress, 253 Fifth avenue, New York, eight years ago was cured of nervous prostration, when the best New England physicians could do her no good. She cured herself with Warner's Safe Cure, and writes in 1887: "To-day I am a perfectly well woman. It is the only medicine I ever take."

L. B. PRICE, M. D., a gentleman and physician of the highest standing of Hanover C. H., Va., four years ago, after trying every other remedy for Bright's disease, including famous mineral waters, cured himself by Warner's Safe Cure, and March 24, 1888, wrote: "I have never had the slightest symptoms of my old and fearful trouble."

HERMAN URBAN, of MacNeale & Urban, safe makers, Cincinnati, Ohio, was broken down by excessive business cares. He was fully restored to health four years ago by Warner's Safe Cure and has since been in robust health.

DR. DIO LEWIS wrote: "If I found myself afflicted with a serious kidney disorder I would use Warner's Safe Cure."

MRS. E. J. WOLF, Gettysburg, Pa., S. C. Farrington, Gotha, Fla., J. M. Long, 43 East Second street, Cincinnati, Ohio, and the sister of J. W. Westlake, Mt. Vernon, Ohio, were cured of consumption (caused by kidney acid in the blood, as over half the cases are) by Warner's Safe Cure.

We could give many thousands of similar testimonials. Warner's Safe Cure does exactly as represented.

Seventh.—Warner's Safe Remedies were put on the market in obedience to a vow made by H. H. Warner that, if the remedy now known as Warner's safe cure, restored him to health he would spread its merits before the entire world. In ten years the demand has grown so that laboratories have been established in seven quarters of the globe. Warner's Safe Cure is a scientific specific—it cures when all the doctors fail, thousands of the best physicians prescribe it regularly, its power over disease is permanent and its reputation is of the most exalted character. Can you afford longer to ignore its extraordinary power? Now in the spring of the year, a few bottles will tone you up and cure all those ill feelings which, unknown to you, are caused by the fatal kidney poison in the blood, which will surely end fatally, if not at once removed. For this no other specific is known.

LAND PLASTER.—We have received an interesting pamphlet entitled "Mineral Manure," which gives the organization of the Pacific Gypsum and Fertilizer Co. of Stockton, Cal. This organization, with a capital of \$100,000, has secured gypsum mines in Nevada and proposes to supply a mineral which Prof. Hilgard's analysis shows contains over 99 per cent of pure gypsum or sulphate of lime. The officers of the company are L. U. Shippee, president; E. F. Smith, secretary and business manager; J. G. Scott, superintendent; other directors are W. B. Wright, H. O. Southworth and B. F. Langford. There is a good field for such a company.

INCUBATORS FOR AUSTRALIA.—The Petaluma Incubator Company, who lately shipped 10 of their machines to a firm in Sydney, Australia, now have an order from the same firm for 35 more, to be shipped as soon as possible. These incubators were little known in that country previous to last season, which witnessed the introduction of 37 of all sizes. This is simply a repetition of what is daily occurring in California; where a machine once finds its way into any locality, continued sales are certain, as they are undoubtedly superior to any others manufactured.

JAMES BETTNER of Riverside, well known for his active interest in horticulture and as a member of the State Board of Forestry, died on the 25th ult., aged 44, leaving a widow and two sons.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

SYLVESTER SCOTT, Cloverdale, Cal., importer and breeder of Jacks; a choice lot of Jacks for sale.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands, Aargies and Case Strains. Punch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER Saxe & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

EL ROBLAS RANCHO, Los Angeles, Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford Cattle. Information by mail. C. F. Swan, manager.

VALPARAISO PARK. Thoroughbred Polled Angus and Durham Cattle. Thoroughbred Berkshire Swine. Address F. D. Atherton, Menlo Park.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen-Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Gen. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

POULTRY.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, Lt. Brahmas, Houdans. Eggs, \$2.

T. D. MORRIS, Sonoma, Cal. Tuolouse and Embden Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

D. H. EVERETT, 1618 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

PIEDMONT POULTRY YARDS, cor. Piedmont Ave. & Booth St., Oakland. Wyandottes, L. Brahmas, P. Rocks, Langshans, B. Leghorns, B. B. R. G. Bantams. Eggs \$2 for 13; circular free; Mrs. J. N. Lund, Box 116.

O. J. ALBEE, Lawrence, Cal., breeder and importer.

SHEEP AND GOATS.

F. BULLARD, Woodland, Cal., importer and breeder of Spanish Merino Sheep. Premium band of the State. Choice bucks and ewes for sale.

J. B. HOYT, Bird's Landing, Cal., importer and breeder of Shropshire Sheep; also breeds cross-bred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep from Illinois and England for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine high graded rams for sale.

E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

ANDREW SMITH, Redwood City, Cal.; see adv't.

SWINE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

I. L. DICKINSON, Central Point, Merced Co., Cal., breeder of thoroughbred Essex Hogs. Pigs now ready for sale. Prices reasonable.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshires. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal., breeder of Thoroughbred Berkshires and Essex Hogs.

ANDREW SMITH, Redwood City, Cal.; see adv't.

LITTLE'S CHEMICAL FLUID NON-POISONOUS

SHEEP DIP.

LITTLE'S PATENT POWDER DIP (POISONOUS). Information by mail.

CATTON, BELL & CO., successors to FALKNER, BELL & Co., 406 California St., S. F. Wool Agency Warehouse, Sixth and Townsend Streets.

Farmers and Fruit-Growers, Attention!

To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

FERTILIZE!

FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

Dr. J. KERRIE—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly, DR. E. A. SCHNEIDER.

University of California, College of Agriculture.

BERKELEY, Nov. 20, 1886.

Dr. J. KERRIE, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully, E. W. HILGARD.


The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 4 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

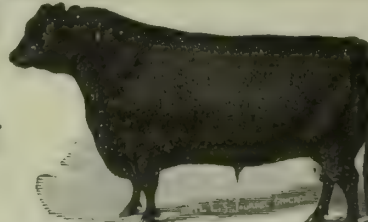
FOR SALE IN LOTS TO SUIT,

On board cars at Sbranto, Station of the C. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the MEXICAN PHOSPHATE & SULPHUR CO., H. DUTARD, President, room 7, Safe Deposit Building, or

and 311 Sansome St., San Francisco.



POPLAR GROVE BREEDING FARM,



BARON VALIANT NE4052

S. N. STRAUHE, P. O. Address, Fresno, Cal.

—IMPORTER AND BREEDER OF—

POLLED ANGUS CATTLE AND HIGHLY BRED TROTTER HORSES.

For information address or call on S. N. Strauhe as above. No trouble to show stock to intending purchasers.

HEADQUARTERS FOR

Holstein-Friesians & Jerseys




A choice lot of young Cattle of the above breeds for sale at very low figures. Their breeding is A No 1 and from the BEST MILKING FAMILIES. Prices and QUALITY will suit. ELEVEN YEARS' experience on this Coast. Correspondence solicited.

Publisher of "Niles' Pacific Coast Poultry and Stock Book," a new book on subjects connected with successful Poultry and Stock raising on the Pacific Coast. Price, 50 cents, post-paid.

WILLIAM NILES, Los Angeles, Cal


REGISTERED SHROPSHIRE SHEEP AND BERKSHIRE PIGS.

IMPORTED FROM ENGLAND DIRECT.



Royal Duke of California.

ANDREW SMITH, Redwood City, Cal., or 218 California St., S. F.



Redwood Duke, No 13,368.

Winners of all blue ribbons in their classes and sweepstakes prizes at State Fairs, Sacramento, 1886 and 1887. Importations made by me annually of the best blood obtainable in England, regard less of cost. Young stock, bred from these importations, male and female, from different families, for sale at reasonable prices, and every animal guaranteed. Address

P. S. CHILES, DAVISVILLE, CAL.,



10,000 VARIETIES

IN OUR STOCK OF

SADDLERY GOODS AND WHIPS.

SOME PRICES RULING IN

Our Retail Cash Department at 410 Market Street, Below Sansome (SEE HORSE ON BUILDING):

Some prices ruling in our Retail Cash Department at 410 Market St., below Sansome (see horse on building):

SINGLE BUGGY HARNESS, per set, \$10 to \$25, including an Embroidered Lap Duster or Neck and Hitch Strap.

SADDLES, Ladies' or Men's, \$8 to \$50, including a Bridle or Saddle Cloth.

HORSE BLANKETS, \$1.25 to \$10; each includes a Strap.

BUGGY ROBES, \$3 to \$25; each includes a Whip or Halter.

FLOW HARNESS, double, per set, \$15 to \$20.

2-WHEEL BUGGY OR CART HARNESS, \$4 to \$25; Whip included.

SINGLE EXPRESS HARNESS, \$18 to \$20, includes a Cushion.

RANCH HARNESS, double, leather traces, \$20 to \$40, including Whip.

WHIPS, 1 ft. to 5 ft. each.

2nd Race Track Equipments a Specialty. For trade orders send for our Catalogue.

Breeder of SHORTHORN CATTLE

Of the best families. A choice lot of young Bulls and Heifers for sale, 4 years old and under, from the celebrated Kirklevington Oxford Count. 36723.

POLLED ABERDEEN ANGUS Bulls and Heifers for Sale

AT SACRAMENTO, CAL. Thirty-four head of young bulls, fullbloods and grades, the latter from Shorthorn cows, for sale at \$75 to \$250 per head; also 15 head of fullblood heifers at \$20.00 per head. These cattle are all choice selections from my herd of Polled Angus Cattle on the Loupvalle Stock Ranch in Buffalo Co., Neb. Come and see the cattle or address DR. G. M. DIXON, 700 J St., Sacramento, Cal. Correspondence solicited.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

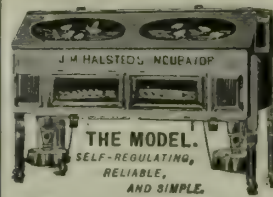
Catalogues and Prices on application to

ROBERT ASHBURNER,

Baden Station. San Mateo Co. Cal.

APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

POULTRY, ETC.




The Hatched Incubator Co. 1312 Myrtle St., Oakland, - - Cal. Price from \$20 up. Model Brooder from \$5 up. Thoroughbred Poultry and Eggs. Send for new Circulars containing much valuable information.

EGGS AND POULTRY.

For the balance of the season I will sell Eggs for hatching at \$2.00 for 13 from my best imported and home-bred L. Brahmas, P. Cochins, Langshans, P. Rocks, Wyandottes, Brown and White Leghorns and B. B. R. Game Bantams. I will also sell one pen of L. Brahmas (5 hens and a cock), and one pen of P. Cochins for \$15 each. One pen of Langshans, one pen of Brown and one pen of White Leghorns for \$15 each. I will sell my Axford Incubator, 100-egg capacity, for \$15, or will trade for two small out-door Brooders in good repair.

E. B. FREEMAN, Santa Clara, Cal.



JOHN McFARLING,

Importer and Breeder of

Langshans, Plymouth Rocks,

Brown and White Leghorns, Fekin Bantams, Light Brahmas, Partidge Cochins, Buff Cochins, Black Minorcas, Registered Berkshire Pigs. Also one pen of Langshans direct from China.

706 TWELFTH ST., OAKLAND, CAL.

Large lot of young birds ready for sale; send for circulars.

OAKLAND POULTRY YARDS,



Cor. 17th & Castro Sts., Oakland, Cal.

Manufacturers of the PACIFIC INCUBATOR and BROODER. Agency of the celebrated silver finish galvanized wire netting for Rabbit and Poultry-proof fences, the Wilson Bone and Shell Mill, the Pacific Egg Food, and Poultry appliances in great variety. Also every variety of land and water fowl, which have won first prizes wherever exhibited Eggs for hatching. The Pacific Coast Poultryers' Hand-Book and Guide, price, 40c. Send 2c. stamp for 60-page illustrated circular to the PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

HATCH CHICKENS



PETALUMA INCUBATOR.

The Most Successful Machine Made.

3 Gold Medals, 1 Silver Medal, and 16 first Premiums.

Hatches all kinds of Eggs. Made in all sizes.

Write us for Large Illustrated Circular Free, describing Incubators, Brood r. Houses, How to Raise Chickens, etc. Address PETALUMA INCUBATOR CO., Petaluma, Cal.

WELLINGTON'S IMPROVED EGG FOOD. STANDARD POULTRY preparation for TEN YEARS. Sold by every principal merchant; also at 425 WASHINGTON STREET, SAN FRANCISCO.

TREE and GARDEN SPRINKLERS.

Wainwright's Spraying Nozzles and Pumps. Are the latest and best. Tree Cleaners, Garden and Lawn Sprinklers. They can also be used for White-washing. Full particulars in RURAL PRESS, March 24, 1888. Illustrated catalogue free. Agents Wanted. Address: WM. WAINWRIGHT, No. 105 Beale St., San Francisco.

BEST TREE WASH.

"Greenbank" 98 degrees POWDERED CAUSTIC SODA (tests 99.3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

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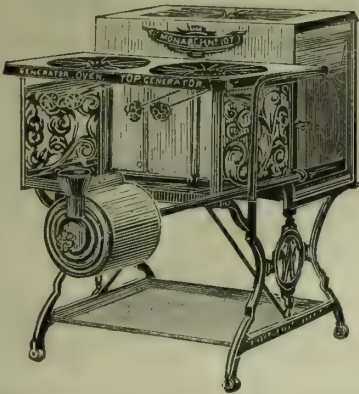
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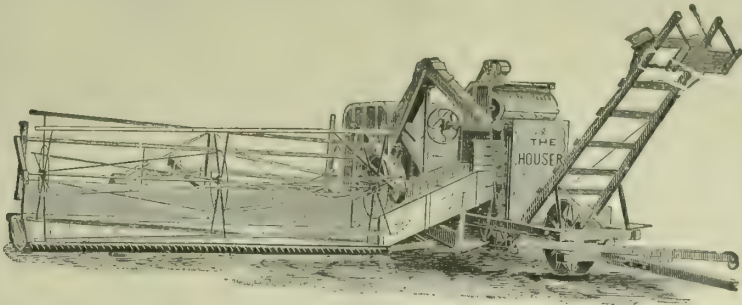
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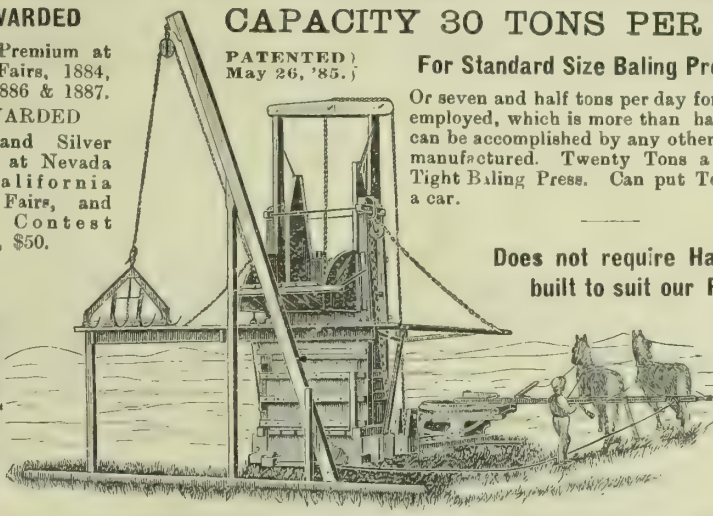
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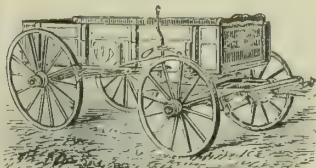
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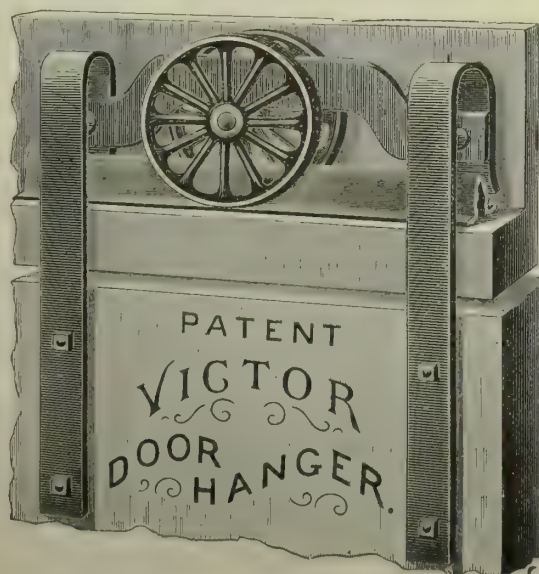
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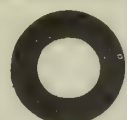
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, May 28, 1888.

Continued cool weather has been experienced the past week, doing much good to growing crops. In garden truck and fruits there is more activity, with receipts increasing. In cereals trading has been light as it usually is at the close of a season. Eastern and European wheat markets have fluctuated to some extent. To-day being decoration day all the exchanges are closed, so that the cable of Tuesday is the latest, which is as follows:

LIVERPOOL, May 29.—Spot wheat, easier. Nos. 1 and 2 wheat, Standard California, including Club wheat, highest price 75 cts, 6s 7d@6s 10d; Red American spring, 6s 9½d. Later—3:30 P. M.—poor demand.

LONDON, May 29.—Cargoes on passage and for shipment, inact. ve. Cargoes off coast, slow. California cargoes just shipped, 34s. Cargoes nearly due, 33s 6d. Cargoes off coast, 33s 6d@34s. Wheat and flour in Paris, rather easier. French country markets, mostly turn cheaper.

English Wheat Markets.

LONDON, May 25.—The receipts of wheat at Liverpool for the past three days amounts to 200,000 bu., only 30,000 being American. The weather is favorable for the wheat crop. The importations of wheat and flour in the United Kingdom during the past three months have been equivalent to 28,119,410 bu.; of wheat there were 16,757,184.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Day	Cash	May	June	July	Aug.
Thursday	96½	96½	96½	96½	96½
Friday	96½	96½	96½	96½	96½
Saturday	96½	96½	96½	96½	96½
Sunday	96½	96½	96½	96½	96½
Monday	96½	96½	96½	96½	96½
Tuesday	96½	96½	96½	96½	96½

The closing prices for wheat have been as follows, at Chicago:

Day	Cash	May	June	July	Aug.
Thursday	96½	96½	96½	96½	96½
Friday	96½	96½	96½	96½	96½
Saturday	96½	96½	96½	96½	96½
Sunday	96½	96½	96½	96½	96½
Monday	96½	96½	96½	96½	96½
Tuesday	96½	96½	96½	96½	96½

California Products at Chicago.

CHICAGO, May 26.—There is only a moderate supply of California fruit held here and arrivals are small. California oranges are getting scarce. Choice Navel are already pretty well out of the market. Messinas are held firmly on account of an advance at the seaboard. The demand is moderate and the market is firm. Following are the prices received for fruit in good condition: California bright fruit, \$3.50 per box; smutty, \$3. Navel, bright, \$5.00 per box. The first apricots of the season to arrive from California sold fairly well at \$3.25 for 20-lb cases, and \$2.75 for boxes.

Trade for sweet cherries is limited, and those buying generally take California, which sell at \$2.25 for 10-lb boxes of choice Red and \$3 for fancy White.

Dried Fruit.—Raisins are at present quoted quite dull; the quality in many cases is quite ordinary to common, and this makes them slow. Plums and prunes sell slowly, but for apricots there continues a fair demand.

We quote: Apricots, sun-dried 1½ lb., 10½¢@11½¢; bleached, prime 13¢; do, choice, 14½¢@15¢; do, fancy, 15¢@16¢; evaporated, choice to fancy, 24½¢@26¢; peaches, sun-dried, 1½ lb., 11¢@12¢; do evaporated, unpeeled, 13¢@15¢; plums unpeeled, 10½¢@11¢; prunes, small, 1½ lb., 6¢@7¢; fancy large, 9¢@10¢.

Raisins, loose Muscatels, 2-crown, 1½ box, \$1.35@1.40; do, 3-crown, 1½ box, \$1.45@1.50; do, London Layers, 1½ box, \$2.25.

Wheat Output.

ST. PAUL, May 28.—Though the rains throughout the Northwest have lately been severe, culminating yesterday in a general downpour, advices indicate that the crops have not been in the least injured. Throughout the Red River valley, in Northern Dakota and Minnesota, the rains were needed. It is estimated that the wheat output in that region will be largely increased and will reach 50,000,000 bu. In some places seeding was delayed and everywhere corn is late in seeding, but not too late to injure the crop. Where wheat has appeared above the ground it was not injured at all by the recent storm, as it was not heavy enough to wash the young plants out, and not cold enough to do it damage. In Southern Dakota and Minnesota the outlook is excellent, and the warm rain was welcomed rather than regretted. No one feels any concern, and many state that the Northwestern crop promises better than at any time in five years.

A Corner in Grain.

VIENNA, May 25.—A ring of aristocratic land proprietors has created a corner in Austro-Hungarian maize. Some of them had to mortgage their estates in order to procure the necessary cash about 12,000,000 florins in all. The price of maize is rising rapidly, but the general opinion is that the scheme will prove a failure.

Wool.

NEW YORK, May 28.—The wool sales made are rather for a mere reduction of stock, but the market, as a whole, is sluggish. There is a notable lack of interest in the new clip. Primary sources report low trading, and mainly to local buyers. Philadelphia had a dropping market, with sales of 298,000 lbs. Boston sales foot up 1,965,600 lbs, including 305,000 lbs California spring, at 16¢@17¢; California fall, 10¢@14¢; 10,000 lbs Oregon, at 18¢@20¢; 50,000 lbs Territory, at 17¢@21¢; 20,000 lbs mixed scoured Texas, at 42¢; 5000 lbs fine do, at 47¢; 15,000 lbs spring Texas, at 15¢@17¢; 30,000 lbs do, at 14¢@18¢; 2,000 lbs fall Texas, at 15¢@17¢; 10,000 lbs No. 1 and quarter-blood, at 33½¢; 15,000 lbs fine delaine, at 33½¢; 30,000 lbs XX and above, 30¢; 10,000 lbs and above at 27½¢; 3000 lbs at 27½¢; 5000 lbs Michigan at 27¢; 30,000 lbs Ohio at 28¢; 6000 lbs Cape at 24¢. On private terms there were sold

174,000 lbs domestic, 20 Noils, 115 bags foreign and 350 bags Mediterranean. Liberal sales of Montevideo are reported for Antwerp.

Miscellaneous.

NEW YORK, May 28.—Hops are spiritless in the wholesale way. The small sales made to brewers show close buying. Pacific are quotable at from 34¢@35¢, State, 40¢@41¢, old, 40¢@41¢.

During the week some 9000 boxes of 2 and 3-crown Californian raisins were sold. They were somewhat off in grade, as the buyer offers to sell them in lots at \$1.40@1.50. The best marks are quoted as before.

The prices of California mustard seed are nominal at 3½¢@4¢.

Lima beans are firm.

Hides are fairly active in low grades, which are selling at from 11¢@14½¢. The strong feeling in prime qualities has not been upheld.

Apricots arrive steadily and are quoted at \$4.75 for a four-box case repacked at Chicago.

Cherries, \$3.50 per 10-pound box.

Local Markets.

The closing sales on the San Francisco Call Board were as follows:

Date	Buyer Season	Buyer Year
Thursday	\$1.35	\$1.50
Friday	1.35	1.50
Saturday	1.35	1.50
Sunday	1.35	1.50
Monday	1.35	1.50
Tuesday	1.35	1.50

BARLEY.—The market is softer. The pool by exaggerating the improvement in crops thought to send prices up. Calcuttas can be bought at from 7 to 7½¢, although the pool asks more.

BARLEY.—The market the past week was in buyers' favor, and as usual when weak trading was light. At the close yesterday there was a better feeling. On Call trading has been fair, generally at settling prices up to yesterday (Tuesday) when more buying orders came in. There is quite a short interest out.

BUTTER.—The market shows continued activity, but heavy receipts keep prices easy. Eastern advices report the market tending down, and also state that the feed is good and promises to remain so for a longer time than last year.

CHEESE.—The market is steady and firm, but no higher. At the East prices are falling.

EGGS.—The market has held steady throughout the week. Eastern receipts keep prices down.

FLOUR.—The market is strong, but no higher.

WHEAT.—The market the past week was dull and inactive, with buyers bidding down and only taking for immediate wants, but at the close yesterday values were firm and had an advancing tendency. In options trading has been good, but the bears succeeded in hammering the market to lower figures. There is said to be quite a line of shorts. As this is a holiday all exchanges are closed.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to May 28, '87.	July 1, '87 to May 26, '88.
Flour, qr. sks.	3,949,966	3,341,531
Wheat, cts.	11,927,233	8,124,886
Barley, cts.	2,176,942	2,195,994
Oats, cts.	132,366	152,749
Potatoes, sks.	776,741	1,047,742
Corn, sks.	111,388	227,681
Rye, sks.	24,674	17,146
Buckwheat, sks.	5,805	3,054
Beans, sks.	429,333	387,363
Brans, sks.	420,809	469,916
Hay, tons.	97,025	109,740
Salt, tons.	21,658	16,010
Wool, bales.	78,513	68,505
Hides, No.	101,537	99,230
Raisins, 20-lb boxes.	137,596	112,046
Quicksilver, flasks.	17,471	28,526
Hops, bales.	13,197	15,708

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1, '86 to May 28, '87.	July 1, '87 to May 26, '88.
Flour, sks.	228,648	350,278
Wheat, cts.	955,939	1,149,944
Barley, cts.	6,073	75
Oats, cts.	322,316	257,035
Corn, cts.	117,804	12,590
Wool, bales.	11,266	8,853
Brans, sks.	27,918	68,810
Hops, bales.	780	508
Hides, No.	31,616	39,948
Rye, cts.	5,289	5,289
Potatoes, sks.	144,834	82,365

Cereals.

From the New York *Producer Exchange Reporter* of May 21st, the following is obtained: The later crop advices from the Northwest prove quite unfavorable, and those from the Southwest are very disappointing. The continued heavy rains and disastrous floods have destroyed a vast area of under wheat, and in the North many farmers have been unable to get in their seed, and it is safe to estimate the shortage in the area under Spring wheat in Iowa, Dakota, Minnesota and Wisconsin on the 16th inst. at fully 16 per cent, but should the weather prove dry this week, a part of this deficiency will be made up. Much of the seed put into the ground during May has not come up, owing to the very cold and wet weather; much of the area seeded is under water, and with a temperature most of the time ranging between 20 and 35 degrees, the seed has not sprouted and in some localities it has rotted,

though this is a limited area. The slow growth of that seeded early is unfortunate, as with an early frost in August a portion of it would be cut off. The injury to the crop in Michigan and this State has cut short our supply of white wheat 8,000,000 bu., and we must look to the Pacific Coast to make good the loss here. The great deficiency in the last crop of winter wheat is now apparent to the most superficial observer; this is more noticeable west of Ohio and south of this parallel than elsewhere, and ere the close of June it will be still more noticeable. The breaking of the Sny levee on the Mississippi river has inundated a farming district that would have produced about 2,000,000 bushels of wheat but for this accident. The flood situations grew worse, and it is now almost certain that the Indian Grove district will be abandoned for years to come. People in the doomed region made a hurried, disorderly retreat for the bluffs, a pouring rain adding to the miseries of the homeless unfortunates. The entire region is completely covered with water. This district would have produced about 1,000,000 bu. of wheat and other crops of great value. It would be very difficult to estimate the great loss of crops by this appalling flood, so vast is the area covered. The visible supply is now reduced to about 29,800,000 bu., and outside of Minneapolis and Duluth there is less than 12,000,000 bu. of visible supply, and with a weekly consumption east of the Rocky mountains of 5,500,000 bu., this insignificant supply (12,000,000 bu.) will soon disappear, as most mills east and south of Lake Erie have no stocks of moment, beyond what they have purchased during the winter at Duluth, Detroit and Toledo, and the prospect now is, we shall hold a very insignificant visible supply on the 1st proximo; and ere new becomes plentiful it will be reduced to the smallest quantity held in many years, this largely due to shortage in the last crop of winter wheat.

The market the past week has ruled dull and inactive owing to buyers' selfishness and holders' firm attitude. The stock here and in interior warehouses is light. Nearly if not all the surplus held in the interior has been sent to tide water so as to take advantage of any upward movement based on short interests on Call. Millers continue to find much trouble in getting desirable grades except they pay quite an advance over current quotations. Receipts from Oregon are large, but still the market does not appear to be affected.

In barley the bears succeeded in hammering prices on Call down the past week, and in sympathy spot or cash parcels shaded off. The market did not break as low as was expected, still the decline in the main speculative option was quite marked, considering that the crop this year will be considerably less than that of 1887, the carryover will not be as large as was expected and the consumption is larger and steadily increasing.

Oats have ruled weak the past week, with buyers taking sparingly under the impression that a still lower range would obtain. Crop advices are without essential change.

White corn is lower. Yellow is steady. Crop prospects good. Eastern advices report a large increased acreage planted. The market at the East is strong.

Both rye and buckwheat met with sales this week. The prices obtained were lower than last quoted rates.

From an editorial in this week's *Herald of Trade* the following is obtained: "The acreage seeded to wheat on this coast the past season aggregated about five per cent more than in the season of 1886-87. Oregon and Washington were about 15 per cent less, while in this State it was about 10 per cent more. Taking our latest crop advices it is safe to state that the output of the coast will be 10 per cent less than in 1887, and may, with unfavorable weather, fall to fully 20 per cent below last year's output. The loss met by the drought this year is variously placed at from 40 to 50 per cent of the entire acreage seeded. Our returns do not warrant us in placing it at over 35 per cent, but in addition to this the quantity cut for hay is fully 10 per cent, making a total of not less than 45 per cent of the entire acreage seeded. With a full crop this State would have this year, all of 1,850,000 short tons; taking from this the loss through the lessened number of acres the quantity will be reduced to 1,040,000 short tons, provided the plant now standing gives the full average yield of a good season; but unfortunately our advices do not warrant such expectations, even if the State escapes the hot devastating north winds that are liable to come any day. Over 600 crop returns received the past week indicate that one-tenth of the plant now standing will go fully 20 per cent over an average; one-twentieth will go about 10 per cent above an average; one-quarter will be an average; one-twentieth will fall short 20 per cent and the remainder give about one-half of a crop. These returns state that had it not been for the cool, moist weather of the past three weeks the prospects would have been of the worst, but a change in the weather for the better brought about a decided improvement in the outlook and caused a corresponding increase in the general estimated outputs. Taking the 1,040,000 short tons as a basis for a full average yield of the acreage that will probably be harvested this season and adding the gain of 14,300 short tons over an average and then deducting the loss, 237,600 short tons, and the output, without further injury to the crop between now and harvest, will aggregate about 815,000 short tons, equivalent to 25,500,000 bushels. Deducting from this the food requirements of this State on the basis of 5 1/4 bushels per capita, and there will be left 85,000 short tons. From this must be deducted the average of the past two years' seed requirements, say about 5,000,000 bushels or about 165,000 tons, which will leave us an exportable surplus for the season of 1888-89, 425,000 short tons. If next season is favorable for plowing and outdoor work there will be an increase in the acreage seeded, which, of course, will cut into the exportable surplus.

The barley output in this State will be considerably short of last year, while the quantity of bright will be very much less in proportion than in 1887, owing to the foggy weather. The lessened acreage is due chiefly to the lowlands that were seeded last year to barley, owing to the late rains, having been seeded

to wheat this year, and these lowlands gave the largest yield to the acre. The acreage seeded the past season was about 15 per cent less than in 1886-87, while the acreage that was destroyed by unfavorable weather was much more in this year than last. Not only was there a lessened acreage and a larger number of fields of barley killed out by the dry weather, but there has been a large increase in the number of acres cut for hay. Of this it is very hard to obtain a correct estimate, but crop returns indicate that nearly 10 per cent of the entire acreage seeded was cut for hay against not quite five per cent last year. The crop of barley in Eastern Washington Territory and Eastern Oregon will be less than last year, but the quality will be better, owing to the late heavy rains damaging the grain in 1887."

Feedstuff.

The inquiry for bran and middlings is larger, due to a scarcity of pasture and the necessity of feeding more. Receipts are large which keep prices down. Ground barley is steadier at quotations. Feedmeal is firm.

New hay is coming in free, which is taken advantage of by buyers to bid down. Prices for both old and new are weak and lower. The consumption is growing.

Vegetables.

Garden is truck coming in quite freely, the weather being all that can be desired for the growing crops. Green corn is generally poor. Tomatoes come in sparingly. Peas and beans are in liberal receipts. Asparagus and rhubarb are in light supply, with a very wide range in prices for the farmer. Summer squash is in good supply and weak at quotations.

Potatoes are lower under free receipts, no increased demand. Poor are to work off, but large, well-matured are placed quite readily, although a slight shading in values is at times necessary to effect quick sales.

The receipts of onions are free, and as the demand is only fair, prices favor buyers.

In cabbage, cauliflowers, etc., there are no changes to report.

Fruits.

The buying of the J. Lusk Co. canning outfit by a San Francisco syndicate insures the running of the establishment and the taking of large supplies of raw fruit that would have to be disposed of otherwise. As the cannery will be controlled by San Francisco canners, competitive buying will, to a certain extent, be stopped, and it is only through competitive buying that good prices are realized by farmers.

For apricots, the writer is informed that 2½ to 3¢, f. o. b. on cars, is still paid by canners. There are very few canning varieties but are under contract.

For fruits, outside of cherries, it is difficult to hear of prices. Any subscriber or friend of this paper will confer a favor by writing to me prices paid for pears, plums, prunes, apples, peaches, etc., and address J. R. Farish, P. O. Box 2325, San Francisco, Cal.

Canners are paying from 3 to 6¢ for cherries, with occasional purchases of choice Royal Ann at 6½¢ and even 7¢. About all the canners are now running on cherries.

For currants canners pay from \$2.25 to \$2.75 per chest. The fruit as yet is not any too ripe for use. For gooseberries, from 1½ to 2¢ is the range paid. Blackberries were received the past week and sold at 25¢ per lb. The crop promises to be large.

In dried fruits there is no stock here to admit of business, consequently all prices are more or less nominal. The new crop will come on a bare and hungry market.

In raisins there is nothing doing, for the simple reason there is no stock here to do with.

Live-Stock.

The market is weak at lower prices for bullocks, and easier for mutton sheep. The consumption is not so large owing to more fruits and vegetables being consumed, while the growing scarcity of feed causes farmers to be more anxious to sell. In milk cows there is nothing doing, and to sell, low prices would have to be submitted to. In horses there is a good demand for single footers, bridge, driving and general utility horses, while for matched teams there are always ready buyers. Prices paid do not show any change. The demand is said to be slow.

Hogs have a steadier and firmer tone at 6½¢ for grain fed. Dairy fed fetch 6¼¢ to 6½¢. The offerings are only fair, barely enough for the block.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain fed and one-half from the price of grass fed, that is, animals running at large.)

HOGS.—On foot, grain fed, 6½¢ per lb.; dressed, 9¢@9½¢ per lb.; soft, 5½¢@6¢ per lb.; dressed, 8½¢@9½¢ per lb. Stock hogs, 4¢@5½¢ per lb.

BEEF.—Stall fed, 7½¢ per lb.; grass fed, extra, 7¢ per lb.; first quality, 7¢ per lb.; second quality 6¢@7¢ per lb.; third quality, 5¢@6¢ per lb.

LAMB.—Choice 8¢@9¢ per lb.; fair to good, 7¢@8¢.

MUTTON.—Wethers, 5½¢@6½¢ per lb.; ewes, 5¢@5½¢ per lb.; lamb, spring, 7¢@8¢ per lb.

Miscellaneous.

In poultry the market is kept easy and in buyers' favor by continued heavy receipts from points on the Missouri river.

Heavy shipments of wines are being made to the East. They aggregate larger than ever before at this season of the year. Some shipments of this season's canned cherries, strawberries and gooseberries are being made to the East. These will be followed by heavy shipments later on, or when canning becomes more general.

Hops are without change. The cool weather is against them. For futures it is said that 12½¢ has been paid for choice.

Wool continues slow. Receipts are being warehoused and held for higher prices, which are looked for before long. The wool manufacture buying combination continue to bid down, and when forced to pay good prices, which they are compelled to do, do so under the seal of secrecy. The wool market at Antwerp and also at London are not only higher, but advancing, while in this country the manufacture combination keeps prices down with the tariff bugbear or other equally as flimsy excuses.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way	443,591	244,777
In port, disengaged	45,395	113,708
In port, engaged	12,769	20,593

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 30, 1888.

BEANS AND PEAS.		ONIONS.	
Bayo, ctl.	2 10 @ 2 25	New...	35 @ 50
Butter...	— @ —	NUTS JOHNNING.	
Pean...	3 40 @ 3 65	Walrus, Cal lb	8 @ —
Red...	2 20 @ 2 50	do Chile...	8 @ —
Pink...	2 20 @ 2 50	Almonds, hd shl.	5 @ 7
Large White...	3 40 @ 3 65	Soft shell...	12 @ 13
Small White...	3 40 @ 3 70	Paper shell...	15 @ —
Lima...	3 25 @ 3 65	Brazil...	11 @ 12
Fid Peas, bk eye	2 00 @ 2 10	Pecans...	10 @ 16
do green...	2 00 @ —	Peanuts...	4 @ 6
do Niles...	2 10 @ —	Filberts...	10 @ 12
BROOM CORN.		Hickory...	5 @ 6
South'n B ton...	60 @ 80 00	POTATOES.	
Northe'n...	60 @ 80 00	Early Rose...	35 @ 1 15
CHICORY.		do...	75 @ 29
California...	6 @ 7	do...	40 @ 75
German...	7 @ 8	POULTRY AND GAME.	
DAIRY PRODUCE, ETC.		Hens, doz...	5 50 @ 7 50
BUTTER.		Roosters...	5 50 @ 13 0
Cal fresh roll, lb	22 @ 25	Broilers...	3 00 @ 9 00
do Fancy brands	20 @ 22	Ducks, tame...	4 00 @ 7 50
Eastern...	20 @ —	Geese, pair...	1 25 @ 1 50
CHEESE.		do Goslings...	1 75 @ —
California, lb...	9 @ 12	Turkeys, lb...	14 @ 18
Eastern style...	10 @ 13	Rabbits, doz...	1 25 @ 1 50
EGGS.		Hare...	1 00 @ 1 75
Cal ranch, doz	23 @ 24	PROVISIONS.	
do store...	19 @ 22	Cal Bacon...	11 @ 12 1/2
Eastern...	15 @ 17	Heavy, lb...	11 @ —
FEED.		Medium...	12 @ —
Barley, ton...	16 00 @ 17 00	Light...	13 @ —
Feedmeal...	30 00 @ 31 00	Extra Light...	12 @ 11
Gr'd Barley...	19 00 @ 20 00	Lard...	11 @ 12 1/2
Hay...	10 00 @ 15 00	Cal Suck'd Beef	11 @ 12 1/2
Middlings...	19 00 @ 20 00	Hams, Cal...	12 @ 14
Oil Cake Meal...	32 50 @ —	do Eastern...	14 @ 15
do new process...	50 @ —	SEEDS.	
Straw, bale...	40 @ 50	Alfalfa...	8 1/2 @ 9
FLOUR.		Canary...	3 1/2 @ —
Extra, City Mills	4 00 @ 4 35	Clover, Red...	11 @ 12
do Co try Mills	3 75 @ 4 00	White...	20 @ 22
Superfine...	3 25 @ 3 50	Cotton...	20 @ —
GRAIN, ETC.		Flaxseed...	2 @ 3
Barley, feed, ctl.	75 @ 87 1/2	Hemp...	4 @ 4 1/2
do Brewing...	92 @ 1 05	Italian Ryegrass	10 @ 11
Chevalier...	1 10 @ 1 20	Perennial...	7 @ 9
do Coast...	90 @ 1 05	Millet, German...	5 @ 6
Buckwheat...	1 50 @ 1 70	do Common...	5 @ 6
Corn, White...	1 50 @ 1 65	Mustard, white...	12 @ 21
Yellow...	1 32 @ 1 37 1/2	do Brown...	2 @ 3
Oats, milling...	1 40 @ 1 65	Rape...	14 @ 2
Choice feed...	1 35 @ 1 42 1/2	Ky. Blue Grass...	15 @ 17
do good...	1 30 @ 1 37 1/2	2 1/2 quality...	13 @ 15
do fair...	1 30 @ 1 37 1/2	Sweet V. Grass...	7 @ —
do Gray...	1 30 @ 1 37 1/2	Orchard...	17 @ 18
Rye...	1 75 @ —	Red Top...	9 @ 10
Wheat, milling...	1 45 @ —	Huogarian...	8 @ —
Gilt edged...	1 40 @ —	Law...	30 @ 40
do Choice...	1 37 @ —	Mesquit...	8 @ 9
do fair to good	1 37 @ —	Timothy...	7 @ —
Shipping, choice	1 37 @ —	TALLOW.	
do good...	1 37 @ —	Crude, lb...	2 @ 4
do fair...	1 30 @ —	Refined...	6 @ —
HIDES.		WOOL, ETC.	
Dry...	11 1/2 @ 12	SPRING 1888.	
Wet salted...	5 1/2 @ 6 1/2	Humboldt and	18 @ 20
HONEY, ETC.		Mendocino...	15 @ 18
Beeswax, lb...	21 @ 25	Sac to valley...	15 @ 18
Honey in comb...	16 @ 17 1/2	Free Mountain...	18 @ 21
do fancy...	16 @ 17 1/2	S. Joaquin valley	10 @ 15
Extracted, light	6 1/2 @ 7 1/2	do m untain...	12 @ 15
do dark...	5 1/2 @ 6 1/2	Calav & Fthl...	15 @ 18
HOPS.		Oregon Eastern...	18 @ 20
Oregon...	6 @ 15	do valley...	18 @ 22
California...	6 @ 15		

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 30, 1888.

Apples, bx, com	30 @ 75	do unpi ted...	4 @ 7
do Ricots, bx...	90 @ 1 25	Pruces...	7 @ 10
do Royals...	1 25 @ 1 70	do French...	8 @ 11
Bananas, bunch	2 00 @ 4 00	RAISINS.	
Blackberries, lb	20 @ 25	Dehesa Chus, fcy	3 25 @ 3 50
Cherries, wh, bx	30 @ 1 00	Imperial Calif...	— @ —
do black, bx...	40 @ 75	et, fancy...	2 00 @ 2 25
do Royal Ann	75 @ 1 00	Crown London	— @ —
Cherry plums...	51 @ 75	Layers, fcy...	2 00 @ 2 25
Cranberries...	10 00 @ 12 00	do Loose Mus...	— @ —
Currents ch...	2 @ 4	catels, fancy	1 90 @ 2 10
Gooseberries lb	1 1/2 @ 3	do Loose Mus...	— @ —
Limes, Mex...	3 00 @ 4 50	catels...	1 60 @ 1 90
Lemons, Cal, bx	1 00 @ 2 50	Cal. Valencias...	1 60 @ 1 80
do Sic ly, box	4 00 @ 5 00	do Layers...	1 50 @ 1 60
Oranges, Com bx	75 @ 1 25	do Suitapas...	1 60 @ 1 75
do Choice...	1 75 @ 2 50	Dried sacks, lb...	5 @ 6
do Nave's...	— @ —	Outside brands of raisins	— @ —
choice...	3 50 @ 5 00	sell at from 25 cts to 50 cts a lb	— @ —
do to Com...	2 00 @ 3 00	Fractions come 25, 50 and 75	— @ —
Peaches, bx...	1 25 @ 2 00	cents higher for halves, quarters and eighths.	— @ —
Pineapples, doz	2 50 @ 4 50	VEGETABLES.	
Raspberries ch...	5 00 @ 12 00	Asparagus bx...	1 00 @ 3 00
Strawberries ch	2 00 @ 7 00	do extra choice	4 00 @ 5 00
DRIED FRUIT.		Okra, dry, lb...	15 @ 20
Apples, sliced, lb	6 @ 8	Pars' ips, ctl...	2 50 @ 3 25
do evaporated	10 @ 11	Peppers, dry, lb...	8 @ 10
do quartered...	11 1/2 @ 13	do green, lb...	10 @ 15
Apricots...	8 @ 11	Squash, Sum...	50 @ 75
do evaporated	15 @ 17	mer, bx...	3 @ 7
Blackberries...	12 1/2 @ 15	String beans, lb...	1 0 @ 1 25
Citron...	18 @ 25	Turnips, ctl...	1 0 @ 1 25
Dates...	3 @ 10	Beets, sk...	1 25 @ —
Figs, pressed...	5 @ 6	Cabbage, 100 lbs	1 00 @ —
Figs, loose...	3 @ 4	Carrots, sk...	30 @ 50
Nectarines...	8 @ 11	Green Corn, doz	10 @ 20
do evaporated	12 @ 15	Green Peas, sk...	75 @ 1 00
Peaches...	9 @ 10 1/2	Sweet Pea, sk...	1 00 @ 1 75
do evaporated	20 @ 25	Mushrooms, lb...	5 @ 25
Pears, sliced...	4 @ 7	do...	75 @ 1 25
do qrd...	4 @ 7	Cucumbers, doz	10 @ 15
do evaporated	11 @ 12 1/2		
Plums, evapo'd	11 @ 12 1/2		

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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
May 24-30.																																				
Thursday.....	.00	62	Nw	Cl	.00	54	N	Cy.	.T	66	S	Fr.	.02	64	SW	Fr.	.03	58	SE	Cy	.04	64	E	Cl	.00	59	SW	Fr.	.00	70	SW	Fr	.00	64	Nw	Fr.
Friday.....	.00	68	SE	Cl	.07	52	W	Ry.	.04	62	S	Cy.	.02	64	S	Cy.	.00	56	W	Cy.	.14	62	Nw	Fr.	.00	60	W	Fr.	.00	68	SW	Cl	.00	64	W	Cy
Saturday.....	.00	64	E	Fr	.24	54	N	Cy.	.08	62	SE	Cy	.00	64	SW	Cy.	.00	61	W	Fr.	.04	64	S	Fr.	.00	62	W	Cl	.00	68	SW	Fr	.T	64	W	Cy.
Sunday.....	.00	60	Nw	Cl	.00	56	N	Cy.	.00	74	NE	Cl	.00	70	N	Cl	.00	69	W	Cl	.00	72	W	Cl	.00	66	W	Cy.	.00	72	W	Cl	.00	64	W	Cl
Monday.....	.00	78	Nw	Cl	.00	54	Nw	Cy.	.00	82	S	Cl	.00	74	S	Cl	.00	61	W	Cl	.00	82	Nw	Cl	.00	66	W	Cy.	.00	78	W	Fr.	.00	64	Nw	Cl
Tuesday.....	.00	80	Nw	Cl	.00	54	S	Cy.	.00	82	S	Fr.	.00	78	SW	Cl	.00	58	W	Cy.	.00	86	SW	Cl	.00	64	W	Cy.	.00	78	SW	Fr.	.00	64	Nw	Fr.
Wednesday.....	.00	76	S	Fr.	.00	64	W	Cy.	.00	78	S	Fr.	.T	68	SW	Cy.	.09	63	SW	Cy	.00	86	SW	Cl	.00	—	—	—	.00	78	W	Cl	.00	66	W	Cl
Total.....	.00				.31				.12				.04				.12				.22				.00				.00				.T			

EXPLANATION.—T, for clear; Cy, cloudy; Fr, fair; Fy, foggy; — indicates too small to measure. Temperature, wind and weather at 12.30 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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IRRIGATION ELECTION ORDERED IN COLUSA.—The Supervisors of Colusa county have made an order defining and establishing the boundaries of a proposed irrigation district in Colusa and Yolo, to be called the "College Irrigation District," and publish notice of an election, to be held Monday, June 18th, for the purpose of determining whether or not the same shall be organized under the provisions of the Wright enactment.

WM. R. CLAYPOOL of Sacramento, a noted trainer of horses, died this week.

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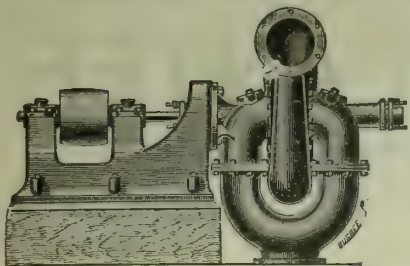
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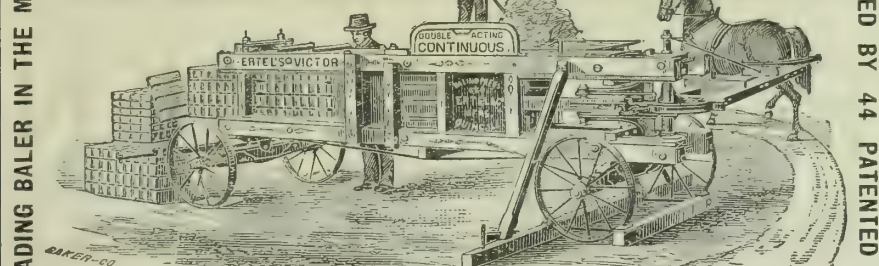
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Double-Acting Perpetual Hay and Straw Press.
A Machine imitated but not equalled. Baling Hay or Straw faster, more compact,
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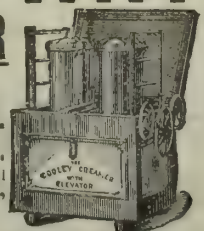
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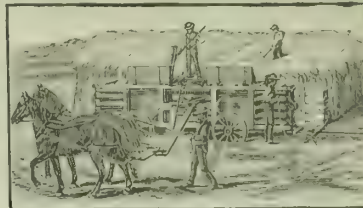
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HAY PRESSES!



THE HURRICANE—Size A.

A mounted, horizontal double-ender. Size of bale,
when in the press, 17x22-40 inches. Average weight of
bale, 220 pounds. Capacity, from 16 to 25 tons per day.
Uses 4 men and works with 2 horses. REQUIRES NO
TRAMPING. Puts 10 tons or over in a box car.

Price.....\$1000.

THE HURRICANE—Size B.

Size of bale in press, 22x24x46 inches. Average
weight of bales, 260 pounds. Capacity, from 20 to 35
tons per day. Uses 5 men and works with 1 or 2 horses,
at option of baler. REQUIRES NO TRAMPING. Uses rope
or wire. Puts from 7 to 8 tons in a box car.

Price.....\$1000.

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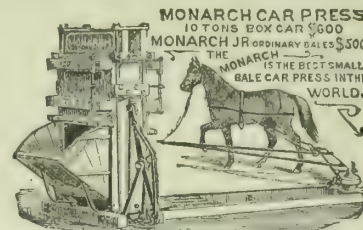
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THE MONARCH—25

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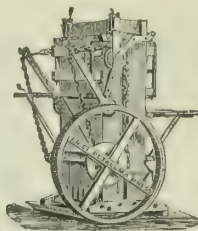
Size of bale in press, 22x24x46 inches. Average
weight of bales, 260 pounds. Capacity, from 15 to 25
tons per day. Uses 3 or 4 men, at option of baler.
Works with 1 or 2 horses. Uses rope or wire. Does its
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THE MONARCH.

Same principle as Junior Monarch, only smaller and
heavier. Size of bale, when in press, 17x20x40 inches.
Average weight of bale, 220 pounds. Capacity, from 12
to 20 tons per day. Requires 3 men and 2 horses. Uses
wire only—rope will not hold. Does its OWN TRAMP-
ING. Puts 10 tons or over in a box car.

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THE GENUINE PRICE PETALUMA.

Size of bale in press, 24x24x50 inches. Average
weight of bale, 250 pounds. Capacity, from 10 to 18
tons per day. Requires 4 men and 2 horses. Uses rope
or wire. Hay has to be tramped into the press. Puts
from 5 to 6 tons in a box car.

Price.....\$350.



THE IMPROVED EAGLE.

Size of bale in press, 26x26x50 inches. Average
weight of bale, 235 pounds. Capacity, from 10 to 15
tons per day. Requires 4 men and 2 horses. Uses rope
or wire. Hay must be tramped in the press. Puts from
4 1/2 to 5 1/2 tons in a box car.

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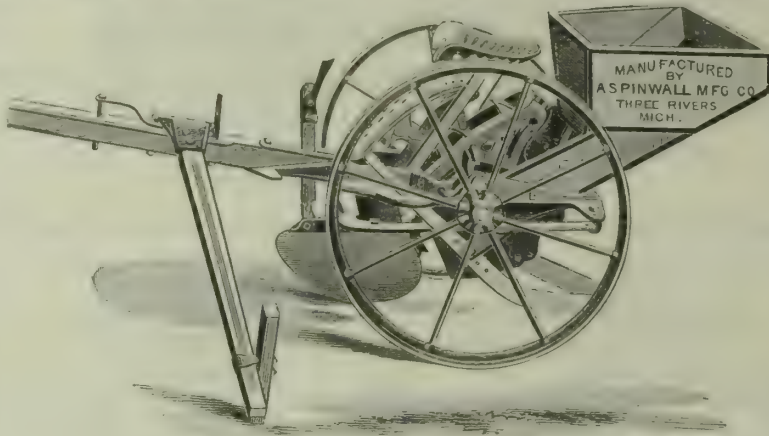
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THE ASPINWALL POTATO PLANTER.**SPECIAL ADVANTAGES:**

The planting can be done from 3 to 9 inches in depth and the covering is uniform.

From 5 to 8 acres per day can be planted and THE ENTIRE WORK of marking, furrowing, dropping and covering is done in a single operation.

Please note the fact that dry or top earth is not drawn over the seed by the covers of our Planter, but, on the contrary, the moist or UNDER



earth is drawn upon the seed, a feature that every experienced potato grower will appreciate, as nothing is more fatal than to cover cut seed in a dry time with dry earth.

The work is far superior to hand planting. The rows are straight, and, the furrows being V-shaped, the seed must necessarily be deposited in a perfect line; this enables CLOSE and EARLY cultivation.

THE COST of raising potatoes becomes greatly reduced by the use of our Planter, and to a potato grower who raises much of an area the machine will pay for itself in a single season.

The Planter is capable of being adjusted to plant either cut or whole seed 10, 13, 15, 17, 21 and 26 inches apart; also, different depths, and shallow or deep covering can be practiced, as desired.

The distance of planting is exactly the same in each row.

The Planter is well made and very durable, and with proper care will last many years.

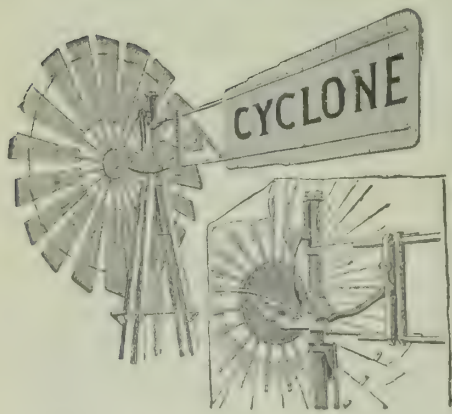
There is no great strain on any of its parts, being entirely free from any cog gear and fast motion. The speed of the mechanism of the Planter is no faster than the movement of the ground wheel.

We give an absolute guarantee that our Planter will do all we claim for it.

No farming tool has ever done more accurate and rapid work, and we strongly question whether any implement (character of work and quantity being taken into consideration) has proven itself to be of such financial advantage to the farmer. We make strong claims for our Potato Planter, knowing that we can fulfill every one of

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The Amount of Work Done,

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Last year it was the BEST, and now that we have improved it, it is BETTER THAN BEST. Our New Catalogue is a daisy. Send for one. Keep your EYES OPEN and you will soon see our BANNERS. LOOK AT THEM.

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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XXXV.—No. 23.

SAN FRANCISCO, SATURDAY, JUNE 9, 1888.

\$3 a Year, in Advance.
SINGLE COPIES, 10 CTS.

Prepare to Dry.

Parties who have made haste to assure fruit-growers that the syndicate which purchased the wreck of the J. Lusk cannery proposed to continue the concern and to serve the growers a good turn by so doing must have mistaken their wish for the intention of the parties. It is quite likely that one of the parties in the combination may have had such a plan in mind, but the fact is now fully disclosed that with the majority the object was for speculation and not for continuance, and that their intention was the dismemberment of the concern. So far as the growers are concerned, it would have been vastly better if the syndicate had been beaten and the successors of the old company who would have continued the factory had secured possession of the property. It does not argue well for the future of the growing interest to have so large a concern thrown down, and, though it may be legitimate enough, it is hardly public spirited to speculate so as to bring about such results. It looks now as though such of the fruit contracts as one or more of the city canneries can make money on will be purchased of the assignees, and the other contracts will go among the liabilities of the bankrupt concern, or rather that the growers will have to resell their fruit as best they can.

This season's experience serves to reinforce a position which has long been taken by our most progressive growers and which we have frequently approved, to wit, that the only safeguard which the grower can throw about his product is to prepare to manufacture it himself whenever buyers will not pay what it is fairly worth. Every fruit-grower should have an evaporator or full appliances for sun-drying if his local climate favors this method, and just as soon as the market rate falls too low stop the sale at once. It may be that fire will never be lighted in the evaporator or the trays never see the sunlight, still his investment in such accessories will yield him larger interest than any other property on his place.

Another movement which should be general is the establishment of fruit-growers' companies in every fruit district like that started this season in Vacaville, or like others which have existed longer at Newcastle or elsewhere. Such companies are more powerful than individuals and wiser than individuals, and they are competent to enlist capital in canneries or drying establishments, or to plan undertakings to place the fruit in distant markets. Such combinations will place growers on equal footings with commercial canners, or driers, or packers,

and things will be apt to go forward on correct business principles between all interested, either in production or trade. The experience of some of the smaller canneries has been eminently satisfactory, and their numbers should be multiplied. When an old, capacious, and popular concern can be unceremoniously snuffed out as the J. Lusk Co. has been, it is about time for the growers to protect themselves in some way.

IRRIGATING WITH CURRENT WHEELS.—These devices for lifting water a moderate distance

CALIFORNIA AT COLUMBUS.—The National Encampment of the G. A. R. meets at Columbus, Ohio, the second week of September. A joint committee of the Department of California, G. A. R., and the State Board of Trade has mailed to every Board of Trade, Improvement and Development Association, Board of Supervisors, Grange and Grand Army Post in the State, a circular asking the co-operation of the people in collecting, arranging and placing on exhibition at Columbus, a display of the products of California that will be an instructive

Scene in the Peach Orchard.

We give herewith a scene in the peach orchard of A. T. Hatch of Suisun, which well illustrates the general form of a well-trained low-headed peach tree, which is found best adapted to California conditions. Though it is possible to find in plantations made 25 years ago or more trees with long bare stems, their numbers are generally few, because the most of their early companions have fallen a prey to sun burn. Low heading was advocated in the earliest days

of California fruit-growing, and practiced to a certain extent, but it took a good many years of experience to make the practice prevalent as it is at present.

This little glimpse at Mr. Hatch's trees, though it covers but an exceedingly small fraction of the 800 acres which he now has planted with fruit trees on his home place, gives a little clue to his practice. Aside from the shapeliness of the trees, the observer will notice the generous distance between them, which is another lesson from years of experience. The older plantations are generally crowded, the trees from their proximity of 12 or 16 feet have interlaced their branches and crowded each other almost to suffocation. The later experience, pointing to 24 or 26 feet as near enough, gives us better trees and trees which will yield more from the same ground than the thickly set will produce. Another lesson to learn from the little sketch is the beauty of clean culture. Over Mr. Hatch's 800 acres it is almost impossible to find a weed or even a clod. He has a most delightful soil to work on most of his orchard, and



SCENE IN THE PEACH ORCHARD OF A. T. HATCH, SUISUN VALLEY.

from running streams seem to be giving satisfactory results in Utah and very large wheels are used. A correspondent of the Salt Lake Tribune describes wheels in use on Green river by the Farrers who are pioneer farmers. They put in some current-wheels about four or six years ago, and these proved successful. They now have five at work. The last one just started is 20 feet in diameter. It is built like a steamboat paddle wheel, so arranged as to be moved by the current striking the paddles. On the wheel are 20 buckets, each holding 16 gallons of water. These are filled when down and emptied when up. As the wheel makes three revolutions per minute, it is over 800 gallons discharged per minute, enough, it is claimed, to irrigate 100 acres of land. This wheel cost \$650 to build to make the short race by throwing out a wing dam into the river, and to put in a little fluming to reach the ditch. C. J. Millis, another farmer, has three wheels in operation.

object-lesson to their Eastern Comrades and the thousands of visitors attending the Encampment. Articles should be forwarded seasonably, care of the California State Board of Trade, 16 and 18 Second St., S. F., where transportation charges will be attended to without expense to the contributor.

WEED CUTTER FOR VINEYARDS.—Vine-growers in the Livermore valley, the *Herald* says, are introducing a weed-cutter which saves a great deal of labor, and does very effectual work. The cutter is a steel knife which passes along between the rows two or three inches below the surface of the ground and cuts out the weeds. This knife is usually bolted to a piece of scantling, on a bevel of 45 degrees. It may then be attached to the rear of a cultivator or clodmasher, or set in a light frame-work. It is a cheap and valuable tool, and some of the growers buy a piece of steel and make it themselves.

he shows his appreciation of its excellence by working it almost continuously. The result is the smooth surface which the photograph exhibits. The actual value of such cultivation has recently been emphasized in the letters from Gen. N. P. Chipman and others which we have published in the *RURAL*.

The fall of the shadows shows that the picture is taken about noontime. Any one who has been in our California orchards can appreciate the suggestions which the picture makes of the quiet air and full heat which minister to the fruit-ripening process.

ARSENIC FOR GOPHERS.—Joseph Wright informs the Livermore *Herald* how he has succeeded in killing off gophers. He merely cuts up a lot of small potatoes, rubs on a little arsenic and throws the pieces in the runs. He lost a great many vines before trying this plan, but since, there are no gophers and his vines are safe.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Observations in Italy.

EDITORS PRESS:—A letter of introduction to the professor of horticulture at Caserta (a town near Naples) was handed me by a friend of Cavalier Mertiera of Naples. Upon arrival at that place, I drove out to the experimental grounds and horticultural school and handed my letter to the professor. I was received very cordially and the professor showed me through the grounds.

Observing that a row of peach trees were trained to grow flat against the walled inclosure of the grounds, I asked him the following question: Will peaches grow here in Tuscany without training against a wall?

Yes, they will grow all right enough, but they will not ripen; or, worse yet, the early spring frosts to which we are subject may destroy them. We want as much sun and protection as we can obtain, hence we train our peach trees against the walls, as you see, and provide the mat covers you see above (pointing to them), to cover them in times of necessity. No, peaches cannot be grown here in Tuscany profitably, but they can in Southern Italy.

What injurious insects infest the peach trees here?

Two species of aphids.

What remedy do you use?

Tobacco water with spray pump; also soap and water with petroleum.

Have you any codlin moths?

Yes, plenty. We stir the ground often and destroy infected fruit. We have no absolute remedy.

We graft our dwarf pears on the *Cydonia vulgaris* and Standards on the *Cyrus Communis* because we have found them to be thrifty growers.

I have observed that they grow dwarf pears on the following plan: A wire is stretched about 12 to 15 inches from the ground in a horizontal line. The trees are about eight feet apart, and the trunk, when about 10 inches from the ground, is bent in a most direct right angle and tied to the wire.

In answer to questions I was told that the bending was done for the purpose of withholding a too rapid flow of sap (which would tend to produce wood); by withholding the rapid flow of sap the growth of the tree is diminished, but the production of fruit is largely increased. This was certainly correct, for the trees that I saw treated in that way had their branches literally covered with young pears. Might it not be a good idea to try this plan in California?

The advantages in addition to large yield that may be mentioned are these: The ground is economized; pruning and harvesting can be done much cheaper.

In going to the vineyard I observed that he had some varieties of grapes trained high, and others of the same variety were grown low; this led me to inquire which gives the greater result, high or low pruning? I was told that it depends on the variety. Generally speaking, high pruning gives the greater number of bunches with the same number of eyes. I was told that high pruning is least subject to early spring frosts.

During my stay here I have tried to find out the mode of preserving the winter pears which may still be seen on the tables of the hotels and in the market. At the market in Venice I found just what I wanted.

Baskets of apples and pears were exposed for sale, and I saw that each layer and between each apple or pear there was a layer of thin strips of paper. These slips were about as heavy as our fruit-wrapping paper, and it appeared to me that this mode of packing possesses the following advantages over our mode:

1st. It can be done much quicker and requires less expertness in the packer. It is cheaper, and it protects the fruit much better, as it prevents contact.

Mr. J. A. Woodson of the Sacramento Record Union suggested to me that paper pellets or small pieces would be preferable to wrapping, but after seeing the paper strips I think them preferable, and if I reach home in time for harvesting I will be inclined to give this mode a trial.

I should like to see some one try it this season. To-morrow I leave for Vienna, and expect to inform you what observations I may make in Austria.

Udina, Italy, May 5th.

DAVID LUBIN.

Farmers' Institutes.

EDITORS PRESS:—Since agriculture gives employment to so many persons, and all other industries depend upon agriculture, is it not a good plan to aid those, who are thus engaged, in every possible way? And as a means of aiding, what can be better than institutes? We know that the thorough, live educators believe in them, and the result of educational institutes have been highly beneficial and have become a fixture in this country. As a class, farmers do not have vacations. Their work requires constant care and attention, and undoubtedly institutes for their benefit would prove valuable to them in more ways than one, and if valuable to them, then of necessity of value to all classes.

In a number of the Northwestern States, notably Wisconsin, Iowa, Minnesota, Illinois and Ohio, farmers' institutes are held every winter, and so popular have they become, that there is a general cry for more. Wisconsin annually appropriates \$5000 to pay the expenses of these meetings; has a superintendent who arranges the time and place and provides speakers for them. The plan is somewhat like this: During the summer months the superintendent ascertains what counties in the State would like to have institutes, and then plans accordingly. For instance, a county in which dairy farming is general has an institute in which matters pertaining to the feeding, care of cows, the handling of milk, making butter and cheese, are discussed, the meeting lasting two or three days; then a county where beef cattle is the product is treated in the same way; the tobacco section is not overlooked, and, in fact, every interest has its opportunity, and I have never known of any to fail to embrace it. I have for several years attended and taken part in these institutes, and have watched the increasing interest year after year, and know that the farmers appreciate the efforts put forth to aid them, and willingly do they pay their share of the tax required to carry them on. In arranging for institutes, each county furnishes a hall in which to hold the meetings; furnishes from its citizens a number who will speak on the branch of agriculture they are engaged in, while the superintendent provides other speakers. It was my fortune to frequently speak on dairy farming, and I have seen the result of these meetings to be better cows, a larger yield of milk and butter and better homes for the farmer, and all because "the know how" was learned at these institutes.

In California, with the thousands of newcomers who are strangers to the soil and climate, these institutes would prove of incalculable benefit, and could be arranged for by the counties which might desire them, without any State aid. The State University might take charge of them and aid in the matter. None of us are too old to learn, and an institute conducted by practical dairymen, cattle and sheep-growers and orchardists would prove to be a good and profitable school for all who are engaged in agricultural pursuits. Let it be tried and it will grow in popularity.

San Jose, May 28th. R. P. MCGILVER.

POULTRY YARD.

Suggestions for the Season.

Make no compromise with lice or filth. Alfalfa is the best dry weather plant for supplying green food.

Market the culls as soon as they are old enough to show defects that make them unfit for breeding stock.

Bring the broilers forward as rapidly as possible. The profit lies in producing a plump broiler in a short space of time.

The experience of practical breeders as set forth in their letters which we publish monthly, are reliable points to guide the beginner. Theories are generally quite unreliable, and often cause disappointment.

An insect powder made by stirring a quarter ounce of carbolic acid in one pound of sulphur is as effective as any in the market, and very much cheaper.

By sifting ordinary wood ashes when taken from the stove, a good lot of charcoal and burnt bone can be obtained, which is relished by the fowls and is of much benefit to them.

Broody hens should be well fed and have the best attention in a quiet yard or coop, if it is desired to relieve them of their broodiness and get them to laying again, for the reason that egg production is very exhaustive to the system.

Setting hens that come off with their brood in good condition, often go to laying again before the chicks are old enough to care for themselves, if generally fed on nutritious and egg-producing food. This may be avoided by confining the hen in a coops and feeding the chicks outside. June is one of the most important months of the year in the management of the poultry-yard. The first of June is a set bayon which it is next to useless to set eggs for hatching under ordinary conditions, as the chicks hatched will be weakly and hardly worth the trouble of raising.

A general cleanup of yards, nests, roasts, etc., should now be instituted. The nest-boxes should be cleaned out and oiled, or sprinkled with a solution of carbolic acid to destroy all lice; and any hens found lingering about the nests at night should be relieved of their broodiness, that they may yet lay a number of eggs before moulting.

Plenty of shade, a supply of green food, a good dust bath, and a constant supply of pure water are essentials during the hot months. Move the water fountains to the coolest part of the yard, and regularly clean and fill each day.

Special attention should be given the chicks, particularly the later hatched ones. If raised with hens, the first appearance of lice should be followed with a dusting of both hen and chicks with some good insect powder. A grassy run or a green range under trees contributes much to the health and growth of chicks.

This is a good time of the year to dispose of all stock not wanted either for breeding or egg production next season, as they will soon begin to moult and become unsaleable; besides many

fowls succumb to the drain on the system caused by the change of plumage.

As the breeding season is now over, it is a good plan to separate the sexes, if convenient to do so during the warm months, as the change is likely to prove beneficial. The eggs laid will of course be infertile, but will keep better, and may be sold anywhere in the market without fear of some enterprising neighbor getting a start of your stock at market prices.—*The California Cuckler.*

THE APIARY.

The California Honey Product and Trade.

As the honey season of 1887 is virtually at an end, and the season of 1888 is just opening, several consignments of new honey having been already received, the statistics of last crop can now be given with as much accuracy as at any subsequent date. To afford comparison, we append receipts of California honey at San Francisco, and shipments from this State by land and sea for a series of years. The number of cases received in San Francisco for past seven years were by months as follows:

	1881.	1882.	1883.	1884.	1885.	1886.	1887.
Jan.	1,758	1,774	665	88	5,095	1,421	751
Feb.	980	95	394	167	1,694	1,120	395
Mar.	334	420	34	144	2,375	1,032	1,285
Apr.	771	654	290	250	1,195	145	467
May	121	215	287	254	889	714	1,763
June	292	669	631	690	892	4,517	1,284
July	692	1,033	948	2,047	925	228	819
Aug.	835	2,003	2,101	4,069	1,185	2,252	1,065
Sept.	1,428	3,392	5,177	6,877	1,400	3,488	1,000
Oct.	1,681	2,700	2,446	10,708	2,518	5,203	893
Nov.	998	1,008	1,253	5,140	2,298	2,938	1,045
Dec.	901	1,183	1,679	4,381	2,957	2,206	1,501

10,658 14,489 16,804 34,263 33,372 25,315 13,200

The above shows arrivals for the past year to have been little over half the quantity received in 1886 and less than in any previous year since 1881, being 600 cases less than were received in the light arrivals of 1883. Receipts from January 1, 1888, to date, aggregate 1150 cases, including about 400 cases of this year's crop. Arrivals since June 1, 1887, aggregate 9500 cases, and there is presumably very little or no old honey now remaining in the interior. Receipts for the previous season, from June to June, were 21,260 cases; for season of 1885-86, 16,000 cases; season 1884-85, 44,000 cases; showing a wide difference for the past four seasons, but the quantities are in keeping with the amount produced.

Exports for the past seven years have been as follows:

By sea from San Francisco.		By rail from S. F. and interior.	
	Cases	Lbs.	Lbs.
1881.....	8,849	62,700	378,370
1882.....	3,612	.....	527,680
1883.....	6,963	.....	269,400
1884.....	13,094	157,320	2,352,000
1885.....	12,151	32,550	1,313,260
1886.....	7,214	1,800	2,676,910
1887.....	2,922	.....	1,155,720

Of last year's shipments eastward by rail, 547,910 pounds were sent from San Francisco and 607,810 pounds from interior. For the previous year shipments by rail were 1,217,530 pounds from this city, and 1,459,380 pounds from interior. Exports for 1888 to date by sea: Three hundred and forty cases from San Francisco; by rail, 8550 pounds from San Francisco, and 21,570 pounds from interior, none having gone outward by rail, according to official reports, since January last. Allowing about one third of the receipts here to have been comb honey, we have the following showing in pounds for the past crop, calculating from June 1, 1887:

	Lbs.
Extracted 6400 cases.....	768,000
Combed 2100 cases.....	1,050,000
Shipped by rail from interior.....	422,450
Total.....	1,376,450

Aggregating only 688 tons, while for previous season the receipts added to shipments from interior footed up 1800 tons. The entire product of this State last season, it is estimated, did not exceed much if any more than 700 tons, considerable honey being carried over from a previous season. As closely as can be estimated, the entire yield of previous years was 2500 tons in 1886, 700 tons in 1885, and 4500 tons in 1884, the largest quantity ever produced. Of the shipments by sea the past year, 1000 cases went to France, 725 to England, 500 to Germany, but this honey was all forwarded out of the crop of 1886. Less than 700 cases have been shipped by water since last June, Australia taking a larger portion of the minor shipments than any other country, the balance going mainly to China, Hawaiian Islands and British Columbia. There has been no demand for Europe the past season, and no inducement to forward there, some of the 1886 crop being still on the market in European centers. The quality as well as the quantity of the 1887 yield was below the average, the percentage of extra white honey the past season having been unusually small. While the quality was below usual standard, prices ruled much higher than for previous crop, a large portion of which was high grade. In 1886 prices for extracted were mainly 4@5c, some of excellent quality changing hands at inside figure, and for fair to choice comb the range was 10@14c.

The past season extracted commanded from

first hands 5@8c, not much, however, selling over 7c, but this was largely on account of there being very little which was water white. Range of prices on comb for 1887 yield was 12 @18c for fair to fancy. Growers have been finding fault at the figures realized for last crop, but they have really reason to congratulate themselves on faring so well. Much of the 1887 honey passed from second hands at an actual loss, and some is now offering for less than was paid the producers. There is no likelihood of such prices being realized this season as prevailed for last crop. It is doubtful, in fact, if as good figures rule throughout the season as were current in 1886. There are no wholesale buyers who at this early date would name over 5½c for choicest extracted, and for amber extracted it would be difficult at present to secure 4c for large quantities. The 1888 crop promises to be large, at least as compared with last year, and it is believed the quality will be in the main good. Receipts of new thus far have been mainly from Santa Barbara county, where some superior honey is produced, but owing to the cultivation of mustard there, the blossom of which does not impart desirable color or the most palatable flavor, the quality is not in the main so fine as from the coast counties farther south. San Diego, Los Angeles, San Bernardino and Ventura counties are large producers, and where the white sage is found the choicest honey is obtained, no other blossom having been yet discovered which furnishes its superior for the business of the apiarist.—*Grocer and Country Merchant.*

THE IRRIGATOR.

The Wright Law Constitutional.

There is great satisfaction in districts contemplating irrigation enterprises over the following decision of the Supreme Court of California, affirming the constitutionality of the Wright Irrigation law passed by the last session of the Legislature. There are in this State 11 irrigation districts organized and millions of capital invested, all waiting for this decision, which establishes the constitutionality of the above mentioned Act. In Stanislaus county alone there are two irrigation districts and \$1,500,000 invested. The following is a full text of the decision:

Turlock Irrigation District against Williams. This is an application for a writ of mandate to compel the defendant as the secretary of an irrigation district (under the "Act to Provide for the Organization and Government of Irrigation Districts," approved March 7, 1887) to sign certain bonds which the applicant proposes to issue under Section 15 of that Act. The refusal of the defendant to sign those instruments is based upon the ground that the statute is unconstitutional and void. One of the distinguished counsel for the defendant contends that the districts contemplated by the Act are private corporations formed for a private purpose; to use his own language: "Such an organization has none of the elements of a public municipal body."

While another able attorney on the same side contends that "all the constituents of a public corporation are present, and to that class of corporations a district of the statute must be assigned," and claims that the money sought to be raised under the Act is a general tax, and that the system of organization of the corporations prescribed in the Act is in conflict with the general plan of constitutional political organization; and that the mode of taxation provided is different from that made necessary by the Constitution for general governmental purposes; and, therefore, the Act is void.

We are inclined to agree with the last-mentioned advocate of the defendant's cause, but to the extent only that the districts, when organized as provided in the Act under discussion, have all the elements of corporations formed to accomplish a public use and purpose, according to the rules of law laid down in *Hagar vs. Supervisors of Yolo county*. The results to be derived from a drainage law, and one which has for its purpose the irrigation of immense bodies of arid lands must necessarily be the same, as respects the public good. The one is intended to bring into cultivation and make productive a large acreage of land which would otherwise remain uncultivated and unproductive of any advantage to the State, being useless, incapable of yielding any revenue of importance toward the support of the general purposes of State Government by reason of too much water flowing over, or standing upon, or percolating through it. The other has for its main object the utilizing and improvement of vast tracts of arid and unfruitful soil, desert-like in character, much of which, if water in sufficient quantities could be conducted upon, and applied to it, may be made to produce the same results as flow from the drainage of large bodies of swamp and overflowed lands. Such a general scheme, by which immigration may be stimulated, the taxable property increased, the relative burdens of taxation upon the whole people decreased, and the comfort and advantage of many thriving communities subverted, would seem to redound to the common advantage of all the people of the State to a greater or less extent. It is true that incidentally private persons and private property may be benefited, but the

main plan of the Legislature, viz., the general welfare of the whole people, inseparably bound up with the interests of those living in sections which are dry and unproductive without irrigation, is plain to be seen pervading the whole of the Act in question. This is not a law passed to accomplish exclusive and selfish private gain; it is an extensive and far-reaching plan by which the general public may be vastly benefited. And the Legislature acted with good judgment in enacting it. If the use for which property is taken be to satisfy a great public want or public exigency, it is a public use within the meaning of the Constitution, and the State is not limited to any given mode of applying that property to satisfy the want or meet the exigency. For the most part the term "public purposes" is employed in the same sense in the law of taxation and in the law of eminent domain. So that a law which is for a public purpose, and which mainly concerns the public welfare, which lays an assessment upon property according to approximate equality of benefits is not unconstitutional because of that feature.

Perhaps to a greater extent than any of the other States, California, speaking through the Acts of her Legislature, her court of last resort and constitution, seems to have considered the irrigation of lands and the supplying of mines with water as of great public concern, and in no sense can it be said that under the Act in question the assessment to pay the bonds is to be levied or collected in order that one man may take another's property for his own exclusive use. Therefore it is evident that the districts in question, as organized under the Act, are not private corporations, organized exclusively for the purposes of private gain. They are at least quasi public corporations, in the sense that the purpose for which they are to be organized is for the general public benefit. Nor does it follow that this method of assessments and their collection adopted must be assimilated to and follow exactly the mode provided in the Constitution for the assessment and collection of taxes for general State purposes. The nature of the assessment is one of local improvements, which, however, eventuate in the advancement of the public good, and such assessments and collections can be lawfully made.

It is clear that those clauses of the Constitution which provide that taxation shall be equal and uniform, and which prescribe the mode of assessment and the persons by whom it shall be made, and that all property shall be taxed, have no application to assessments levied for local improvements. And as was said of the Drainage Act, so it may be said of the one in hand relative to irrigation, that a system which has for its object the reclaiming from the desert of vast bodies of land, "may justly be regarded as a public improvement of great magnitude and of the utmost importance to the community." It has been planned by the Legislature on the basis of "dividing the territory to be reclaimed into districts, and assessing the cost of the improvements on the lands to be benefited." In none of the States where such a course has been pursued has the power of the Legislature to cause such improvements to be made in this method ever been denied; nor do we see any tenable ground upon which it can be questioned.

The fact that the lands are situated in more than one county cannot affect the power of the State to delegate authority for the establishment of a reclamation district—or an irrigation district—to the Supervisors of the county containing the greater part of the lands. Such authority may be lodged in any board or tribunal which the legislature may designate. The expense of such works may be charged against parties specially benefitted, and be made a lien upon their property. All that is required in such cases is that the charges shall be apportioned in some just and reasonable mode, according to the benefit received. Absolute equality in imposing them may not be reached; only an approximation to it may be attainable. If no direct or invidious discrimination in favor of certain persons to the prejudice of others is made, it is not an objection to the mode pursued that to some extent inequalities may arise. It may possibly be that in some portions of the country there are overflowed lands of so large an extent, or arid lands requiring irrigation, that the expense of their reclamation should properly be borne by the State. But this is a matter purely of legislative discretion. Whenever a local improvement is authorized, it is for the Legislature to prescribe the way in which the means to meet its cost shall be raised, whether by general taxation or by laying the burden upon the district especially benefited by the expenditure.

The provisions of the Act relative to the condemnation of private property, land, water, etc., for the uses prescribed therein, are in harmony with the Constitution and State laws, and in strict consonance with the views of the Supreme Court in the case of *Lux vs. Haggin*, 69 Cal. There are many other points by the various counsel for the appellant, which are some of them at war with others, but time and space do not suffice to advert to them all in detail. It seems plain that none of the objections raised to the signing of the bonds by the respondent are tenable. The Act under discussion in all respects complies with the various provisions of the State Constitution. The demurrer to the answer is sustained, and the defendant commanded to sign the bonds by a preceptory writ of mandate.

The opinion was written by Commissioner Foote.

HORTICULTURE.

Fruit Tree Propagation.

EDITORS PRESS:—Please allow a new-comer in this State, but one who has studied orchard culture most thoroughly east of the Rockies, to criticise somewhat the letter of J. S. Tibbits in the PACIFIC RURAL PRESS of May 12th.

In the first place, "natural trees," or those grown from seed where they are to stand and fruit, are not all hardy and lasting; in fact the reverse is true in severe climates. If we should plant 1000 apple seeds in the northern prairie States and attempt to grow 1000 trees from them, we would find that only about one-third of them would prove hardy, i. e., could be grown to maturity in that severe climate, and of these not more than from none to five per cent would prove entirely hardy, and perhaps none of these that would withstand all the vicissitudes of that most trying climate would bear fruit of any value. Another one-third would prove half hardy. The other third would be killed by the first severe winter. Here in this most mild climate the results would be different; also in the fine apple climate of Michigan, where Mr. Tibbits had his experience. But we who had our trials on the prairies of Northern Illinois have learned different lessons.

It is true that a tree grown from seed in the climate where the seed grew is more liable to produce a tree suited to that climate, or an acclimated tree, than one grown from seed from another climate, for we can acclimate a species, never a variety. It is true that some seedling apple trees and other seedling fruit trees are hardy and long-lived, but they are the exception and not the general rule.

We must bear in mind that the old vigorous, healthy seedling fruit trees we see scattered all over the older States are simply the survivors of the hundreds of thousands so planted. Or, to put the case in a different way, if a man should grow 10,000 apple seedlings and plant them on the prairies of Illinois or Iowa, and care for them in the best manner, it is safe to say that in 10 years half to two-thirds of them would be dead, and in 20 years he would not have living more than from 100 to 500 trees, and perhaps not more than from 1 to 10 of these would give fruit good enough to save or propagate from; yet trees grown from the seed of these survivors would be more likely to produce trees suited to the climate, and thus by continued sowings of the seeds from trees withstanding the climate best could we eventually acclimate a species, and in no other way, and by exactly such modes will California acclimate the orange and other semi tropical fruits and plants. This is a great and vital subject. I have not time to go over it fully, but the fundamental principles are correct as I have given them.

Root Grafting.

Again, there is no disagreement among fruit-tree propagators who have made the art a life-long practical study as to which is the best general plan to propagate the apple tree and most other fruit trees for orchard planting. Such men all agree that the plan well known as root grafting is, all things and points considered, the best generally. There is no disagreement on this point among disinterested practical horticulturists. Why? Simply because by that mode of propagation each and every tree eventually becomes supplied with its own natural roots; and, second, by this plan of propagation the best possible amount of old material is used. If a tree's own natural roots are the best for it, then is not root grafting the best. Varieties of grapes, currants, gooseberries, etc., have been grown from cuttings of the wood for hundreds and thousands of generations without change or deterioration; they have remained the same for ages. The root graft is very similar in its nature; or, in other words, the starting of a fruit tree by root grafting, when we use a fresh young shoot of the variety we wish to grow, and ingraft it onto a very short piece of a fresh young root, we have what Dr. Warder aptly called it, "simply a cutting helped," and in due time, if the graft grows, a perfect young tree on its own roots. [This point is open to controversy. Some growers protest against root-pieces.—EDS. PRESS.]

It is true that in some cases we find it advantageous to have a fruit tree on roots other than its own, as, for instance, the pear on the quince. [There is no advantage in California for this stock.—EDS. PRESS.] The plum or prune on the peach, the apple on the Paradise and Damsin stocks, etc. In all these cases we have the trees "worked" on different species of the same family, and to accomplish it properly we resort to budding; that is, we insert a bud from the variety we wish to propagate into a seedling a few inches above ground. A budded tree planted so deeply that the point where the bud was inserted would be a few inches beneath the surface of the soil would eventually be on its own roots. [But we do not plant this way in California nor would such high-starting roots live in our dry surface soil.—EDS. PRESS.]

We now come to a point over which there has been considerable trouble to the city-grown editors of horticultural journals. To grow an apple or pear tree by budding in the Eastern States, the very best one or two year seedlings are planted in the best soil, cultivated thoroughly, budded in the following summer and

fall; the next season the bud throws up a clean, straight shoot four to seven feet high. The next spring the shoot is cut back to four to five feet in length, and then by the second fall it is a most beautiful tree to look at—just such a tree as an inexperienced buyer will fancy; a clean, nice tree, with a fine head, and five to seven feet high. It is neat, light and straight, and will pack for shipment nicely. It is so pretty that the average farmer cannot resist the temptation, and buys it. It is really a good tree as budded trees go, except that it is coarse-grained and succulent, therefore tender, and would be a good tree to plant (except that it is headed too high for some of us) if the tree had been allowed to ripen up thoroughly in the nursery before it was dug out. But as a very general rule where nursery stock is handled in the fall, the young trees are stripped of their foliage long before the office of the leaves are complete, and the young tree goes into the planter's hands a very weak thing indeed.

Good apple trees can be produced by budding, but after planting hundreds and thousands of trees grown by both methods, I would greatly prefer those grown by root grafting. It is true that as some varieties do not form good looking roots of their own, when root grafted, some propagators have said such should be budded; but as the foliage eventually dominates the roots, such advantage would be only temporary. This last fact, which is a fact, simplifies the whole question. The roots of a tree seem to be, they are, neutral in regard to the growth of the tree. They have no formative or controlling power whatever except to furnish the tree with the crude substances of nutrition. The foliage controls all formative action, or, perhaps, to speak more concisely, they furnish the cells with neutral elaborated sap, and they by fission or self dividing make all new growths. D. B. WIER.

San Francisco.

[We publish this statement of conclusions drawn from Eastern experience partly to enable our readers to see how at variance the results are from those drawn from California experience. There are probably many points advanced which some of our readers may discuss with advantage.—EDS. PRESS.]

SERICULTURE.

Silkworms at Fresno.

Six weeks ago, says the *Fresno Expositor*, Mrs. George W. Fuller received from Mrs. Louise Reizni, secretary of the State Board of Sericulture, 4½ ounces of silkworm eggs, instructing Mrs. Fuller to take especial care, and keep the correct amounts of food consumed, the dates of the different hatches and moulting seasons. This she has done, and now furnishes us with the following facts:

From 4½ ounces of eggs there hatched between 150,000 and 200,000 worms; and as soon as they emerged from their tiny shell they had to be fed with the leaf of the mulberry tree. Mr. Fuller had a large quantity of the best Italian mulberry trees surrounding the 20-acre colony lot, situated in the B. & N. of California Tract, southwest of Fresno, and with the leaves she fed the worms, and watched them through the four moulting seasons. At the end of the fifth week they began to crawl around, searching for a place to spin. Frames were provided and they soon formed their pretty cocoons. The first week the worms ate 15 pounds of leaves per day; the second week 50 pounds; the third week 100 pounds; the fourth week 150 pounds; the fifth week 200 pounds; and now, in the sixth week, about half of them are spinning, and the balance eat 250 pounds of leaves per day. They are regularly fed three times a day, placed on trays four feet square, and it requires 32 trays to hold the amount of worms she now has. They also require to have the dry refuse leaves removed from under them every other day. The trays are made of lath one inch apart. Perforated paper, made by punching with a wad cutter, is then laid on the tray, and upon this the worms are placed and then covered with leaves. Precaution has to be taken to prevent the ants from killing the worms. The eggs furnished to Mr. Fuller were the imported Italian and make the best silk obtainable.

It requires during the last three weeks of the six the constant attention of four persons to procure the leaves and feed and care for the worms. Mrs. Fuller will stifle the ohrysalis by steaming, as it is not so liable to injure the silk as by the old way of baking. It is now clearly demonstrated that Fresno county can be made the banner county for sericulture. The heat is not too intense and it is never too cold. The thermometer ranged from 52° to 103°, and the worms never suffered from either extreme. It will be an industry that the ladies can enter into, the work being easy and pleasant, and, with the exception of a hired man during the last part of the season, there need be but little expense, and it will prove with good care that it is remunerative and instructive as well.

In this county, where the mulberry thrives without any care on the ditch banks, and the climate so well adapted to the rearing of the worm, we predict that in a few years the San Joaquin valley silk will rival the imported article. San Francisco is a good market, and the

prices paid are very satisfactory. Last season 35 or 40 Fresno ladies and gentlemen availed themselves of the opportunity to visit the room of Mr. Fuller and saw for the first time in their lives the process of silk spinning.

THE VINEYARD.

Root Rot in Vines.

Said a prominent viticulturist to a *Chronicle* reporter last week: "A fungus disease has been prevailing to a very large extent in many vineyards during the last few years, but only lately has it been prominently observed. It is doing the most damage near Cloverdale, in the Sonoma district, and near St. Helena, in Napa valley. The disease is called pourridis, and it affects the roots of the vines, causing them to rot and produce what is commonly called among vineyardists 'root rot.' This disease should not be confounded with black knot as is frequently done. The only similarity is in the sound of the names.

"The malady is one known for years in Europe, and it has affected fruit trees and those of the forest. The parts principally attacked are the southern part of France and Austria and the Mediterranean countries.

"A vine when affected shows general signs of enfeeblement, producing sometimes additional force, but this is only temporary, for it is followed with a meager production of foliage and by the rotten condition of the root, which, on being exhibited, is brown in color and saturated with water to such an extent as to show the water very plainly when it is cut. The trunk of the vine remains healthy for some time. The general appearance of the vine is that of one attacked with phylloxera. The plants sometimes continue to thrive only from 15 to 18 months, and where the conditions are most favorable to the development of the disease they even die in six months. The disease spreads in a short time over large areas. Favorable conditions are generally produced by excessive humidity in the soil and in an impermeable subsoil which forms a subterranean basin where the water becomes stagnant, a condition favorable to the introduction of the disease. The fungus which is responsible for the following disease may be introduced on the vines or even on some vegetables and on trees.

"The new fibers of a vine may show up signs of an attack, but the old roots will show swellings which even break through and protrude from the bark with a pithy growth which soon dies and rots. Before long the whole substance of the root decays to such an extent that the vine, which is far gone, may be pulled out of the soil without difficulty.

"One can only hope to so modify the conditions of the soil as to prevent the further spread of the disease and to destroy the vines on which it exists. These should be pulled up and burned on the place, so as to avoid any diffusion of the spores, which would be produced in transferring the debris. Follow this with a complete drainage and working up of the ground, and if possible leave it unplanted for several years, after which, if the excessive moisture has been provided for by proper drainage, vines may be again planted in the same spot."

"A sample of this disease," said Viticultural Officer J. H. Wheeler, when asked concerning the matter, "has just been exhibited at the Viticultural Commission office. It came from a well-known vineyard near St. Helena. Lately many other cases of the same disease have been reported. It has been just identified here in California. This disease, if I might add to what you already have, cannot flourish on well-drained and well-cultivated soil. The damage is probably great, but cannot be at present estimated, owing to the fact that but few vineyardists know its characteristics. By the way, there has been an unusual number of complaints of the increased damages to vineyards by the phylloxera. Considerable alarm is being felt for its effect on the coming crop."

Vine Hoppers.

This pest has become troublesome in some vineyards, especially so where there are young plants. Mr. S. W. Kilpatrick, who is in charge of Henry Miller's extensive orchards and vineyards in this section, assures us that a very simple, inexpensive and efficient remedy can be found in the use of concentrated lye. Mr. Kilpatrick recommends that two small cans of concentrated lye be dissolved thoroughly in one barrel (40 gallons) of water and this mixture sprayed upon the leaves and stalks of the vines, care being taken that the spraying shall be done so lightly as not to break off or injure the foliage by its force. The work should be done before sunrise or some time after sunset. By placing the barrel upon a light hand-cart it would be an easy matter to spray many acres in a few hours and at a very inconsiderable expense.

Another formula suggested by Mr. Kilpatrick, but which he does not recommend so strongly as the foregoing, is to dissolve one pound of sulphur in three gallons of milk taken from the fire at the boiling point; mix with this two quarts of kerosene, stir the whole thoroughly in one barrel (40 gallons) of water, spray with the mixture in the same manner as recommended with the concentrated lye.—*Gilroy Gazette*.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Effective Efforts.

[By MORTIMER WHITEHEAD, Lect. N. G.]

Farmers organized in the Grange, more than all other influences combined, aided in securing the present national Oleomargarine law. And farmers in the Grange have, by their influence and united action, so far prevented its repeal or any amendments that would impair its usefulness. The Agricultural Department at Washington, under the able management of Norman J. Coleman, helped to point out the fraud in oleo, and thus aided farmers greatly in securing the law. The combined oleo, cliques and rings since that time have toiled to injure the usefulness of the Department of Agriculture by taking away its Bureau of Animal Industry; but in this they have so far made no headway. The Grange stands squarely behind the department and the commissioner. Another pure-food battle is now raging in Congress, and the same parties who opposed the oleo law, and who have since worked for its defeat, and who have tried to injure the Department of Agriculture, are at work now fighting against the adulteration of lard bill. But the law will come, and after a while laws to protect producers and consumers alike against all food adulteration. It is worth the effort, and united effort will secure it.

The Order of Patrons of Husbandry is no pent-up Utica concern, as is proven by the prompt response to the call of other classes to aid in the pure food movement. The Grange has secured relief to the entire people, far greater than to its own membership, by securing the Interstate Commerce and Oleomargarine laws. It has nearly secured the reduction of postage on plants and seeds and a much needed paper fractional currency. It is now engaged in preventing the Chicago cattle ring from capturing the right arm of the Agricultural Department by getting control of the Bureau of Animal Industry. This is a matter in which the entire people are interested—they do not desire, nor will they allow, the Bureau of Animal Industry to be used by a set of monopolists to enable them to sell diseased beef as well as diseased hogs. In addition to this matter it is also engaged in the laudable work of securing for the people pure food. Every man, woman and child, and the child unborn, is directly interested in this matter, and the Grange asks your assistance in this laudable work in the interest of health and morals, as well as of agriculture and commerce. Every man and woman who can write, or who has influence over others, should at once write to their Congressmen and let them know that the people demand and will have a pure-food law. Such an Order that is working for the greatest good to the greatest number should command the respect of all intelligent and thinking people. We know prejudice exists against the Order, but it is because of ignorance of its aims and purposes. It is a purely philanthropic and educational organization among farmers which, when properly understood, must commend itself to the intelligent people of the country irrespective of vocation.

Saloon Restriction.

At a meeting of the Pacific Coast delegates to the Methodist General Conference in New York, the following resolutions were offered by Chancellor Hartson of Napa, seconded by Rev. W. S. Harrington of Oregon and unanimously adopted:

WHEREAS, There are now engaged in the sale of intoxicating liquors in the United States more than one hundred and fifty thousand retail liquor shops known as saloons, the commerce of which costs the people of the United States more than five hundred millions of dollars annually; and connected with which there is an army of habitually intemperate of one hundred thousands; and beside there are more than one-half of a million of able-bodied men engaged in some of the various departments of the liquor trade, in useless and unproductive labor; and,

Whereas, This traffic sends direct to almshouses, jails, penitentiaries, scaffolds, and to ruin more than all other causes combined, and creates an untold and inexpressible amount of crime, suffering, anguish and woe; therefore,

Resolved, That the highest interests of the people of the United States demand that legal restriction be placed upon this enormous and fatal traffic, and that we most earnestly appeal to the Pacific Coast delegates of the Republican and the Democratic National conventions to declare in their

respective platforms saloons to be the malignant enemies of the human race, and that they ought to be abolished; believing that the adoption of such measures by any party will contribute largely to its strength and honor and permanent success.

Resolved, That a copy of the foregoing resolutions and proceedings be forwarded to the aforesaid Republican and Democratic delegates, and be published in the principal papers of the Pacific Coast.

Beware of Strange Horse Traders.

Mr. Brule, a native son of *la belle France*, who lives on the southside of Tuolumne river, is noted—the Modesto Herald says—for his hospitality.

Some weeks ago there came to his ranch a stranger, having in his possession several head of horses and mules and a buckboard, of all which he represented himself to be the owner. Taking advantage of Mr. Brule's confiding nature, he traded one of the mules to him for a horse and saddle and \$25 in cash, left the balance of the stock and the buckboard with him, and "skipped," saying he would return in a few days.

Soon afterward, however, Sheriff Purvis was apprised that the animals had been stolen in Fresno county; whereupon he went to the Brule ranch and brought the animals to Modesto to await further developments.

Mr. Brule is mourning the loss of a horse, saddle and \$25 in money. It appears that the rascal had been selling stock along the road between there and Fresno. At last accounts he was still at large.

The Railroad Taxes.

The United State Supreme Court has decided that the Central Pacific need not pay its taxes because the State has no right to tax franchises given by the United States. Mr. Raymond tells a reporter of the *Alta* that the disposition of the railway is this:

There is a great need of a revision of the tax law, and I believe that railroad companies should be taxed on their gross incomes, as the most just and equitable basis. We are willing, however, to pay 60 per cent of the amount levied on our road—about \$600,000—and then we will be paying a greater tax than any single track line in the United States. Besides this State tax we pay under local assessments State taxes on our work-shops, office-buildings and depots, besides the city and county taxes. We pay more taxes to this State than any railroad corporation does to any State in the Union.

Paying taxes is not very pleasant business, we admit, but all small people have to do it and don't have the fun of saying what they will pay and what they will not pay either. They either have to shell out or the sheriff will shell them out. This comes of small people not having Supreme Courts. Should they not petition Congress to establish some for them?

Our Northern Neighbors.

During the past year Oregon has shown new life by the increased number of Granges organized. From all we can learn there was far more than ordinary interest taken in the late session of the State Grange. Oregon heartily indorsed the resolution to co-operate with California in inviting the National Grange to hold its session of 1889 in San Francisco; also in inviting the National Lecturer, Mortimer Whitehead, to visit Oregon and California, providing the Executive Committee find it feasible to secure his valuable services on this coast. The prompt manner in which Patrons seemed pleased to join in co-operating in the work of the Grange with California was very gratifying, and we believe that much good will result to both States from future unity of action.

ANTI-DEBRIS SUIT.—We learn from the *Bee* of 31st ult. that the county of Sacramento, by its attorneys, S. C. Denson and R. T. Devlin, has begun suit against William Weisler, Geo. Parker, Edward Mitchell et al., who, it is charged, are engaged in the business of hydraulic mining on the American river and tributaries, asking that defendants be restrained from dumping debris into the water-courses named. It is alleged that the streams have been filled up to such an extent as to cause overflows, causing great damage and a resort to artificial means for confining the waters within bounds. It is further alleged that the property of plaintiff—the Court-house, Hall of Records, etc., is greatly endangered. It is stated that the defendants do business under the firm name and style of the North Star Mining Claim, and an injunction is asked restraining them from so depositing any debris pending the action, and finally that a perpetual injunction issue, and an order for costs of suit.

THE mention of our visit to Oregon last week was dictated without being, as usual, revised by us before publication. This will account for any mistakes which may have been noticed, and no doubt corrected by the reader's mind.

A RIGHTEOUS JUDGMENT.—In the case of A. Martens against H. Pauls, to recover \$7500, lately tried before Judge Maguire in this city, the evidence showed that while the two men were playing cards for money they agreed to pool their winnings and buy tickets in the Louisiana Lottery. Pauls subsequently bought six coupons, and gave one of them, which he said he had purchased with the pool fund, to Martens' wife. Of the five retained one drew \$15,000, and Martens claimed that he was entitled to one-half, alleging that the winning ticket was the one in which they were jointly interested. The Judge, deciding in favor of the defendant, said: "The contract of the parties appears to have been doubly tainted with the vice and illegality of gambling; and in the relations thus created by the parties between them they are beyond the pale of civil law, and must rely solely upon the honor of each other." They were therefore "remitted to their own consciences in settling a transaction into which they entered in defiance of the laws to which they now appeal."

WM. M. CUBERY & Co., book and job printers, have furnished the secretary of the State Grange with some handsomely illuminated address cards, for which we make due acknowledgments. Cubery & Co. lead on this coast in decorative card printing. Persons desiring a handsome or neat thing in the way of address or fraternal cards, wedding cards, etc., should send to Cubery & Co., No. 415 Market street, for samples.

SAN JOSE GRANGE met on the 26th ult. and discussed the prospects of the cherry crop. Bro. Keesling gave some sensible advice to those shipping this fruit to market. Bros. Sanders, Alley and others also spoke on the same subject. Such discussions are always profitable to the members of the Grange.

THE Patron's Interstate picnic will be held as usual at Williams Grove, Pa., August 27th, continuing one week. President Cleveland is expected to attend. The attendance is expected to reach 150,000.

BRO. GEO. OHLEYER gives an entertaining account of a drive on the 25th and 26th ult. through portions of Sutter and Yuba counties in the last issue of the *Farmer*.

Vacaville Jottings.

EDITORS PRESS:—Quite a shower of rain fell last Wednesday but none since. Summer-fallowed grain in Suisun valley is looking well, and will turn out a good crop.

Considerable fruit is being sent East from Winters and Vacaville. Strong & Co. are buying around the latter place. They give their agents orders not to buy more than 300 boxes from one person—what their object is in so doing no man knows. W. Rippey is sending about 100 crates per day of apricots, peaches, and cherry plums.

A new telephone line is going up from Vacaville, and another will soon be built.

Mrs. Blake has sold the apricots which they will have on their ranch, too small for the market, for one cent per pound for drying.

A peach-pitting machine is on exhibition in Vacaville, which it is claimed will cut 1000 lbs. of peaches per hour. The general opinion seems to be that it will bruise the fruit too much.

The Brink Bros. are shipping fruit to Los Angeles, also to Newcastle.

The main question now among the fruit-growers is: "What are we going to do with our fruit contracts with J. Lusk?" Many think that it is a put-up job with the canners to escape, refusing to keep the contracts as long as they can, and force the fruit on the market and buy it at a reduced price. If such be their intentions they will fail, as they refused to take fruit unless at their own price three years ago. Only the Benicia cannery taking quite a lot, and the apricots turning out short saved the fruit-raisers then. While the first part of the crop was hard to sell at 1½ cents the last part sold quickly at three cents per pound. Nearly everybody around here is prepared to dry if a good price is not guaranteed.

Some gentlemen are expected here from the East in a few days to contract for several carloads of dried fruit. If such an arrangement can be made it will save the pay of several middlemen.

Vacaville June 2d.

THE concluding portion of "My Dream of Anarchy and Dynamite," in the June issue of the *American Magazine*, is quite as interesting as the May instalment. It shows in a graphic manner the utter helplessness of our large cities against mobs that are armed with dynamite, and indicates what remedies should immediately be adopted.

FORESTRY COMMISSIONER.—The Governor has appointed Walter S. Moore of Los Angeles a member of the State Board of Forestry, vice James Bettner, deceased.

The Permanent Exhibition Opened at Sacramento.

The standing display of products of Northern and Central California, for which the Sacramento Improvement Association has long been preparing, was thrown open to the public last Saturday afternoon. The outside of the exposition building, lately erected near the railroad station, was gaily decked with flags, while the interior was beautiful with flowers, fruits and cereals—the choicest offerings of the Sacramento valley.

Among the more noticeable exhibits were 48 glass jars of grains and seeds by Gregory Bros.; superior fruits and grains by E. Greer; fine samples of wheat by S. M. Hoover; fruit on boughs by R. D. Stephens; vegetables by J. and F. Gabriella; specimens of 35,000 young olive trees by G. H. Kunz; pumpkins by S. H. Jackman; licorice root and its products by Isaac Lee; Bartlett pears and other fruits by D. T. Lufkin.

Yuba county showed peaches, plums and cherries of excellent quality, but Placer's display of green fruit was the finest in the exhibition, her peaches especially calling forth warm praise.

At the appointed hour of opening there was present a goodly audience, whom Mayor Gregory bade welcome in behalf of the citizens and the members of the association.

Dr. G. L. Simmons, president of the Improvement Association and chairman of the occasion, spoke of the origin and necessity of the enterprise they were inaugurating. His first referred to the grave misapprehensions which have been found to exist in the minds of passing travelers respecting the soil and productions of all that portion of the State lying north of the Tehachapi range of mountains. "Thousands of these travelers," said the doctor, "have returned to their Eastern homes with no true impression of the extent of our agricultural and horticultural regions. * * * But if untrue impressions prevailed concerning soil and productions, they were exceeded by erroneous ideas concerning climate. Very naturally the word 'south' conveyed to these people inferences of warm winters, with the associated cultivation of citrus fruits, while 'north' conveyed ideas of snow or ice, from which a majority were fleeing. * * * Here (at Sacramento) are frequently found numbers of travelers with short stop-over privileges; and here, to meet this current of immigration which has flowed, and which, we believe, will continue to flow toward us from the East, the Sacramento Improvement Association, in the direct line of its policy of progress, determined to erect a place where the passing stranger might be taught by object lessons, more convincing than argument—in circular—that the productions of the great counties around us are the equal of any in our State. * * * It is not designed to hold here competitive exhibitions from the various counties who may desire to affiliate, but the purpose is rather for an exposition of choice productions in their season, and as a central place or exchange where representatives from any county may meet without expense to them, and present true and reliable information concerning their several sections. We know there is work to be done here that will repay a hundred-fold, and as we launch this enterprise upon a fair sea, let us hope that it will receive the approval and hearty co-operation of all citizens who desire the progress of Central and Northern California."

Addresses were made also by Joseph Steffans, President of the Sacramento Board of Trade, E. W. Maslin and P. W. Butler of Placer county, H. H. Camper of Butte, E. E. Lake of Solano, E. S. Parker of the Improvement Association Committee, and P. E. Platt, President of the California Fruit Union. The speeches were interspersed with music by Noack's orchestra.

In the evening the building and grounds were brilliant with electric lights, and throngs of visitors inspected the exhibits or promenaded to the strains of the full Hussar band.

The enterprise appears to be successful in its outset, even beyond the expectations of its ardent friends and promoters; and the Press joins them in hoping that as the season progresses we may then see such an interesting collection of the products of field, orchard, garden and farm, and mine, as will be worthy of a long journey to look upon.

FRUIT SALES IN CHICAGO.—Telegrams from Mr. Weinstock from Chicago announce that the auction plan of selling fruit, which he has gone to inaugurate, is meeting with favor among the prominent Chicago dealers. This is fortunate. What is wanted is something which will facilitate the distribution of fruit which will give every dealer a fair chance to secure whatever he can dispose of, and really the auction plan seems to be the best way to secure such an end. If all will take hold of it cordially it will no doubt succeed. The time has come when every outward door for California fruit must be thrown wide open.

THE first fresh figs in the San Francisco market this season were received on the 5th of June by Onesti & Connor. They were raised by H. and W. Brinck of Pleasant valley, Solano county, arrived in good order and brought half a dollar a pound.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

POWERFUL TRACTION ENGINE.—San Leandro Reporter, June 2: It is worth while to visit the big shops down by the depot these days. The way they are rattling out hay-presses, harvesters and cleaners is something remarkable. * * Among other things of interest at the works is Remington's traction engine, just arrived from Oregon. It seems capable of going anywhere and pulling anything. A big harvester, with all the machinery in gear, was pulled without apparent effort, and even when the brake was applied to the big wheels so as to lock them and make the work like pulling a cat by the tail, it still walked steadily behind it, and when it came to the steep bridge (leading up to the railroad loading platform), which has a rise of 5 feet in 16, it continued its journey, dragging the harvester after with the same apparent absence of effort that characterized all its work.

Butte.

QUEER PLACE FOR A HORN.—Oroville Register: A cow owned by W. H. Donahue, near Biggs, had something growing in her mouth which prevented her from chewing her food. Dr. C. S. Brown, V. S., examined the mouth and found it to be a genuine horn fully five inches in length and two inches in diameter at the base. A pair of forceps were applied and the horny shell was pulled off, when a knife had to be used to cut off the fleshy part remaining. The excrescence was a genuine horn, attached to one of the back molars, and so filled the mouth that it inconvenienced the animal when feeding. The point of the horn made a crook and projected from the side of the cow's mouth perhaps an inch or more in length.

Contra Costa.

SHIPPING HAY.—Martinez Item, June 1: The Grangers yesterday shipped a carload of new hay to Oakland. This is the first new hay shipped from Martinez this season.

SERICULTURE.—Antioch Ledger: Mrs. Abbott Sellers, who for two years past has been very successful in raising silkworms, has this year met with a decided reverse. When the worms were within about two weeks of spinning they died in large numbers, but a very small per cent arriving at maturity. Mrs. Sellers attributes this fatality to the very hot weather of April. Captain Mitchell has had no success with the silkworms he was feeding. In his hands they have suffered and died of cold. Mrs. J. P. Abbot secured the eggs of two moths last season; this spring when the season of growth began the teaspoonful or less of tiny globules developed a marvelous number of worms. Under her watchful care they grew and thrived, and 550 plump cocoons resulted.

El Dorado.

FRUIT CROPS.—Georgetown Gazette, May 31: The apple and pear crops in the vicinity of Georgetown promise to be large. The peach, plum and prune yield is large and fine. The cherry crop is splendid—so fine that the Newcastle fruit-shippers have contracted for all of the shipping varieties at 75 cents per 10-pound box. The output for the town limits will be some 300 boxes suited for shipping.

Humboldt.

ON TABLE BLUFF.—Cor. Humboldt Standard: On the ascent known as Table Bluff we see splendid farms on every side, yielding unfailing crops one year with another. The best evidence of the good quality of these lands is given in the fact that many of the settlers who pre-empted the land from Government 30 and 35 years ago, still own and cultivate the same. Going toward the point, or end of the bluff, you pass the fine farms of McNaughton Bros., J. F. Quill, M. Treinby, J. McGrath, A. H. Knight, W. Phelon, McNulty Bros., P. Quinn, M. Fitzsimmons, Jeff Knight, Carlin Kinman and the lands belonging to the Clark estate. All this fine body of land is covered mostly with oats, which today make a fine showing for a good yield. The acreage in potatoes is smaller than for many years. Potatoes were an unprofitable crop last year, and most of the farmers are steering clear of them this season. While all have a few acres, none are depending upon them exclusively. There is at least a fourth more grain on the bluff this year than last. The farmers on Table Bluff pay a great deal of attention to raising horses, and you can find here the best in the county. A. H. Knight is also engaged in raising mules. He has a fine jack for breeding purposes.

NICE DAIRY FARM.—Wm. Perrott, who has a magnificent tract of 750 acres, extending down to Swanger's Station, and who is largely engaged in the dairy business, is building a barn 70x90 feet. It will be the largest and best built barn in this part of the country. He has 55 cows in his dairy, and markets most of his butter at Eureka. He has 150 acres in oats, barley and peas. Mr. Perrott's place is highly improved in every respect. He has a neat, comfortable, roomy residence, nice orchard, beautiful flowers, etc. Everything denotes industry, enterprise and thrift.

BOVINE HARDWARE DEPOT.—Eureka Standard, May 31: In the stomach of a cow butchered for the Third-street market yesterday, there were found one buttonhook, one darning-needle, two safety-pins, 13 common pins, one knife blade, two lath nails, seven shingle nails, four tacks and some pieces of wire. Notwithstanding the presence in her digestive appara-

ratus of these foreign substances, the cow seemed to get on comfortably and was in good condition at the time she was killed.

Los Angeles.

SAMPLE STRAWBERRIES.—Pomona Progress, May 31: A strawberry weighing three and one-fourth ounces and another weighing exactly three ounces have been laid upon our desk by L. P. Fanning. They are the largest specimens of the fruit we have ever seen, and are truly typical Californians in their proportions. From one acre and one-half of strawberries, planted only last January by H. B. Westerman of Pomona, 1140 pounds of the fruit have been picked thus far this season, and the prices paid for it have been as high as 15 cents and as low as 10 cents a pound. Berries will be picked from the land for several weeks longer this season. Alonzo Cummings who lives west of Pomona, has already picked 2850 pounds from his one-acre strawberry lot, and will pick fully 700 and perhaps 1200 pounds more before July.

Marin.

FLOWER FESTIVAL AT SAN RAFAEL.—Journal, May 31: Last Wednesday evening the Second Annual Flower Festival took place in aid of our library and free reading-room. The decorations were beautiful. Among the finest were an exquisite violin of pansies, a lyre made of white roses and marigolds, and a tall ladder, flowery steps to knowledge, symbolizing the reading-room. These were all presented by the Misses Elliott, who have helped so much on previous occasions. The hearts of the workers were gladdened to find the net proceeds amounted to over \$150.

COWS FOR JAPAN.—C. A. P. telegram, Point Reyes, June 2: A party of Japanese cattlemen have been scouring the country lately for milk cows. They secured a large drove at prices ranging from \$40 per head upward, for exporting to Japan, where it is said milk sells at 50 cents per gallon and butter at 75 cents per pound. The cost of exportation is about \$100 per head.

Napa.

OLIVE CULTURE IN POPE VALLEY.—Cor. St. Helena Star, June 1: Mr. Worth of San Francisco a few months since purchased a tract of land from Mr. Shaffer for olive culture. He bought 10,000 cuttings of Elwood Cooper, which weighed about three tons. They reached their destination in good condition, and, we are informed by Mr. Shaffer, are all growing well.

Nevada.

RAISE HAY.—Nevada City Transcript, May 30: J. A. J. Ray, over on Shady creek, cuts from his ranch between 100 and 150 tons of hay a year, and gets \$20 a ton right on the ground. Other Nevada county farmers who have tried the business get equally good results. Hay is a crop that never fails in this part of the State. Raise hay!

MODEL MONGOLS.—As several different statements have been made in relation to the amount per annum paid by the Chinese who have such a fine garden on the Burns' ranch, the reporter interviewed the boss Chinaman yesterday, and learned from him that 21 acres have been leased for 10 years. The rental for the first three years is \$1000, and for the remaining seven years is to be \$37 per month, or \$444 per year, payable monthly in advance. These Chinamen, who have had the place for about three years, have demonstrated that the soil is not at fault if first-class grapes, strawberries, apples, pears, peaches, plums, radishes, beets, turnips, asparagus, potatoes, cabbages, onions, celery, tomatoes, beans, peas, squash, raspberries and currants are not raised in this locality. If a dozen or more such ranchers here raised as much of fruits and vegetables as do these Chinamen, they would always find a ready and profitable market.

Placer.

AMONG THE FIRST FRUITS.—Newcastle News, May 30: Henry Reith presented us a box of blackberries on Thursday last. They were from his place near Penryn. . . . J. B. Evans brought to Kellogg's fruit house on Friday last the first full baskets of blackberries in the market. On Monday he brought in a whole case of fine ripe blackberries. They were very fine looking and of the Wilson variety. . . . J. E. French who has a fine fruit farm near Pino, brought in a box of nice ripe peaches Wednesday, May 23d, which he picked from his trees that morning. These were the first peaches here this season. . . . The Newcastle Fruit Co. shipped 40 boxes of peaches to the East on Monday. Most of them were from P. W. Butler's magnificent fruit farm near Penryn. This is the first regular shipment of peaches from Newcastle this season.

ACME EVAPORATORS.—Elijah Higham is putting up two Acme steam evaporators for the curing of fruit on the premises of Mr. Geo. D. Kellogg below town, and expects to have the same ready for operation inside of a month. The evaporators will be under the sole ownership of Mr. Higham, but will be conducted in co-operation with Mr. Kellogg's fruit house, which will insure a closer selection of fruit than could otherwise be had, and at the same time afford a ready market for all the fruit that the customers of the house can supply.

THE DITCHES.—Auburn Herald, June 2: There are 250 inches of water in the main Bear river ditch. Before this, water has been running into the big tank at Pino, as the men finished laying the pipe last Monday. The water has been running into the big reservoir at Whitney's ranch for the last week. The ditch

to Clover valley is dug. The flumes, which altogether are 2500 feet in length, are being put up, and in a short time a large and fertile area will be supplied with water.

San Benito.

PROLIFIC GRAINS.—Hollister Free Lance, June 1: Steve Lyons reports fine crops up in Bitterwater valley. As a proof of the fact he brought us in yesterday samples of grain as follows: Sixty heads of barley growing from one grain; 26 heads of beardless barley growing from one grain; 39 heads of Australian wheat from one grain; 17 heads of Snowflake wheat from one grain.

STOCK THRIVING.—From all parts of the county we hear flattering reports regarding the condition of stock. Owners of cattle say that the outlook could hardly be more encouraging. The damage to dry feed by the recent rains is practically nothing.

ITEMS FROM MULBERRY.—Cor. Advance, May 28: The cool weather of the last two weeks has done much, indeed, for the recovery of growing crops from the demoralized condition in which the same was left by the "shortage" of the season's rainfall. More than half of the grain sown the past season will be cut for hay. There are some very good pieces of wheat to be seen, among which it seems to be conceded that Thos. H. Slaven has the best. Barley is light. The wild oat crop was also light this season. Range feed is already becoming scarce, and many ranchers would now sell their fat cattle.

San Diego.

HONEY.—San Diego Union, May 31: Harbison & Young report good prospects of a large honey crop from the flowers of the black sage, although the recent cool and cloudy weather has interfered somewhat with the work of the bees in the white sage and grease wood.

San Luis Obispo.

BUTTER SHIPMENTS FROM CAYUCOS.—Cor. S. L. O. Tribune: We were told by the gentleman in charge of the wharf and freight that they shipped an average of 200 boxes of butter every four days, which would bring a net value of \$26 per box, amounting to \$5200 per shipment every four days. Butter is not the only produce shipped, but there is cheese, hogs, grain, chickens, and many other articles. Grant, Watson & Co., general merchants, kindly showed us through their storehouses, where they keep on hand many thousand pounds of butter and cheese. They told us of the arrangements by which they can make drafts payable in Locarno or Bellinzona, Switzerland, which will be of great value to the Swiss population of this section.

Santa Clara.

GILROY CANNERY.—Advocate, June 2: Steam was up and machinery at the cannery in motion on Tuesday last. The shrill whistle called the hands to work, and women and girls sat around the tables picking and sorting cherries. Earnings depend altogether upon motion. The very quick can earn \$1.50 a day; the slow rarely fail to make six bits. They are in clean, airy, comfortable quarters, subject to good rules and regulations. There are at present about two tons of cherries in stock, and the whole pack of the season is expected to reach about ten tons. Prunes, pears, peaches will follow in turn and the outlook of securing a supply is so encouraging that Superintendent Spreckens says the cannery will have active employment for its machinery and its labor force during the whole season. The present stock of empty cans is about 100,000 of the two sizes 2½ and 3 pounds. Boxes are made on the premises; indeed the whole work from the first handling of fruit to the boxing for shipment will be done under the factory roof. None but the best fruit is handled, and granulated white sugar of the best brands is used. The machinery is working satisfactorily. A water-tank to hold 5000 gallons is receiving the finishing blows of the workmen, and a seven-inch bored well will be completed in a few days. The engine of five-horse power will keep the tank supplied with water for all purposes. The cannery appears to be under good management.

LARGE HAY CROP.—It is estimated that the total cut of hay on Henry Miller's lands in this valley will reach 10,000 tons.

Santa Cruz.

BEE PULP DISPOSED OF.—Pajaronian, May 31: Henry Miller, the cattle king of Gilroy, has contracted with the Western Beet-Sugar Co. for its share of the pulp at the Watsonville beet factory this season. We are informed that Mr. Miller could use and is willing to take all the pulp that comes from the factory, and that he will pay a moderate price therefor, providing the farmers pay the cost of loading on cars at the factory. If this is not done, and if the pulp is not removed within a reasonable time, it is probable that the sugar company will ship it to Mr. Miller. The disposal of the pulp has been a matter of some interest to citizens of Watsonville as well as to the factory folks, as it was feared that the smell of the pulp would be offensive. The difficulty has been obviated.

Tulare.

SUCCESS IN ORCHARDING.—Traver Advocate, May 26: C. W. Elliott of the Windsor neighborhood brought to town last Saturday the first ripe apricots we have seen this year. They were small but of delicious flavor. The trees have been set out two years and are now bearing about 35 pounds of fruit to the tree. He has a lot of raspberry bushes in bearing which are loaded down with fruit. The red variety is

now ripe, while the black raspberries are just beginning to ripen. Mr. E.'s orchard shows remarkable growth. He has a row of two old Bartlett pear trees which are loaded with fruit. Last year one of the trees bore 20 pounds, and one pear weighed 1 pound 2½ ounces. The peaches set so thick this year that he and a hired man spent several days thinning out the fruit to keep it from breaking down the trees. None of this orchard is more than four years old, but many of the trees are large, symmetrical and heavily loaded.

ON IRRIGATED LAND.—Tulare Register, June 1: The farm of Mrs. Louis Haas, just north of Grangeville and situated on the Last Chance ditch, demonstrates forcibly the possibilities of irrigated land. She has 500 acres of grain that will make as good or a better yield than last year. Meandering through her farm flow the silent waters of the above named ditch. In front of the house on the east is 14 acres of the most beautiful corn which has never had a drop of rain; west of the ditch is 500 acres of wheat, high, well formed, a beautiful gold tint, and as it is nourished by this silent little stream it majestically waves in the gentle breeze and seems to defy the withering heat of a rainless climate.

Yo'o.

ROOTING GRAPE CUTTINGS.—Davisville Cor. Yolo Democrat: E. H. Gould has a simple labor-saving method of rooting grape cuttings, which consists in placing them in boxes of convenient size, embedding the larger (or root) ends in a layer of straw, mixed with a small quantity of sand. They are then dampened, the lid nailed down and the box set in a sunny place, with the large ends of the cuttings upward. No further care is required until time to plant them, when they will be found well rooted and the equivalent of a season's growth secured without material trouble or expense.

OREGON.

BIG DROVE OF SHEEP.—East Oregonian: E. L. Wood, the well-known sheep buyer, has purchased in Eastern Oregon in the last few months, 52,000 head of sheep to drive out of the country. This means at least \$100,000 to the sheep-raisers, as the average price paid by Mr. Wood is about \$2 per head. Hersher & Boelcher have purchased in this and Morrow counties about 20,000 head, the greater number of which will be shipped direct to Chicago over the Northern Pacific railroad.

WASHINGTON TERRITORY.

WHEAT IN WHITMAN COUNTY.—Colfax Cor. Oregonian: James A. Perkins, president of the Bank of Colfax, says that four firms in Colfax handled, of the crop of 1887, an aggregate of 41,675 tons, or 1,399,167 bushels. The prices paid ranged from 45 to 55 cents, according to difficulty of reaching a point of transportation. To be sure, all of this large quantity of wheat was not actually delivered to Colfax as a shipping point, but a very large part actually was loaded on the cars here. These firms buy the wheat in all parts of the county and deliver it to the nearest shipping point. On the aggregate handled by these four business men, they paid in freight alone more than \$250,000, the rate charged being \$6.50 per ton on all rail shipments to Portland and \$7 from points on the Snake river. Grain can be shipped cheaper from Lewiston, Idaho, to Portland than from Colfax. Whitman county has about one-third more agricultural land than Walla Walla county. The total grain acreage is about 112,000, which, allowing that all is in wheat, will produce about three and one-half million bushels. As a matter of fact, the larger part is in wheat. While the acreage now actually under cultivation is not very much in excess of Walla Walla county, it has more agricultural lands and will, in a few years, have by many thousand acres more land under cultivation than any other county in the Territory. The increase of grain acreage this year over 1887 is about 20,000 acres. This county feels itself tributary to Portland, and naturally the people are seriously discontented with the situation. The burden does not fall on the Oregon Railway & Navigation Co. but on the people of Whitman county.

CULTIVATION VS. ROUGH SURFACE.—Walla Walla Union: Some farmers follow a theory that if the soil is not thoroughly cultivated—if it is left lumpy—the grain sown will be better protected from frost and the ground will retain more moisture. This season Preston Brothers of Waitsburg made an extensive and expensive experiment. They have 800 acres of land on the hills near Waitsburg. It is all of the same character of soil and has about the same "lay." A public road runs through the land, dividing it into two fields, one containing 300, the other 500 acres. Last fall the large tract was very thoroughly cultivated, the soil was made as fine and smooth as possible by plowing and harrowing, while the 300-acre field was cultivated on the "rough ground" plan. Both were sown at the same time, with the same kind and amount of seed per acre. The result is very noticeable. The 500-acre field presents a beautiful healthy appearance; the grain stalks appear close together and the promise is for an abundant yield. The 300-acre field looks like a crazy patch-work quilt. Where the grain is not frozen out, it is dying out, and the yield will undoubtedly be poor. Farmers who are inclined to follow the "rough surface" plan of wheat growing, will do well to remember the lessons taught by the experiment of the Preston Brothers.



A Few of the Trusts.

TRUST, that was nurtured in confidence
And born of honor and innocence;
Trust, that once cheered the roller's way,
Now marks the toiler for her prey,
While murdered competition cries
Vainly for justice to Freedom's skies,
And "limited production" drives
Workingmen home to their hungry wives!

Rubber and railroad iron and reapers—
Trust of them all are the makers and keepers;
Raffing, piper and ropes and rum—
The price is fixed and the buyer is dumb;
Diamonds, copper and butcher's meat,
Limbarger cheese and the envelope sheet,
Even the lead a poor man might buy
To put him out of his misery!

Undersell all who refuse to bow
To the edict that furrows the laborer's brow;
The electric lamp shall not shine for less,
Nor gas, to lighten his home's distress,
Coal and coke and kerosene oil,
The plough and the pot too empty to boil,
The paper bag for the penny cake.

Sugar and salt and shoes and the steel
The moneyless wretch at last may feel;
His sashes and blinds and the slate his lad
Must carry to school are not to be had
Save of a trust; nor his mica, his lard,
His beeswax and honey, there's nothing too hard
Or too tender, indeed, for the money-lust
Of the all-pervading pitiless trust.

Theater-posters and thrashing machines,
Trunk-lines, telephones, tin and beans,
Telegraph messages, cottonseed oil,
Oilcloth, sumach, cordage, fuel,
Cotton-duck, linseed oil and pitch—
These are the TRUSTS on which some grow rich;
But as for the penniless workingman—
Let him get trust at the shop—IF HE CAN!

—*Mercantile Mail.*

The Kindergarten.

BY EARL MARBLE.

"What is a kindergarten?" I asked of a burly, practical, hard-headed, but by no means empty-pocketed ignoramus one day.

"Oh, its a place where the brats get sense in a nonsensical sort of way," he replied.

The answer would bear studying. I felt that in an instant. So I hesitated in tongue, and kept busy in brain, while keeping my eyes on the man who stuck to his work in a stolid sort of way.

"Then it's play for the children?" I said presently.

"Well, it ain't exactly play and it ain't exactly work. That's where the laugh comes in on the young ones. They think its play, and yet they're working all the time."

I had learned a lesson already in the few moments I had stood talking with this hard-headed son of toil.

What is the origin of the kindergarten?

Maybe the readers of the RURAL PRESS would like to know.

First, as to the meaning of the word. Kindergarten means literally "children's garden."

The system of teaching that rules in these schools was first put into practice by Friedrich Froebel, who was born in Oberweissbach, Germany, April 21, 1782, and died June 21, 1852. His first educational work, "Die Menscherezhung," was published in 1826, and later he edited a weekly journal devoted to education. In 1837 he established his school at Blankenburg, Thuringia, which was largely normal, and devoted to preparing teachers for their work in the new system, which was so soon to become famous, and spread through Germany and in Switzerland as well. To aid the work, the Duke of Meiningen gave him the use of his mansion of Marienthal, near Liebenstein. His school and method prospered and became very popular for a time, and then brought down upon it the opposition of the ignorant and the narrow-minded, some of the bigoted church people and advocates of the old austerity in teaching denouncing the schools as nurseries of atheism and socialism. So rabid did the opposition become that in 1851, the Prussian Government prohibited all kindergartens in which the Froebel system of instruction prevailed. But the law was soon afterward repealed, and the method allowed full swing.

The kindergarten schools founded by Froebel consisted of large, well-ventilated, well-lighted rooms, opening into gardens, where were located play-grounds for the

younger children, and garden-plots for the older ones. Children as young as two or three years old, accompanied by mothers or nurses, were admitted, and from this age to 14 all studied, played or worked, as their age allowed, or their inclination directed, without let or hindrance, for from three to five hours. The teachers were selected with great care by Froebel, he deeming this choice of great importance, insisting that they have love for their work and love for children, with infinite patience and self-control. No corporal punishment, under any circumstances, ever was allowed, the only means of correction being expulsion from a game or from the garden for a brief time, which was always found ample for any emergency. Not more than 25 pupils were allowed to each teacher, and never so many as these unless there were children of a dozen years of age, who shared the duties of teacher with those of pupil, which fed their enthusiasm and stimulated their good behavior.

Froebel invented many games and exercises, and the six so called "gifts" which are issued in the kindergartens, consisting of six soft balls of various colors, a cylinder and a cube of various divisions and dimensions, designed to teach color, construction, algebra, geometry, etc.

The first school in this country was established in Boston between 20 and 30 years ago, and grew into favor at once, Horace Mann and his wife and sister-in-law, Elizabeth Peabody, becoming interested at once. Miss Peabody visited Germany in 1867, to make a thorough study of the system, and remained abroad nearly a year, returning and re-entering the labor with much zeal.

From that preliminary Boston work, based on Froebel's ideas, the system has grown and spread until to-day it is a strong institution, doing a grand work in a quiet but an effective way. The noblest and most unselfish people in the land are engaged in the movement, either directly as teachers and workers, or as aiders in making its good deeds known.

The work that the kindergarten schools in San Francisco has accomplished can scarcely be estimated. It has done more toward the suppression of hoodlumism, or, rather, toward restraining it, than all the policemen's bills or the judges' stern sentences.

The first kindergarten in San Francisco was started by Felix Adler, the eminent Jewish thinker and author, who came to the Pacific Coast on a lecturing tour in 1878; so all the work of the great movement has been done inside of ten years. Mr. Adler saw the need of work, and immediate work, when he came, and put his shoulders to the wheel with the earnestness born of his wonderful energy. He caused to be subscribed among his friends 130 one-dollar subscriptions, with which the movement was inaugurated by establishing the first kindergarten at 64 Silver street, which was named the Silver Street Kindergarten Association, and which had for its first president Judge Solomon Heydenfeldt. No one being found in San Francisco who was familiar with the workings of the school, word was sent to Miss Kate Smith (now Mrs. Kate Smith Wiggins) of Los Angeles, who came at once, and thus taught the first kindergarten school west of the Rocky mountains. It was opened in September, 1878.

A few weeks after the opening of the school, Mrs. Sarah B. Cooper, at the suggestion of Professor John Swett, of the Girls' High school, visited the new institution, and was at once captivated by it. The subject of hoodlumism was then creating much excitement and apprehension in the minds of all thinking people in the community; and she thought she saw in this movement a means of reforming hoodlums and eradicating hoodlumism. She went home from the school, more and more impressed with the belief, and thought so much upon the subject that she wrote a series of six articles for one of the daily papers; the first one entitled "A Remedy for Hoodlumism," and the second, "A Visit to Silver Street Kindergarten." The articles attracted much attention, and awakened great interest in the new movement.

But Mrs. Cooper was practical as well as theoretical. She had a large Bible-class at the time, and directed their attention to that field as one in which they could reap great moral and practical harvests. From that day to the present time Mrs. Cooper has given constantly of her time and attention to the good work, and looks with satisfaction on the perceptible decline of hoodlumism, acknowledged by all who have given the subject attention to be owing to the kindergartens.

The second kindergarten was started Oct. 6, 1879, at 116 Jackson street, on the Barbary Coast, the Five Points of San Francisco. It was then called the Jackson Street

Kindergarten Association, but the name has been changed to the Golden Gate. At the close of the first year, this organization numbered two classes with an enrollment of 109 pupils, and receipts of \$1805.70; at the close of the eighth year there were 15 classes with 1105 pupils, and receipts of \$17,307.50. This is only a hint of the work that has been done.

Mrs. Cooper has given nine years to the work, and has never accepted a salary.

There was an effort made some time ago to name the schools the Cooper Kindergartens; but Mrs. Cooper would not allow it, saying that she could not solicit donations consistently in such an event.

The total enrollment of children in the San Francisco Free Kindergartens is something over 3000.

Miss Emma Marwedel, the author of "Conscious Motherhood," was one of the early pioneer teachers, and trained Mrs. Wiggins in Los Angeles.

"To the rare genius of Mrs. Wiggins as a teacher and trainer," said Mrs. Cooper in conversation with a member of our staff the other day, "the kindergarten owes much of its great success."

The work has branched out and extended not only all over the State, but along the entire coast, to the British possessions, the Pacific islands, and even to Japan. The California Training School have sent out 185 teachers, who have inaugurated kindergarten work, either private or free, in Santa Barbara, Napa, Stockton, San Jose, Eureka, Arcata, Chico, Watsonville, Santa Clara, Woodland, Livermore, San Buenaventura, Oakland, Santa Cruz, Sacramento, Fresno, Riverside, Pasadena, Vallejo, West Berkeley, Marysville, San Rafael, San Luis Obispo, Los Gatos, Centerville, Menlo Park, Mayfield, Yreka, and Sausalito in this State, and the first free work in Los Angeles. Outside the State their work extends to Tucson, Arizona; Salt Lake City, Utah; Eugene City, Oregon; Portland, Oregon; Seattle, Washington Territory; Fort Vancouver, Washington Territory; Victoria, B. C.; Reno and Carson City, Nevada.

Foremost among those who have given largely to the kindergartens is Mrs. Leland Stanford, whose donations so far exceed \$30,000. She has made a careful study of it, and has devoted much time as well as money to its encouragement and support. A kindergarten is sustained by Mrs. Alexander (nee Miss Crocker), another by the wife of Senator Hearst, another by Lady Hasketh (nee Flora Shannon), and still another by the San Francisco Produce Exchange.

"Let the very playthings of your children have a bearing upon the life and work of the coming man," said the wise old Greek philosopher, Aristotle, who seems to have seen in vision the future kindergarten and its beneficial work in training aright and sending into life in better train those who else would be mental and moral cripples from the rising to the setting of the sun of their life's day of existence.

Farmers' Telegraph Line.

There has grown up among the farmers of Lenawee county, Mich., a telegraph system which is quite unique in its character, and which might be profitably and generally extended throughout the rural districts everywhere. The system began by two farmers connecting their houses with a wire for their own private convenience, and operating their line with the ordinary Morse instruments. Gradually other farmers extended the line to their houses, and after a time the wire was run into the neighboring village of Tecumseh. Seven years ago the combined farmers and a few village merchants organized themselves into a company, and it has since been extended, until now it has 65 miles of wire and 90 offices, two-thirds of the latter being in farmhouses, and nearly all the rest in stores where these farmers do their trading. One or two newspaper offices, as many more railroad freight offices, the County Telephone Exchange and the larger post-offices are all connected. Every farmer is his own operator, battery man and line repairer. Of course any quantity of private communication is kept up between the stockholders of this independent system and their connection with the village stores makes it easy to communicate their wishes as to purchases. As it happened one farmer's life was saved by the wire. By accident he took a dose of poison, and no doctor was within several miles, but the wire was connected with the doctor's office in Tecumseh, and the farmer's daughter sprang to it and called up the physician. Having ascertained the kind of poison, the doctor telegraphed back to fill the patient with sweet milk until he got there.

From one of the railroad freight stations standard time is transmitted daily at 11 o'clock.

When a piece of important news is received by the station officers, and at the newspaper office some event of great national or State importance, it is sent over the farmers' lines, and

by this means the farmers, who are regarded as slow and behind the times, are often several hours ahead of the reputedly faster denizens of the cities, who are waiting for their afternoon papers to appear. There are two or three independent systems of these lines in operation in the county, arranged so that they can be connected with each other at intersecting points, and the whole scheme is being worked very cheaply and successfully.—*New York Times.*

Can a Woman Pre-empt Land and Marry?

We alluded recently to the subject, of which the following is a fuller statement from the *Call*:

A particularly interesting land case has just been concluded by Receiver Leigh and Register Bradford of the local Land Office. It arose out of the pre-emption claim of Miss Agnes M. Crandall to 160 acres of Sonoma land, and is of much importance to the single women in the West who are holding land under the pre-emption law. After filing her application Miss Crandall married a gentleman named Perry, and about two weeks ago transmitted her final proof, together with the purchase money, so that she could obtain title to the land. It was rejected by the receiver on the ground that having married after she filed and before proving up, she was disqualified and had forfeited her right of pre-emption.

The register, however, held that the proof should be accepted and the entry allowed, maintaining that Miss Crandall's marriage did not disqualify her from taking this claim by pre-emption right, as she had continued to live on, cultivate and improve the land after becoming Mrs. Perry and until she submitted her final proof.

There being a difference of opinion by the local officials, the case will now be presented to the Commissioner of the General Land Office for his decision.

It is now the law by the secretary's decision that where a single woman claiming public land by homestead right marries, that fact does not disqualify her from perfecting her right if she continues to live on the land.

Receiver Leigh stated yesterday to a *Call* reporter that his action in Miss Crandall's case was based upon a long line of decisions, emphatically denying the right claimed by Register Bradford, and holding that a female pre-emptor lost her right on marriage.

A distinction has heretofore been made in favor of unmarried female homestead settlers, by which their marriage has not disqualified them from completing their title. It even went so far as to permit the spouses to file and prove up both claims after their union. But even this has been swept away by a Commissioner's decision, so recent as only a fortnight ago. The commissioner held that they must select which claim to perfect and surrender the other. This decision, however, is in conflict with the superior decisions of the Secretaries of the Interior, and will be disregarded.

In speaking of the distinction between pre-emption and homestead claims, Mr. Leigh said: "What the policy of the law is for the distinction can with difficulty be explained upon any other hypothesis than that every citizen has a right to a homestead, regardless of the amount of land he may own, while in a pre-emption claim the prerequisite is that the claimant shall not own 320 acres of land. The Government is very liberal in its laws on homesteads, while it pursues an opposite course in respect to pre-emptions. An endeavor has been made in the present Congress, and in fact in many former ones, to abolish pre-emptions entirely, and confine filings to homestead claims, but for some reason the legislation has always been barred."

The Receiver was strongly of the opinion that his view of Miss Crandall's filing would be adopted by the General Land Office, and suggested that it would be well for female pre-emptors to prove up before marriage. In this way trouble and expense would be avoided.

THE NOSE AND THE BRAIN.—Dr. Guye of Amsterdam has been making a study of nasal maladies and their effect on the brain. He finds that a diseased nose is often the cause of inattentiveness and dullness in children. A dull boy became quick to learn after certain tumors had been taken from the nose, and a man who had been troubled with vertigo and buzzing in the ears for 12 years, found mental labor easy after a similar operation. In a third case a medical student was similarly relieved. Dr. Guye supposes that these nasal troubles affect the brain by preventing the cerebral lymph from circulating freely.

A BRAVE FRONTIERSWOMAN.—The San Joaquin Register says that Mrs. W. H. Moore of that valley killed in one week three rattlesnakes, one having 14 rattles and a button and a body as large as a man's arm. She also killed, with a pistol, a large wildcat weighing 50 or 60 pounds, which she carried home as a trophy of her hunting abilities.

WHAT IS LISLE THREAD?—Lisle thread is a fabric that is woven from ordinary linen thread that has been first of all twisted.

A CLOSET finished with red cedar shelves and drawers is death to moths and insects.

YOUNG FOLKS' COLUMN.

The Wicked Stepmother.

Adapted from an Irish Legend.

[By MARTHA T. TYLER.]

In the good old once-upon-a-time there lived a king in Ireland who had a most beautiful wife and two sweet children, a boy and a girl. The queen unfortunately died, and in an evil hour the king married again. His second wife was of a very jealous temperament, and it displeased her to see the devotion of her husband to his children. He was particularly fond of his daughter, who closely resembled the dead queen, and although but 14 years of age, was already considered the prettiest girl in the country.

One day during the king's absence the black-hearted stepmother entered the room where the pious young princess knelt telling her rosary. The woman held a dagger in one hand and a cup of poison in the other.

"Swear on your beads," she said, "never to tell to anyone that has been christened what you will see me do," and she made as if she would stab the poor girl with the dagger in case of refusal.

The princess being helpless, took the required oath, and soon after the queen killed the king's pet dog before her eyes.

When the king returned he was very much vexed to find his favorite dead.

"Who did this?" he asked.

"It was your dear daughter," answered the stepmother. "Let her deny it if she can."

The old man cursed a little at this, and the princess said nothing at all, for she remembered the vow she had made.

A few weeks later the king went out hunting, and while he was away the horrid woman strangled the little boy, and stood his body on its head in the lobby. When her husband found it there he was dreadfully grieved, and called out in a thundering voice:

"Who has done this? By heaven, the murderer shall answer!"

"It was your darling daughter," said the stepmother, "but she hasn't a word to say in the matter."

"Take the monster out of my sight," cried the infuriated king. "Drag her into the forest and cut off her hands. Perhaps that will teach her to be less wicked."

All night long the poor princess wandered through the woods with her bleeding arms, and at daybreak she discovered a holy well, where she washed her wounds as well as she could, and was surprised and delighted to find her soft, white hands miraculously restored by reason of the virtue of the water. Hearing a noise just then she climbed a tree, the broad, low branches of which overshadowed the wonderful well, and looking down from this hiding-place, she saw a maid approaching carrying a pitcher and a slice of bread and butter.

Now, the peasant girl caught a sight of the reflection of the princess' face in the water when she stooped to fill the pitcher, and thought it was her own likeness, so she did not wait to eat her bread, but dropped the pitcher and ran back to the kitchen of the young king's palace which stood on the edge of the wood.

"Indeed," she exclaimed to the housekeeper, "you may fetch the water for yourself. I am grown altogether too handsome to serve the like of you. I ought to marry the king himself!" The indignant housekeeper pushed the servant into a dark room and turned the key on her, but two other girls who were sent to bring water came back with the same story, so that there was presently a great uproar in the kitchen, and it reached the ears of the king himself.

"Surely the creatures are bewitched," he said. "I will go myself to the well."

When he reached the spot, he, too, saw the shadow of the beautiful face, but he had sense enough to look up into the tree, where he found the lovely princess.

Of course he fell in love with her and took her home with him and married her. She would never tell him anything of her history, however, until their little boy was born; then she said:

"Come with me to King Conacht's palace. Ask me no questions, and in time you shall hear my whole story."

"But at least we may have the baby christened before we start out?" he asked.

"No, no," answered the princess. "I have my own reasons for deferring that matter." And although the king was very much astonished at this, he loved his wife too much to mistrust her, so he consented to accompany her without further delay.

From the window of his palace King Conacht saw them approaching, and in his eagerness to speak with his daughter whom he had mourned as dead, he forgot all but his affection for her.

"There is my fair daughter," he said to the wicked stepmother. "She has found a noble husband, and I am a grandfather!"

"How should it be your daughter?" screamed the jealous queen. "Look at the woman's hands."

By this time the princess, with her baby in her arms, had entered the castle yard.

"Who are you? Who are you?" cried the king. "Tell me about yourself."

"I can't tell you that, sir," said she, "because of an oath I was obliged to take never to



tell my story to any one that was christened. But my little son here was never christened, and I'll tell him everything:

My son, you must know that my wicked stepmother killed my father's favorite dog, and killed my own little brother, and made me swear never to tell any one that had received baptism about it. She got my father to have my hands cut off, and I should have died if I had not washed my arms in the holy well. My hands were restored, and a king's son made me his wife. Now I place you in my father's arms, and you shall be baptized, please God!"

But the wicked stepmother was not at the christening. She disappeared as the princess told her story, and has never been heard of again.

(Original.)

"Wun Lung" and the Bucking Broncho.

Wood Cuts and Points.—No. 1.

The lower end of Broadway, Oakland, was the scene, late one afternoon of last week, of a touching little episode in which a policeman and a bare-headed Chinaman, named "Wun Lung," cut a prominent figure, while a seedy-looking individual with a bundle of wash under his arm loomed up in the distance.

It transpired that the seedy individual had seized his washing without paying for it, and the officer was called in as a mediator. By the time Wun Lung had found a guardian of the peace, the seedy individual was two blocks away, and to expedite his capture the pagan mounted behind the officer. To insure his staying there, Wun Lung dug his heels into the animal's flanks. At first the broncho seemed a little startled at this maneuver. He appeared somewhat perturbed intellectually, and stood motionless for several seconds, apparently waiting for his mental faculties to assume their normal condition in his broad dome of thought. Then of a sudden, plug, pagan and policeman shot athwart the evening landscape. Gliding through space for a distance of about thirty feet, the sorrel broncho struck the earth with a ringing blow, legs in a wad and stiff as those of a Cardiff giant.

It was noticeable that there was a sort of rigid, determined, "I'll get there, Eli," expression about the movement.

The policeman didn't seem to care to mingle his existence with such a procession any longer, so he alighted somewhat more hastily than gracefully, and, poised on his head in the street, looked like a collapsed accordion.

In some manner, known only to Wun Lung, he managed to still retain his seat. The expression of his face, however, at that moment seemed to indicate that his left virgo had been jolted into the southern extremity of his *nux vomica*, whatever that is.

At this point in the proceedings the sad-eyed beathen opened his mouth and indulged in a respiration so powerful that all the leaves on the trees in that vicinity withered and died. Then he recoiled his wealth of raven pigtail. The horse also recoiled, and Wun Lung was saved the trouble of parting company with the native quadruped, of his own volition.

For the next few seconds the spectators saw nothing much of any thing pretty distinctly. The soft, sunset-tinted sky seemed darkened by cavorting plug and wild-eyed Chinaman occupying positions slightly remote from each other.

When the excitement subsided a little, it was discovered that Wun Lung's cue was a little disheveled and his clothing somewhat disarranged. It was found also that his lung was shifted to a position where it couldn't do him much good, and that his *sic semper servatua* had been pierced by one of his left ribs.

By this time Wun Lung's cousins began to realize that he was a physical wreck. What was once a fine specimen of robust almond-eyed shirt-destroyer was now a shapeless mass of protracted finger nails, blue shirt-tail and tufts of raven hair.

Later, the coroner went down to the scene of the calamity, and with the sponge tried to soak enough of the remains out of the ground to hold an inquest over.

The jury was divided in its opinion as to whether deceased came to his death from being kicked in the diaphragm by a robust volcano, or had been blown through the county jail by a ring-tail-puler of a cyclone.

FREMONT WOOD.

GOOD HEALTH.

Dandruff and Kerosene.

EDITORS PRESS:—A while ago some one asked what to do for dandruff. As I have never seen any answer to the question (although there may have been one that I overlooked), I will state that clear kerosene oil is the best and cheapest thing I ever used. It not only cleans off the dandruff, but makes new hair grow nicely and prevents the old from coming out. I keep a bottle of it on my toilet table and once a week wet the top of my head well with it. The warmth of the head soon drives away the scent. Then put a little perfume on your hair and it will be in a beautiful condition for a week. Those who are not troubled much with dandruff need not use the oil oftener than once in two weeks. I usually put it on my head as soon as I rise in the morning. As I have used it myself and recommended it to others for 12 years, I know what I am talking about.

Another thing I feel convinced about in my own case, is that the use of the oil upon my head has cured me of a partial deafness, from a collection of dry wax in the ear. Do not mistake me and put it into the ear, for I do not think that would be safe; but by constantly applying it outwardly it has done the work.

MRS. J. HILTON.

THE DANGER IN HOT BATHS.—It is surprising that deaths by syncope during the use of hot baths are not more common. The peril of faintness by the mere determination of blood to the surface of the body, thus quickly depriving the heart of its usual normal supply and stimulus, is very great. In cases of muscular weakness of the heart this danger must be imminent whenever the "hot" or even the "warm" bath is used. Apart from this obvious risk, however, there is always the possibility that in weakly or too impressionable states of the nervous system, the peripheral stimulation produced by the application of heat to the whole of the cutaneous extremities of the afferent nerves may so act on the centers as to arrest the evolution of energy by an inhibitory influence. It is doubtful if we lay stress enough on this condition when prescribing the use of such external agents as act on large areas of surface, and strongly impress the nerves there commencing. We know how burns of even moderate severity may kill by the impression they produce on the centers of vitality from the periphery. There is much to learn in regard to the nature and extent of the central effects which may be thus caused. Whether for good or evil, the application of heat or cold to the cutaneous surface is a potent measure, and one that ought not to be recklessly resorted to, more especially in cases of great susceptibility, involving such excitability of the nervous centers as often coexist with fairly good health in a weakly body.

THIRST IN YOUNG INFANTS.—It is a mistake to suppose that because milk is a liquid food it is at the same time a drink which is capable of satisfying the thirst of infants. Although milk appeases hunger, it makes thirst more intense after it has remained some time in the stomach and digestion of it has begun. It is thirst which causes healthy, breast-nourished infants to cry for long periods of time in many instances. There are many cases of indigestion due to weakness or insufficiency of the child's gastric juice which would be greatly benefited or even cured if the child were allowed an occasional drink of water.

SAVE THE FINGERS.—An extract from a surgical journal gives an account of the preservation of a boy's thumb, that had been severed from his hand, by the simple process of securing it to the stump and bandaging. The same paper declares that in many cases severed fingers are needlessly sacrificed.

STEEL IN A SHIP OF WAR.—The steel required for the United States ship of war Maine aggregates about 2000 tons.

DOMESTIC ECONOMY.

Tested Recipes.

[Written for the RURAL PRESS by ADA E. TAYLOR.]

Orange Pudding.—Wash the salt out of a half pound of butter; mix it with the same quantity of sugar, and a wineglass of brandy; grate the rind of three large oranges and squeeze out the juice; beat six fresh eggs, stir them into the butter and sugar, then add the prepared orange; lay a puff paste around the pudding-dish, and bake from a half to three-quarters of an hour. Eat cold with sugar; lemons may be used the same way.

Lemon Custard.—Beat the yolks of eight eggs with a half pound of sugar; add a pint of boiling water, rinds of two lemons, grated, and juice of same; boil until it thickens and then add a large wineglass of white wine, and a half glass of brandy; boil a few minutes, and put in a glass dish. Beat the whites, add half a cup of sugar, and pile on the top; to be eaten very cold.

Forcemeat Balls.—Chop two pounds of veal very fine and one onion; add parsley, a quarter of a pound of suet or salt pork; season with cayenne pepper, salt, sweet marjoram and thyme; mix all well together, make into small balls, and fry in drippings. Balls of a smaller size could be put into soup before sending to the table, and would be found a very desirable addition.

Cream Cake.—Beat the whites of seven eggs to a stiff froth; add the yolks and beat again, first adding a little salt; mix thoroughly with one cup of sugar, then stir in gently one cup of flour in which has been sifted one teaspoonful of yeast powder; last of all, stir in one-half cup of butter which has been melted; bake in jelly-tins.

Filling.—Set a tin vessel in a kettle of boiling water, and put three cups of hot water in the tin; take two tablespoonfuls of cornstarch and dissolve in cold water; pour gently into the hot water until it thickens, stirring all the time; then add one large tablespoonful of butter, one small cup of sugar and one tablespoonful of lemon or vanilla; let cool and spread between the cakes.

Custard Pudding.—Beat the whites of ten eggs to a stiff froth, add the yolks and beat again, first adding salt; stir in briskly one cup of sugar and flavoring to suit the taste; pour over the eggs and sugar one quart of boiling milk and beat thoroughly; set the pudding-dish in a tin of hot water and bake till the custard is set.

Chinese Camp, Cal.

BEEF A LA MODE.—Take a piece of the round of beef, beat it slightly and sprinkle with salt; then cut some pieces of uncooked ham and some lard about the size of a small finger; chop finely a little parsley, a couple of mushrooms and a shallot. Mix them together with pepper and salt, roll the pieces of ham and lard in them, make holes in the beef and thrust them in; lay the beef in the saucepan with a lump of lard, a few carrots and onions sliced; add a glass of wine and one pint of stock. Cover down closely and simmer for four hours, turning the beef over once or twice.

EGG OMELET.—Six fresh eggs, the yolks and whites beaten separately. One level tablespoonful of butter, one cup of new milk, into which one even tablespoonful of flour has been smoothly mixed; season with salt and pepper; pour without mixing into a hot, buttered omelet pan. Shake vigorously until the egg begins to thicken. Let the pan rest on the stove for about five seconds; then roll up the omelet. Tip the pan forward and roll the omelet with a knife in the same direction. When rolled, brown for about a quarter of a minute. Serve at once.

COFFEE PUDDING.—Soak the crumbs of a small stale loaf in some very strong black coffee; melt one ounce of butter, mix with it one ounce of sugar, one ounce chopped almonds and the beaten yolks of four eggs, then the whisked whites of three; squeeze out the bread slightly and beat it into the other ingredients, allowing sufficient to make the mixture of the consistency of a cabinet pudding; pour it into a buttered mold and bake it in a moderately hot oven, or boil and serve with sweet sauce.

LAYER NUT CAKE.—One coffee cup of white sugar, half a coffee cup of butter, half a coffee cup of sweet milk, half a coffee cup of cornstarch, whites of four eggs, two teaspoons of baking powder, flour to thicken; bake in three round tins. For the filling take one cup of sweet cream, one tablespoonful of cornstarch dissolved in cold milk; heat until it becomes thickened, then add one teaspoon of chopped hickory nut meats and two tablespoons of pulverized sugar.

TO KILL THE SMELL OF PAINT.—It is said that the smell of paint, which is frequently so unpleasant in both a new house and one that has been freshly done up, is easily removed by means of a few armfuls of thoroughly damped hay, which should be laid loosely about the rooms and passages and left for 24 hours, after which it may be taken away, and if necessary replaced by another lot.

GOLDEN PUDDING.—Mix well one-quarter of a pound each of flour, breadcrumbs, sugar and finely-minced suet. Add the same quantity of orange marmalade and one egg; pour into a well-buttered mold and steam 2½ hours.



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Business Announcements.

(NEW THIS ISSUE.)

Agricultural Implements—Baker & Hamilton, Windmills and Pumps—Woodin & Little, Washing Machines—E. W. Melvin, Sacramento. Agricultural Implements—P. P. Mast & Co., Fruit Driers—A. J. Hatch, Tools—G. G. Wickson & Co., Oils—Woodbury Oil Company, Van Ness Seminary—Mrs. M. B. Gamble, Box Strap—A. I. Hall & Son, The Oaks—Miss L. Tracy, Oakland, Field Seminary—Oakland, Sheep—A. G. Stonifer, Hill's Ferry, Cal.

See Advertising Columns.

The Week.

The week is full of politics, as the hosts of the Democracy are assembled at St. Louis. Even the telegraph wires are resonant with the notes of the brass bands and the shouts of the excited multitude. Grover Cleveland has just been enthusiastically nominated by acclamation as we are going to press. Mr. Cleveland's free trade ideas do not, however, seem to be as popular as his candidacy, for the telegraph says the Convention cannot determine to endorse his message, but may fall back on the old resolution of 1884, which was half and half. Nor does free trade seem to be a winning issue in the campaign, for Oregon at the State election on Tuesday defeated the free-trade Congressman.

Matters, other than political, are quiet. The fruit is coming on satisfactorily, and no new features of the crop are disclosed. Feed and grain are still favored by the cool, overcast skies, and in some places are making better showing than was anticipated. In the city the vacation season is casting its shadow before and cooling business ardor to a notable extent.

The Wright Irrigation Law.

Because of its importance in the advancement of California agricultural interests, we give on another page the full decision of the Supreme Court, declaring the constitutionality of the Wright Irrigation Law.

The law was a sort of a compromise between the two great forces of water rights and riparian rights, as set up by the landholders of this State. It grew out of one of the most important movements that has ever agitated our agricultural population.

When the gold seekers came here in 1849 all our natural resources were lying loose, owned by nobody, and protected by no law. Every man took what he wanted, land, water, timber, right of way, gold, anything of value to him.

While there was plenty for all, first come first served, was the universal rule. In case of dispute the pistol and knife often settled all the points, and the victor held the ground as in days of yore.

At last this rich abundance began to fail. Water was taken from the streams by miners, ranchers and ditch-owners, till the streams failed to reach their accustomed place, and the landholder on the lower ground found himself waterless.

This was peculiarly the case with Kern river in Kern county. Haggin & Carr had a monopoly ditch of large dimensions, capable of absorbing the whole river and plenty of room to spare.

Lux & Miller had previously gobbled up all the land below and wanted a living stream for the use of their stock and to make feed in the dry season. They sued Haggin & Carr for the water and for damages. They set up—

"That they were riparian owners under the common law of England. That the common law was the law of California. Under that law the water must flow to them for their use and benefit forever."

In the Superior Court of Kern county the defense was sustained, and the ditch took the water. But on appeal to the Supreme Court it was reversed, and the pleas of the plaintiff allowed.

That decision was erroneous, and must be reversed before there can be a water-peace in this State; and such a statute as will award the waters of the State to the true owners and the best interest of the people. That decision was given in utter ignorance of these facts—

"That the common law of England is law here only on these conditions as modified from time to time by the constitution of the United States and of this State, and by each and all of the statutes lawfully passed under the same.

That the inherent and inalienable rights of the American citizen give him privileges unknown to the common law of England, and which modify the common law at every step. That in England the theory is that all law is a grant from the king, and all rights not granted rest with the king.

In the United States this is just the reverse. All laws are grants from the citizen to the Government, and all not granted rests forever in the citizen, an inalienable right till he grants it.

There is every reason in California why the Supreme Court decision favoring the authority of the common law in this State should be set aside at the earliest day. Our lands need water. All the water we have is probably not enough for our final use, and there is need of an absolute control by the people, and a distribution at once equitable and for the public good.

The Wright bill is a good effort in this direction, and the decision of the Supreme Court makes it solid and reliable. Our people may safely proceed to operate under it. Our agriculture will take a step in advance in that way. But the Wright bill needs two additions that are indispensable to a just and permanent law:

First, a decision of the Supreme Court, or

an amendment to the Constitution, that riparian ownership of running water is forever abolished, or has no foundation in this State.

Second, a law of distribution of all water brought under control for use, to all persons alike, as the fourteenth amendment to the Constitution of the United States commands.

The riparianist will not forget that the water cannot be taken from him under this law. It must leave him a secure and equal share.

In fact the legislators and the courts of our country have not seemed to realize this fourteenth amendment yet. It is the best law ever yet entered on a human statute book. It should be posted up in every legislative hall and every court:

"All laws must be just and equal to all persons, and all must have the equal protection of the law."

All else is void, and courts are bound to set it aside. This alone secures the water to the whole people.

Orange Shipments.

Our southern exchanges bring very satisfactory reports of the shipments of oranges during the season which is now closing. The total amount of oranges shipped from various producing points in Southern California reaches 2250 carloads, and of these Riverside claims nearly 750 carloads, or about one-third. These figures are very creditable, and the rapid extension of the interest of the whole southern district may be inferred from the following record kept by the *Riverside Press* of the shipments from that place for a term of years, as follows:

Crop of	Carloads.
1880-81.....	15
1881-82.....	42
1882-83.....	45
1883-84.....	50
1884-85.....	456
1885-86.....	506
1886-87.....	375

The crop of last year was short for temporary reasons, and, as the *Press* notes, the increase of product in 1888 to 750 carloads "is an excellent showing for a year that has been noted for its cold winter and severe north winds. The prices, though perhaps not as high as the year previous when we only shipped 375 carloads, just one-half the present crop, have been very satisfactory, and there are many orchards that will net their possessors \$500 and upward per acre."

Much progress has also been made during the time covered by the *Riverside* record in transporting and handling the fruit at the other end, and in view of the growth of the interest, the facts are pertinent. The *Press* says:

When the orange-shipment business opened a few years ago, the price per car to Chicago was \$1200, and no systematic arrangement had been made to take care of the fruit upon its arrival at the Eastern cities. Nor did the shippers understand the art of packing in a manner to enable the fruit to stand the long journey. Since that time experience has taught many valuable lessons, agencies have been established in Chicago, New York, Philadelphia and other large cities, and the price has been reduced from \$1200 per car to \$220. From shipping on ordinary freight trains the business has increased so that regular orange trains of 10 to 15 or more carloads each leave twice a week, or oftener, if the shippers wish.

If all goes well the orange product of next year will show a notable increase, as the trees are gaining age, which gives them increase in geometrical progression.

HORTICULTURAL SOCIETIES.—B. M. Lelong, Secretary of the State Board of Horticulture, contemplates the publication of a complete list of local horticultural societies or fruit-growers' clubs, with the officers of each. There is call for such a publication to enable fruit-growers to communicate with each other for mutual information or aid. Mr. Lelong has the information he desires from some parts of the State, but to secure accuracy and completeness he would like to hear from the secretary of every organization in the State of the kind described, with names and post office addresses of officers, times and places of meeting, etc. We hope every one who sees this notice will write to Mr. Lelong at 220 Sutter St., S. F.

It is believed in local railroad circles here that the Southern Pacific Company will extend its Santa Rosa and Carquinez line into Mendocino and Humboldt counties at an early day.

The Labor Supply.

We understand that the fruit-growers of the Vacaville district are hearing favorable things of their labor supply for the coming fruit crop. We do not know how large the coming force may be, but we understand that many families from a considerable distance, as from Lake county, propose to come in and camp and work during the fruit harvest. There should be a considerable amount of this kind of labor available both in Vacaville and in other fruit centers. Many new settlers, whose trees are under bearing age, might increase their cash supplies considerably by taking themselves and their families to the orchards where young and old can earn considerably more than their living for two or three months. In many cases persons and housekeeping outfit could be loaded into the big wagon and thus transported considerable distances. We wouldn't much mind even turning ourselves and our half-dozen babies loose in one of the fine peach orchards for the summer if we had a pair of automatic scissors to run the *RURAL* with during our absence.

The bad boy is protruding again in the labor problem. This bad boy is a hard case and seems to fit no place very well. The last account of him comes from the Spreckels ranch, in Santa Cruz county, in a letter to the *Call*, which says:

The white boys drove all the Chinese off the ranch and then went on a strike. The cause of the trouble originated from the endeavor of the foreman of the place to lower the wages of the men to the sum received by boys. At the same time the wages of the Chinamen were increased. The men employed are very indignant about the matter and seem to have the sympathy of the community.

The local paper, the *Santa Cruz Sentinel*, does not give quite the same version. It says:

On Tuesday there was a strike among the boys employed in cultivating sugar beets on Spreckels' ranch at Aptos. The boys demanded that they receive as much as the Chinamen who are employed on the same place. They were receiving \$1.15 per day and wanted \$1.25 per day. As their demand was refused they quit in a body and avenged themselves by stoning the Chinamen, who fled from the scene until after the strikers had left. There were 25 boys and about 15 Chinamen employed on the ranch.

It is impossible to tell just how the affairs stood from these conflicting accounts, but general experience in this state is that farmers have no use for many boys unless their parents go along to spank them. They don't seem to be comfortable too far away from the threshing machine.

Teach Them to Shoot.

The telegraph brings an account of the hindering, gagging and violating of an unprotected young woman in Yolo county by two beasts in human form who gained entrance to the dwelling under pretence of asking food. No wonder the community is aroused and the country is being scourged, and no wonder if the villains are hung with as little mercy as they showed their victim.

These outrages have fortunately been few in California, considering the many isolated places in which women are often left unprotected, but one such occurrence as hinted at should give its lesson so sharply that no repetition should be needed. The lesson is this: Women must be armed and taught to protect themselves. If this were done, there would be far less evil practiced upon them. Any woman called upon by circumstances to journey alone or abide alone should be ready to protect herself against human fiends. In the case in Yolo county, it is reported that the poor girl ran for a shotgun, which was wrested from her. A shotgun in such a case is of little more account than a cannon would be. Arm them with small arms, which talk quickly and which can be thrust out and fired into a wretch before he can lay his fiendish hand upon his victim.

We do not believe in the idle packing about of weapons by those who do not need them or who do it for braggadocio; but for a woman whose danger is great and whose natural means of protection small, we would prescribe a revolver. Nor should it be laid away in some inaccessible place and the charges drawn. If you are in danger, daughters, sisters, wives, see that you have arms; that you are not afraid of them; that you know how to use them; and then shoot a wretch who assaults as you would a mad dog—and the community will commend you for saving yourself and freeing society of a monster.

The University Experiment Stations.

Three stations have now been established in the order in which the respective donations of land and subscriptions for buildings were tendered, viz.: Near Jackson, Amador county, near Paso Robles, San Luis Obispo county, and near Tulare City, Tulare county. Financial considerations will prevent the acceptance of any additional stations for this year.

Each one of the stations named has a tract of 20 acres of land, deeded to the University in fee simple, with the condition that the land shall revert to the original owners in case the station ceases to be occupied for the purposes specified. Two additional and adjacent pieces of six acres each have been tendered at the Amador station in order to complete the representation of soils.

At the Amador station the following improvements have already been made, or are being made, by the donors: The land has been cleared of brush and plowed; a rabbit-proof (board and wire) fence incloses it, a new wagon-road has been made, nearly a mile in length, for convenient communication with the county road to Jackson; a two-inch pipe is being laid to connect a water-wheel on the Amador ditch with a reservoir to be established on the highest hill, from which a smaller pipe will lead to the buildings, which are not yet begun. A reservoir of at least 20,000 gallons capacity is ordered to be constructed, and one of the additional six-acre tracts will be fenced as above by the University. All the improvements are being made under the local supervision of Hon. A. Caminetti.

At the Paso Robles station, where the ground was quite heavily timbered, the grubbing has been done and the holes filled, so that after removal of the wood and refuse the land will be ready for the plow. A six-board fence (with cap) has been built around the tract, and a well for water supply will be bored as soon as a well-borer can be secured. All these improvements are made by the University, under the local superintendence of J. V. Webster of Creston.

The Tulare station, a tract of 20 acres within 1½ miles of the town, donated by Mr. B. F. Moore, has but just been accepted and surveyed. Being treeless, it requires no preparation beyond fencing, and the boring of a well, which, in this case, is intended to serve for irrigation as well as other purposes, the supply of ditch water being somewhat uncertain although within reach. As water rises within ten feet of the surface, an irrigating pump and horsepower will be set for the purpose. These improvements will be made at the expense of the station fund. For the erection of buildings \$3000 has been subscribed in Tulare City and the neighboring region. Mr. B. F. Moore of Tulare City will be in charge of the improvements.

It is expected to have the buildings at all these stations ready for occupancy by Sept. 1st, when the station foremen will be put in charge.

At Berkeley the new building being erected for the purposes of the Central Station, by

joint expenditure of University and United States funds, is about closed in and will be finished and equipped by the 1st of August probably. The extra work placed upon Prof. Hilgard by the inauguration of the system of outlying stations is considerable, but he is prosecuting it with his usual earnestness and devotion.

A Trust Condemned.

The "trusts" seem to be having a hard time, as such iniquitous organizations should have. Congress and the Legislatures are after them, and the courts are not indisposed to condemn their aims and methods. We are glad to see the Supreme Court of California is moving in this direction. An opinion was rendered June 4th in the case of the Santa Clara Mill and Lumber Company vs. Isaac W. Hayes and Thomas B. Hubbard, and the decision is described in Thursday's *Chronicle*. The action was brought to recover \$10,000 for breach of contract. The defendants were manufacturers of lumber near Felton, Santa Cruz county, and agreed to deliver to the plaintiff, a corporation, during the lumber season of 1881, 2,000,000 feet of lumber at \$11 per thousand, the condition of the contract being that the defendants should not manufacture any lumber to be sold to other purchasers during such period in the counties of Monterey, Santa Cruz, San Benito or Santa Clara, forfeiting \$20 per thousand feet for any lumber sold to other parties. The defendants failed to comply with the contract.

The lower court found that the plaintiff owned three mills near Felton; that it leased all

the mills it could and made contracts similar to that with the defendants where a lease was impossible; that the sole object of the plaintiff was to "corner the market;" that the direct effect was to limit the supply of lumber, and that dealers at Felton could not buy lumber in any considerable quantity that year; that the contract was against public policy and therefore void, and that the defendants had the right to repudiate it.

This is getting at the essence of the whole business. If contracts made with corners, or to erect corners cannot hold, then the corners and trusts will speedily fall to pieces by their own weight. A wise judge!

AGRICULTURAL GRADUATE.—A young man who will graduate in the agricultural course at the State College of Maine writes to Prof. Hilgard that he is well acquainted with farming and gardening in Maine and would like to work under the instruction of a progressive California horticulturist for a compensation. Any one who thinks he can use the young man to advantage may write to Prof. Hilgard at Berkeley, stating kind of work to be done and what compensation will be given.

CALIFORNIA MAPLE SUGAR.—Now that the announcement is made of the making of sugar from the broad-leaved maple of California in Nevada county, it transpires that the sugar value of this tree has been practically demonstrated in other counties. The tree is abundant in the mountain counties, and Walter C. Robinson, living across the summit from Buck's ranch, Plumas county, writes to the *Oroville*

Register that he has a maple tract and for several years has made maple sugar. He sends a sample cake that has been kept for three years past. John Tucker at Tuckerville also has a maple camp, and in one season he made about 50 pounds. His sugar is pronounced by all to have a fine flavor. The *Register* pronounces the sample sent by Mr. Robinson of high quality.

Early Lambs.

Even if the tariff reformers succeed in knocking the wool interest to pieces, they cannot stop the production of mutton; in fact, if the large shearing flocks are decimated, there may be a better business for a limited number of people in growing mutton sheep. Those who get "spring lamb" in the fall will be the ones who will get the most money. This business is pursued by some of our farmers to a limited extent, but not so far as would probably be profitable. To all who contemplate diversifying their farming in this way, it will be interesting to see the arrangements and know the practice of F. E. Bowditch of Millwood Farm, Framingham, Mass., who is a leading grower of early lambs for the Boston market.

The engravings on this page show Mr. Bowditch's yards and shelters. Our climate does not demand such complete shelter as is needed at the East, but still the arrangement shown is interesting and may be suggestive. Fig. 1 has about 350 feet of walk along side of the pens. The second shed, Fig. 2, is about 270 feet long. These sheds are subdivided into pens, in each of which are 30 to 40 sheep. They have beside a number of box stalls for rams, ewes that refuse to own their lambs, and sheep that need doctoring. In connection with these are shearing rooms and storage quarters.

Mr. Bowditch uses Hampshire and Horned Dorset breeds of sheep of which we will speak at another time. Lambs intended for breeders are not forced but are allowed to maintain a normal growth. A little grain is kept constantly before those intended for market, and at four or five days old they begin to nibble it a little and it is not uncommon to get lambs at 30 days old that will eat one quart per day. It is composed of two parts finely ground cornmeal and one part of process oilmeal.

This year Mr. Bowditch has added to this feed new cow's milk; and he gives the fattening lambs all that they can eat, keeping two cows expressly for the purpose of acting as wet nurses to the lambs. They are fed so scientifically that at 35 days old they will dress about 25 pounds each, and are ready for market as may be required.

There is running water in each pen, and Mr. Bowditch claims that a sheep will drink from four to six quarts of water daily. Mr. Bowditch has every convenience for slaughtering and dressing, and in 15 minutes from time of leaving the pen, the lamb is in the "cooler" ready to be packed. This insures a good healthy article, much better than when the animal has been transported long distances and is more or less feverish and exhausted.



Fig. 2.—SOUTH SHEEP-YARD, MILLWOOD FARM.



Fig. 1.—NORTH SHEEP-YARD, MILLWOOD FARM.

Pebble Beach, Pescadero, California.

A Sea Beach on the California Coast Remarkable for Silicious Gems and Mineralogical Curios.

(Written for the Press.)

Officers of the coast survey have characterized the famous Pebble beach of Pescadero as one unique of its kind and without a counterpart on the whole extent of our Atlantic and Pacific coast-lines.

Its distinguishing feature is the mass of highly polished, pure silicious gravel bordering the sea at this locality, in which the topaz, carnelian, onyx, chalcedony, turquoise, agate and jasper pebbles are found, buffed and perfected by ages of wave action as if by a lapidary.

Wave action has also eliminated all soft and angular minerals from the mass, save occasional fragments of abalone shells and chalcedony, and only the hardest stones survive the surf's eternal attrition.

Many of the topazes and carnelians are of rare clearness and beauty, and may be matched by patient search in size, form and color for jewelry, or for display in mineral cabinets.

Some fine pebbles of milk-and-fire opalescence are found; and the surf-polished crystals of pure, pailucid quartz glisten like dewdrops in the multi-colored gravel.

The carnelians are of all tints, from blood-red to the palest pink or purple; and in some rare specimens the color is singularly confined to the middle of the stone, while the exterior is perfectly limpid.

Here, too, are found agates of every color and combination, the choice of which make handsome bracelets, watch-charms and other personal trinkets when cut and set. The smaller gems, however, of clear tint, perfect form and suitable size need no touch of art or lapidary's wheel, but in their natural state, set in contrasted colors, are jewels at once unique and of special interest. Stones of this class are generally small.

But chief among the mineral curiosities of the beach are the so-called "water drops," which are most abundant on a piece of sea-marge north of the main deposit, known locally as "agate beach." These are chalcedony pebbles, more or less translucent, and usually about the size and form of a lemondrop, having a globule of water imprisoned in a central cavity, and an air bubble which, when small, looks dark by transmitted light and moves within like a living insect.

They are highly prized and much sought after by mineral and curiosity collectors. Mrs. General D. Mond of San Francisco is accorded the credit of being first to discover and direct attention to these curios of the beach.

To the non-scientific the stone-imprisoned water is a mystery not less puzzling than the milk in the coconut. If it had percolated from without it should be sea-water; on the contrary it is perfectly fresh.

The explanation is that the aqueous drop was enclosed by the silica during the process of crystallization.

These curios, though rare, are not unknown in other parts of the world; and they are occasionally met with in the vugs or cavities of quartz veins during mining operations.

It is evident, however, that only under exceptional conditions of temperature can they exist on the surface of the earth as at Pescadero, since either a temperature below 30° would freeze, or powerful sun rays would expand the water within and fracture the silicious bulbs.

On other sea-beaches washed crystals of smoky and limpid quartz occur; such crystals are plentiful at Long Branch, but I found there no other varieties worthy of note, and though many of these are beautifully clear while wet, they lose their limpidity when dry, owing to forcible impact one with another in the strong surf, which, as microscopic inspection shows, covers their surfaces with minute fractures.

At Pescadero, however, the silicious gem materials occurred in extraordinary variety and profusion; the sea floor and beach contour favored accumulation and a gentler attrition, and we have there in the fine lapidary finish of these lustrous stones the ultimate product of patient Nature and the tireless sea toiling through untold lapses of time.

Pebble gatherers are enthusiastic in their pursuit, and return again and again to the charmed precincts of the beach for new varieties, more perfect specimens, or to complete "sets."

And surely no hobby could be more innocent, more full of restful enjoyment and physical good than the gathering of these pleasing and imperishable mementoes in the exhilarant sea air and climate of the Pacific Coast, and in so delightful a locality.

But beyond its distinguishing feature, the Pescadero beach is otherwise interesting and picturesque. The receding tide leaves wide stretches of kelp-covered reefs, where fine sea-mosses and the beautiful abalone univalves may be obtained by the more adventurous visitor. Here, also, are things of interest to geologist and naturalist in the lithology of the shore, the fantastic carving and surf sculpture of the rocks, the pebble-paved pools and basins in the uncovered sea floor, hollowed as if by art, fit baths for the sea nymphs, or fabled Amphitrite, and natural aquaria rife with varied sea life, lined with mosaics of purple-spined sea-urchins, limpets, and many-tinted sea-anemones.

The botanist, too, especially one unfamiliar

with the California flora, will find much of special interest in the wildflowers, grasses and shrubs of the immediate coast-line, if he times his visit rightly, say in the period between March 1st and the close of July.

There is for the angler fairly good trouting in the Pescadero river, which rises in the higher Coast Range and courses through the village to the sea.

But better fishing may be enjoyed in several fine trout streams a few miles southward; and in the grand redwood forests east of the village, hunters and summer parties can find unrivaled retreats and camping grounds.

The Beach and the Pebble Seekers.

A mile in lineal extent north and south will embrace nearly all of the Pescadero beach deposit; and "Bobbie beach" proper is but a part of this, a crescent-shaped sweep of sea marge sheltered between rocky promontories and backed by arenaceous bluffs.

Around this crescent, on the seaward slope of clean, surf-washed and sun-warmed gravel, lie the pebble gatherers in all postures of ease, singly and in groups, sorting with unflagging interest the bright colored mass, and dropping their selections into wide-mouth bottles, cigar-boxes, or muslin bags made for the purpose.

Here is one who, with the indiscriminate zeal of a neophyte, finds lovely things on every hand, and speedily fills her bottle, her handkerchief, and other improvised receptacles with clear and many-colored stones, gems all, to her untrained eye; but here is another assiduous seeker more advanced in pebble culture, whose critical taste discards all but the perfect in color and form, and whose little vial happily holds all the gleanings of patient hours.

A smoke rises on the beach and a call is heard. This is the welcome signal that lunch is ready; and what an impromptu and enjoyable affair it is truly! Here is gyping under most charming conditions!

A campfire has been built from seadrift, and a tablecloth covers a flat-topped log, upon which cups and plates are arranged; the coffee is hot, and the sandwiches, eggs, cheese, cold meats, cakes, pies, etc., with which the baskets were bountifully filled by our hostess before leaving the hotel, are ready for appetites made keen by the pulse-stirring drive to the beach, the bracing seabreeze and the stimulus of genial rivalry in a common quest.

Formality is banished, and all the hotel guests, though but chance met to-day, mayhap eat and chat with refreshing unreserve together, after which the various finds are shown and compared; but briefly, as the fortunate are eager to renew the search, and the less lucky are inspired with new hope on seeing the "beauties" found.

The village of Pescadero (formerly a Spanish fishing settlement, as the name implies) lies out of the beaten tracks of tourists and traffic in a picturesque little valley, through which flows the Pescadero river, a limpid, mountain-trout stream, the ideal "brook" of Tennyson's poetic fancy.

It is nearly midway on the coast between San Francisco and Santa Cruz, and the nearest railway stations are at San Mateo and Redwood, from which points, and also from Santa Cruz, daily stage connections are made.

The best route is from San Francisco by the Southern Pacific railway to San Mateo; thence by stage of a very picturesque section of the Coast Range, passing through Spanishtown (Halfmoon Bay) and the ranches that border the sea, an enjoyable and typical California stage-coach ride of 30 odd miles.

But the outward trip from Pescadero by coach to Santa Cruz is a scenic treat (yet more delightful and varied character, and the traveler is alternately whirled through the foamy beach-surf of the Pacific, under cliffs, and over steep mountain buttresses, through sequestered ranches, hamlets and forest solitudes to California's greatest seaside resort; and from there through the grand redwoods and rugged scenery of the Coast mountains by the serpentine Narrow Gauge R. R. to Oakland and San Francisco.

The famous beach is two miles from the village, and there are no houses or accommodations for sojourners nearer thereto than the Swanton House.

Parties with camping outfits pitch their tents on the bluffs near the shore; but the hotel guests and villagers, according to ability or inclination, either walk to and from the beach, or go down in staging parties, which are usually made up in the morning soon after breakfast.

Pescadero is not a rendezvous of fashionable folk, nor a watering place in the usual sense; but it is a place of special attraction to anglers, hunters, campers, tourists and a cultured class whose tastes lean not to crowds and display; a favorite resort of many San Franciscans who periodically fly from the city's rout and turmoil for a term of restful change, and a spot of memorable charm to all who find joy with Nature in forest and stream, on mountain and beach, and who love the luxury of "old clothes" and the freedom of an unconventional life.

Good accommodations at reasonable rates are furnished at the Swanton house, a comfortable, unpretentious hotel with a number of detached one-story cottages for families and others desiring to dwell together.

These are bordered in roses and climbing vines, and front a pretty garden where flowers bloom almost perennially among a profusion of shrubs, exotics and shade trees that never know the blight of winter frosts.

It was from this umbrageous haunt of birds that on the odorous morning air came to my waking ears the ecstatic song of the California linnet from whose mellifluous throat, after a preluding "chic-chic," poured better-sketched a marvelous mass of liquid syllables—a carol as sweet and joyous, surely, as ever bubbled from bird heart to greet the rising sun. And between these impetuous rhapsodies, blending with the susurrs of Woodbine and acacia leaves, came dreamily to the sense the far-away lullaby of sea-murmurs, borne up from the estuary where the surf toils with the out-flowing waters of Butano creek and the Pescadero.

Strangers on the Pacific Coast are often troubled with the Spanish nomenclature there prevalent. The correct pronunciation of some familiar California names can be learned by attention to the rhyme and measure of the following jingle:

A man named Mayo
Came from Vallejo (-layho)
To San Mateo
One summer day.
Inquiring "Where, O,
Is Pescadero?"
And what's the fare, O,
To San Jose?" (Hozay)

MILES J'ANSON.

Woodside, N. J., May 7, 1888.

Santa Barbara Notes.

EDITORS PRESS:—This county is one of the fortunate ones this season, as the crops promise well in almost all particulars. The lack of rainfall is being counterbalanced by heavy dews and fogs, thus keeping the grain and bean crops growing right along. The hay crop is somewhat lighter than usual, but is of unusually good quality. Alfalfa is becoming more and more a staple product, a large percentage of the land being eminently suited to the growth of this valuable forage plant, producing from four to six good crops annually without irrigation.

Out worms are doing some damage in certain localities cutting down tender grape shoots as well as vegetables; but fortunately this pest is confined to small localities.

All kinds of fruit except apples and pears promise well. Apples generally bloomed well but dropped their fruit. Pears blossomed exceedingly full but the fruit blighted and fell off, due, probably, to the foggy weather.

Walnuts promise a good average, and are good size for this season of the year. Oranges are blooming exceptionally full, being a mass of white, and give indications of setting well. Oranges blossomed well but did not set full. Grapes are now in full bloom and promise a good yield. Being so close to the coast grapes require special care to prevent mildew, and are not very successfully grown. The quality of the grapes is good, but they bear sparingly, and so far no way has been discovered to make them fruit as heavily as in the interior counties.

The trees and vines are generally very free from insect pests and diseases, the cottony cushion scale being the only one requiring active measures to keep it down, and this, fortunately, is not widespread.

Improvements in various parts are going on. The work of paving State street in Santa Barbara is still going on with vigor. More and more artesian wells are being sunk. A fine flow has lately been struck at the Lughlin hotel, in Carpinteria, filling a two-inch pipe. The supply of water seems only restricted by the size of pipe put down. Considerable building is being done both in city and country. Mr. Blood, Sr., a veteran agriculturist, is putting up a fine house on the place which he sold to La Serena Land & Water Co., in Carpinteria valley, and in which he still holds some stock. The house will cost several thousand dollars, and is on a lovely site overlooking the Carpinteria valley, Santa Barbara city, Montecito, the Islands, ocean, etc.

The Montecito Hot Springs have been reopened in good style and is having a good run of custom. The company of soldiers that is to spend the summer at Santa Barbara will have an enlivening effect on society circles.

Carpinteria.

L. B. CADWELL.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., Room 3.

HALL'S SARSAPARILLA!

THE BEST BLOOD PURIFIER AND TONIC ALTERNATIVE IN USE.

It cures disease originating from a disordered state of the Blood or Liver. It invigorates the Stomach, Liver and Bowels, relieving Dyspepsia, Indigestion and Constipation; restores the Appetite and increases and hardens the Flesh.

It stimulates the Liver and Kidneys to healthy action, Purifies the Blood and Beautifies the Complexion.

Sold by all Druggists.

J. R. GATES & CO.
417 Sansome Street, S. F.

What's the Matter With Your Blood?

Cleveland Press.

As much blood goes through the kidneys as goes through the heart.

There is nothing startling about this fact, except it be a revelation. Many people have but a dim idea of the real work of the kidneys. They not only drain the water from the system, but also the poisonous matter which that water holds in solution to carry out of the system. Over half the time, however, the kidneys fail to do this work!

What is the result?
Gradual failure of strength and health and eventually death by Bright's Disease or some unsuspected kidney disease.

But particularly in the spring of the year, when one's blood is filled with poisonous waste, as it invariably is at that time, you feel depressed, tired, languid, do not seem to have any disease, but your system does not respond to the genial warmth of summer and spring as formerly.

You had better look out!
The kidney poison is accumulating in the blood. Tonics won't do any good, they simply treat effects. You can only secure a radical, thorough renovation of the system by the prompt use of Warner's Safe Cure, which is the only reliable, scientific specific for the blood, because it is the only known specific in the world for the kidneys, which are the only great blood purifiers.

GEORGE RIDGEWAY, 93 Murison St., Cleveland, Ohio, Ex-Dputy Sheriff, from uric acid poisoning of the blood became, at times, totally blind, and was troubled with great giddiness. In 1882, after suffering for many years, and being distressed beyond measure by thorough y purified his blood by means of Warner's Safe Cure, and says: "I have never had a day's trouble since, and have fully recovered my health. Warner's Safe Cure saved my life."

REV. J. P. ARNOLD, of Camden, Tenn., in 1878 and 1881 was grievously afflicted with many abscesses, caused by kidney poisoned blood. The abscesses were alive for many months and caused great distress. After thoroughly purifying his blood with Warner's Safe Cure in 1882, he reported that in 1888 he was 80 years old, over 70 years of age, and able to preach regularly.

CAPT. W. D. ROBINSON, United States Marine Inspector for the chain of lakes, residence, Buffalo, N. Y., in 1881 had a slight eruption on his hands. It soon spread to his face and he was almost blind. His body was covered with light flaky scales. His skin itched excruciatingly. For two years he gradually grew worse, trying almost everything imaginable. In 1883, after having given up hope of recovery, he began using Warner's Safe Cure. "Twenty bottles," he says, "completely cured me, and to-day I am strong and well as ever."

JAMES WIGHT, 276 Fifth Avenue, New York, suffered for years from inflammatory rheumatism—a blood disorder—but in 1883 was fully restored to health by Warner's Safe Cure and remains well to-day.

The four above cases are as good as a million. They prove what is stated, that the organ that removes the impurity from the blood most effectually is the kidney, and for this when impaired there is but one sound, rational method of treatment.

Dr. Dio Lewis, who was opposed to the use of medicines in general, thought so highly of this remedy that he said if he had a serious kidney disease, he should use it.

Ask your friends and neighbors what they think of it.

In the spring of the year, when debility is so prevalent, and the seeds of disease are sown that may have a fatal blossoming before the fall, the prudent man and woman will give the system a thorough cleansing and purification.

Carriages.

We are receiving 10 carloads of Carriages, Buggies and Wagons from the Briggs Carriage Company of Amesbury, Mass., which will be sold at prices that will be satisfactory, considering style and workmanship. Quality of material guaranteed the best.

F. A. BRIGGS & CO.,

220 & 222 Mission St., San Francisco, Cal.

Cost of Spraying by the Woodbury Tree Cleanser less than 2 cents per gallon. Address, WOODBURY OIL CO., 123 California St. (room 26), San Francisco, Cal.

IT STANDS AT THE HEAD!

"DOMESTIC"
THE LIGHT RUNNING

DO NOT FAIL to SEE THE "DOMESTIC" Before Buying a Sewing Machine.

It is the leader in practical progress. Send for price list J. W. EVANS, 29 Post St., S. F.

SPENCER PIANOS

Latest Improved Repeating Action (PATENTED)

TO BE UNSURPASSED.

Durability Guaranteed in any Climate.

F. W. SPENCER & CO.,

723 Market Street, San Francisco, Cal.
Second Floor, History Building.
Largest Piano Warehouses in California. Catalogues and prices by mail. Visitors always welcome.

Lands For Sale and To Let.

Agricultural and Grazing
LANDS FOR SALE.

7975 Acres of fine grazing and agricultural land, including 4000 head of fine grade stock sheep; abundance of water; 9 miles from Merced City, and near Merced River; price, \$7.25 per acre; 1000 acres good wheat land. Address

OSTRANDER & SONS,
Merced, Cal.

Or N. C. CARNALL CO.,
624 Market Street, San Francisco, Cal.

CHICO VECINO!

Best location in the State of California for beautiful suburban

HOMES.

Located near the thriving city of CHICO, Butte County, California. Subdivided from the heart of the famous

RANCHO CHICO,

The well-known property of

GENERAL JOHN BIDWELL.

Town Lots and acreage property, from fractions of an acre upward. TERMS REASONABLE. For further particulars, address:

CAMPER & COSTAR, Real Estate Agents,
Chico, Butte Co., Cal.

Or WM. H. MARTIN,
809 Market Street, San Francisco, Cal.

Artesian Belt Land
AT LOW FIGURES.

The southwest quarter of Section fifteen, Township twenty-three, Range twenty-four west, one hundred and sixty acres of rich level land, near the center line of the Artesian Belt in Tulare County, five miles northwest of Alila, on the S. P. R. R., is offered for sale at the exceedingly low price of fifteen dollars per acre. Address, "Landowner," Box 2361, San Francisco P. O., or to the care of this paper.

FOR SALE OR EXCHANGE.

Ranch of 200 acres on Coquille River, Coos County, Oregon; 40 acres bench land 160 acres bottom, 80 acres under cultivation; 1 1/2 miles from Coquille City, one-half mile from steamer landing. An abundance of fine spring water on place. Price, \$1500 cash, or will exchange for California property in vicinity of San Francisco Bay. For further particulars apply to
H. GOETZ,
659 Clay St., San Francisco, Cal.

LAND & WATER FREE!
800 Acres Rich, Level Land.

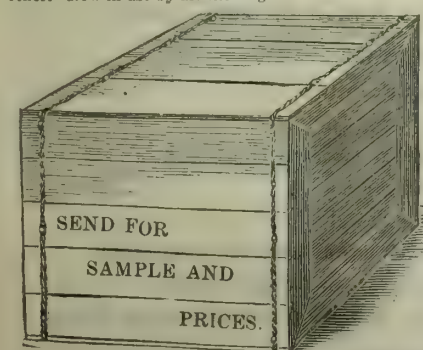
To some one who will summer fallow and cultivate well, will be furnished free water and use of 160 acres of good land (S. E. Sec 13, T. 21, R. 23) within 9 miles of Tulare, S. W. Forty acres formerly plowed. Land on all sides cultivated and pastured. Water for irrigation (if needed) free. Also (without water) 640 acres (Section 13, T. 23, R. 24), four miles westerly of Tipton and S. F. R. R., all in Tulare County and the Artesian belt. For particulars call on E. M. DEWEY, 7 miles S. W. of Tulare, or A. T. DEWEY, 220 Market St., San Francisco.

Fruit Shippers' Box Strap.

A SAVING OF MONEY, TIME and LABOR.

The Best,
Cheapest and
Strongest

Box Strap in use. Can be applied in half the time of any other. Now in use by all the large houses.



TWISTED WIRE BOX STRAP.
On Reels of 4000 to 5500 feet.

A. I. HALL & SON, Sole Pacific Coast Agts
528 & 530 Market St., San Francisco.

Engraving Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of this paper.

THE LOUISIANA TRACT!

SITUATE ONE MILE FROM THE FLOURISHING

City of Sacramento,

With a Population of 30,000, and

1/4 MILE from Terminus of an ELECTRIC RAILWAY, now in course of construction.

SUBDIVIDED INTO 5-ACRE LOTS.

Soil is Deep and First-Class Fruit Land.

CITRUS AND ALL DECIDUOUS FRUITS, and the choicest of Plants reach the highest state of perfection upon this soil.

30 ACRES OF TRACT IS GOOD ALFALFA LAND, from which three crops a year can be cut. 5 ACRES IN FRUIT, well attended to, will make a handsome income. One Acre in Strawberries will net \$400 a year.

WATER IN ABUNDANCE at a depth of 30 feet. One Windmill, costing \$60, will irrigate five acres.

PRICE FROM \$175 TO \$250 PER ACRE.

TERMS.—One-fourth cash. Deferred payments in five annual installments; interest at 7 per cent, free from taxes. Title perfect.

Healthiest Location and Best Market in the State.

—APPLY TO—

EDWIN K. ALSIP & CO., REAL ESTATE AGENTS,
SACRAMENTO, CAL.

Catalogue of Lands issued monthly. Send for one.

PALM VALLEY!

TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land?

DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10 acre lots, which they are now selling at \$200 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. Two hundred acres have now been sold on this basis, starting at \$150 per acre. The price is now \$200 per acre.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They have completed a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

BRIGGS, FERGUSON & CO., General Agents,

314 California Street, - - - - - San Francisco, Cal.

SANTA YNEZ,

Santa Barbara County, California.

THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil. TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for home or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

E. de la OUESTA, Agent, Santa Ynez.

McCLUNG & PRAY, Agents, 325 Montgomery St., San Francisco.

SIDNEY LACEY, Agent, Los Angeles.

COOPER & DREYFUS, Agents, Santa Barbara.

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—THE—

IRON TURBINE
Wind Engine

—AND—

Buckeye
Force
Pump.

The most powerful and durable
Combination for Raising
Water in the World.

SEND FOR DESCRIPTIVE CATALOGUE.

P. P. MAST & CO.,

31 Market St., San Francisco.

I AM OFFERING FOR SALE

—AT—

GREATLY REDUCED PRICES!

A LARGE STOCK OF

Agricultural
Implements!

—CONSISTING OF—

Headers, Mowers,
Rakes, Plows, Harrows,
Cider Presses,
Wind Mills, Etc.

Full information and prices furnished on application.

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Self-Playing Organ.

An Automatic Organ Combined with an
Ordinary Five Octave Organ.

No Teacher or Practice Necessary.

ANYBODY CAN PLAY the latest and most difficult music of every class. Every home should have one. Send for descriptive circulars, prices and terms to

KOHLER & CASE, 137 & 139 Post St.
Dealers in all kinds of Musical Goods.

GOOD CROPS EVERY SEASON WITHOUT
IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

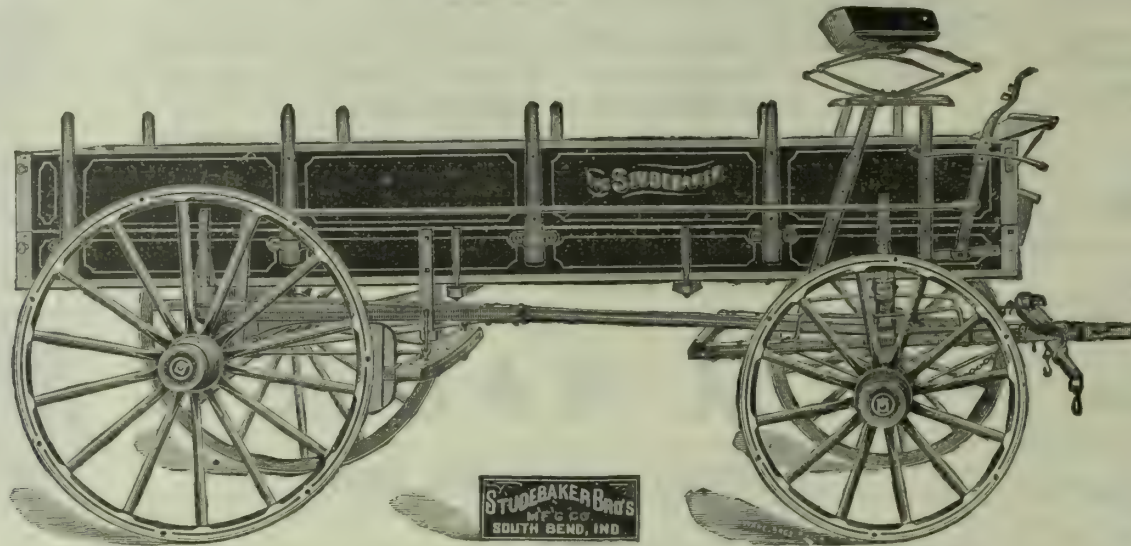
SANTA CRUZ COUNTY.

Address, H. MEYRICK, Box 5, Santa Cruz, Cal.

HEADQUARTERS

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Wagons, Buggies, Carriages,



STUDEBAKER BROTHERS MANUFACTURING COMPANY,

201 and 203 Market Street,

San Francisco, Cal.

E. E. AMES, Manager.

Send for Catalogue.

POWELL'S PATENT DERRICK.



MOVING.



UNLOADING.

Derricks complete, with ropes and block (no nets).....	\$120 00
One long net for one wagon.....	22 00
Two short nets for one wagon.....	32 00
Powell's Patent Net Blocks, per pair.....	8 00
Powell's Patent Foot Blocks, each.....	5 00

IMPORTANT FEATURES.

The entire wagon load is hoisted up in a center opening net, by a self-braced Portable Derrick, which is moved from stack to stack ground without being taken down. Half an hour is ample time to move and set. Two nets can be used in each box, and the load taken out in two parts by having a partition in the box. Any farmer can at once see many advantages gained by the use of this invention.

One large or two small Nets used for each wagon. Parties having boxes longer than 16 feet should order two nets for each box.

In ordering nets, send inside length of box, and state whether one or two nets are required for each.

In Use Over 15 Years and never One Returned.

H. C. SHAW PLOW WORKS,

MANUFACTURERS AND SOLE OWNERS,

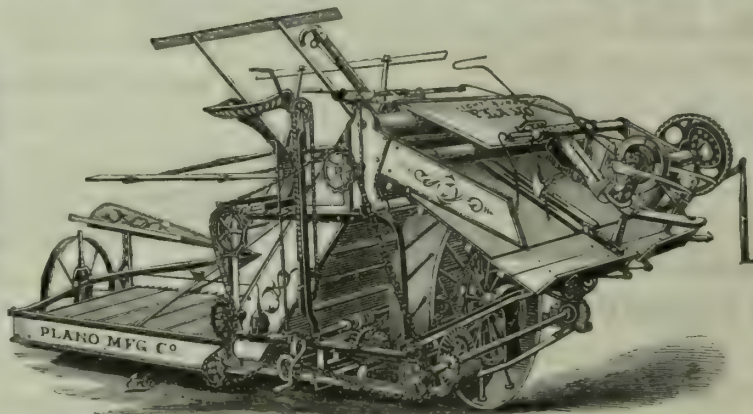
Nos. 365 and 367 El Dorado St., Stockton, Cal.

— THE —
"PLANO" TWINE BINDER

IS FAMED FOR ITS

LIGHTNESS, DURABILITY, SIMPLICITY and CAPACITY.

Price, 5½ feet, \$200.



Price, 6½ feet, \$210.

The Light-Running All Steel "Plano" Twine Binder, 5½ & 6½ ft. Cut.

WE HAVE A CERTAINTY ON THESE POINTS OF SUPERIORITY:

- There is not even one experiment about it.
- The wear is very slight and is easily taken up.
- It does not get out of order, for it is well made.
- It is an economizer of twine, and does not strain the band.
- The size of bundle is most easily changed.
- Tightness of bundle is most easily regulated.
- It binds either long or short grain with equal ease and certainty.
- Each bundle is completely separated, even in tangled grain.
- It is perfectly automatic and needs no attention, except proper oiling.

P. P. MAST & CO.,

No. 31 Market Street, San Francisco, Cal.,
PACIFIC COAST AGENTS.

News in Brief.

WORK has commenced on the railroad to connect Spokane Falls with Coeur d'Alene.

THE levee on Roberts island in the Sacramento river is to be doubled in thickness.

THE output of the Briggs fruit orchard at Marysville is said to be 1000 boxes a day.

THE trustees of the City of Vancouver, B. C., have borrowed \$150,000 on bonds for municipal improvements.

THE California Southern and California Central offices will not be removed from San Diego to Los Angeles.

DURING the month of May the receipts from the sale of sheep licenses in Inyo county amounted to \$2525.

MANY of the sheep-owners of Lake county have imported packs of hounds to clear off the coyotes and wildcats.

EASTERN NEVADA papers boast that the rabbit pests are exterminated, and they look more hopefully to the future.

THE Flower Festival Society of Los Angeles has donated to the Orphans' Home \$4500 of the money realized from its late festival.

THE Times declares that saloons are increasing at an alarming rate in Los Angeles, and that there is now one for every 300 inhabitants.

THE conference report on the bill to create a Department of Labor has been accepted, and the bill has been passed substantially as it came from the Senate.

GOV. HILL of New York signed the bill abolishing hanging for all murders committed after January 1, 1889, and substituting death by electricity therefor.

STATE street, Santa Barbara, is being paved with bituminous rock for a distance of two miles. The street is 80 feet wide and the paving will cost \$170,000.

IT is probable that this will be the greatest year on record for immigration to the United States. Over 135,000 immigrants have arrived in New York since April 1st. Week before

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 250 Market St., S. F.

FOR WEEK ENDING MAY 29, 1888.

383,694.—HORSESHOE—J. E. and E. W. Birmingham, Walla Walla, W. T.

383,700.—ANIMAL TRAP—J. Brusie, Oakland, Cal.

383,629.—TRANSPLANTING TOOL—T. R. Coon, Hood River, Ogn.

383,572.—HEATER FOR TEA, ETC.—C. W. Hellcnbrand, Salem, Ogn.

383,577.—MECHANICAL MOVEMENT—M. B. Kellogg, S. F.

383,531.—PRESERVING PILES—Chas. C. Lane, S. F.

383,736.—PRESERVING PILES—Chas. C. Lane, S. F.

383,818.—MAP AND CHART SUPPORT—W. H. Larew, Mariposa, Cal.

383,739.—FRUIT-STONING MACHINE—B. A. Lillie, S. F.

383,826.—AIR SUPPLY FOR PROPELLING CARS—L. C. Pressley, S. F.

383,510.—SCREEN—D. Wesemann, Los Angeles, Cal.

15,556.—TRADEMARK—F. M. Towne, San Bernardino, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

A Handy Accessory for the Wagon.

One of the most interesting of recent California inventions was secured through Dewey & Co.'s agency last summer by Dr. C. L. Bard of

Fresno Raisin-Growers and the Tariff.

FRESNO, June 4.—The following petition is being circulated among raisin men of this county and is being generally signed. It is considered to be an important move politically, which will have a great bearing on the coming campaign:

Hon. William M. Stewart, Senator from Nevada.—DEAR SIR: In the failure of any willing or competent representative of our own State to lift a voice in our behalf, we, the raisin-growers of Fresno county, Cal., appeal to you, the representative of another State, but a senator whose ability is the pride of the Pacific slope, irrespective of party, and whose broad statesmanship, as shown by your course in Congress, embraces not only the interests of your own State, but those of the whole coast and the entire country.

Under the kind influences of our skies and the protective policy of the Government we have been induced to inaugurate an industry new to the American continent. We have had many trials and discouragements, but have met them with fortitude, hoping for a happy outcome. No raisin vineyards in California have ever repaid any adequate profit upon the capital and labor invested. We have simply toiled on in the faith until the time of profit should come.

But now, through the grace of his majesty, the reigning President of the United States, and his followers, we are confronted with a proposed reduction of one-half a cent in the tariff upon raisins. This fraction of a cent may appear a ridiculous thing to a body like the Senate, composed of millionaires, but to us poor bread-winners it is vital, and represents the profit we have been struggling and hoping for through these years. Protection has not increased the price of raisins. Competition alone has regulated the market value. Under our disadvantages of labor and transportation the tariff is the only thing that gives us even a fighting chance. Unless Congress is willing to hold that shield before our infant industry our cause is hopeless. From the time the first box of California raisins was offered in the market the Spaniard has stood at the door, poniard in hand, endeavoring to kill the American product. It is for the honorable Senate, which we have been taught to believe is the guardian of the general weal, to determine whether the attempted assassination shall succeed or not.

We present these facts, knowing we are an humble and insignificant factor in the great economy of the Union, but trusting that you will realize that no single industry in the nation can be stricken down without injury to all, and that our poor welfare is as much to us as is to them the interest of the richest or the greatest. We put our trust in you and the honorable Senate to stand by us, otherwise we are ruined.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JOHN G. H. LAMPADUS—Santa Barbara Co.
G. W. INGALLS—Arizona Territory.
A. F. JEWETT—Tulare Co.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
R. G. HUSTON—Montana Territory.
WM. WILKINSON—Butte and Tehama Co.'s.
J. L. DOYLE—Kern Co.
W. W. THEOBALDS—Contra Costa Co.

Cheap and Excellent Tree Washing.

We see that the Woodbury Tree Cleanser is offered at a fraction less than 2 cents per gallon. As 4 gallons cleans a tree, that is cheap work.

FLOUR MILL

—WITH—
Immense Water Power
FOR SALE

At Merced Falls, Merced County, located on Merced River; size of Mill, 33x70; two stories in front and four stories in rear; latest improved roller machinery; new capacity; 100 barrels per day; power to increase to any capacity desired; title to water and land perfect; 60 acres of land, comprising the town site of Merced Falls; reputation of flour is A1; commands all mountain trade; fire wheat country surrounding; no failures ever known; grain warehouse 80x80; four dwelling houses; 25 shares of Merced Falls Woolen Factory go with purchase. Address

OSTRANDER & SONS,
Merced, Cal.

Or N. C. CARNALL & CO.,
624 Market St., San Francisco, Cal.

GO TO THE OLDEST AND THE BEST

1868. PACIFIC Business College, 320 POST ST. 1888.

LIFE SCHOLARSHIPS, \$75.
NO VACATIONS. DAY AND EVENING SESSIONS.
Ladies admitted into all Departments.
Address: T. A. ROBINSON, M. A., President.

WELLS, RICHARDSON & Co.

IMPROVED
Butter
Color.EXCELS IN { STRENGTH
PURITY
BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color.

Three sizes, 25c, 50c, \$1.00. For sale everywhere.

WELLS, RICHARDSON & CO. Burlington, Vt.

(33 Colors.) DIAMOND DYES

are the Purest, Cheapest, Strongest, and most Durable Dyes ever made. One 10c. package will color 1 to 4 pounds of Dress Goods, Garments, Yarns, Rugs, etc. Unequalled for Feathers, Ribbons, and all Fancy Dyeing. Also Diamond Paints, for Gilding, Bronzing, etc. Any color Dye or Paint, with full instructions and sample card mailed for 10 cents. At all Druggists

WELLS, RICHARDSON & CO., BURLINGTON, VT.

Educational.

VAN NESS SEMINARY,

(RALSTON HOUSE) 1222 Pine Street,

BOARDING and DAY SCHOOL

—FOR—

YOUNG LADIES and CHILDREN.

ENGLISH, FRENCH, GERMAN AND LATIN
TAUGHT BY COMPETENT PROFESSORS.

A Sunny Primary Room and Gymnasium have been added to the establishment.

WILL RE-OPEN JULY 23, 1888.

For particulars apply to
MRS. SARA B. GAMBLE.

BAINBRIDGE
Business College—AND—
NORMAL SCHOOL.

Institute of Short-Hand and Type-Writing.

SACRAMENTO, CAL.

Send for Catalogue. J. C. BAINBRIDGE, Principal.

(Formerly Principal of Stockton Business College and Normal Institute.)

DEPUE'S BUSINESS COLLEGE

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SHORT-HAND INSTITUTE,

1014 Broadway, OAKLAND, CAL.

Individual instruction. No vacations. Six months Business Course, \$50. A fine specimen of penmanship free. Address, J. E. DEPUE, President.

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SCHOOL FOR GIRLS and YOUNG LADIES

1825 Telegraph Ave., Oakland, Cal.

The Seventeenth Year of this well-known

institution will open

WEDNESDAY AUGUST 1, 1888

For further information apply to

MRS. R. G. KNOX, Proprietor,

Or to MRS. D. B. CONDRON, Principal.

THE OAKS,

OAKLAND, CAL.

The next year will begin on Wednesday, July 26, 1888.

For information address, MISS L. TRACY, Principal.

HEALD'S

BUSINESS COLLEGE,

24 POST ST., S. F.

FOR SEVENTY-FIVE DOLLARS THIS

College instructs in Shorthand, Type Writing, Book-

keeping, Telegraphy, Penmanship, Drawing, all the Eng-

lish branches, and everything pertaining to business,

for six full months. We have sixteen teachers, and give

individual instruction to all our pupils. Our school has

its graduates in every part of the State.

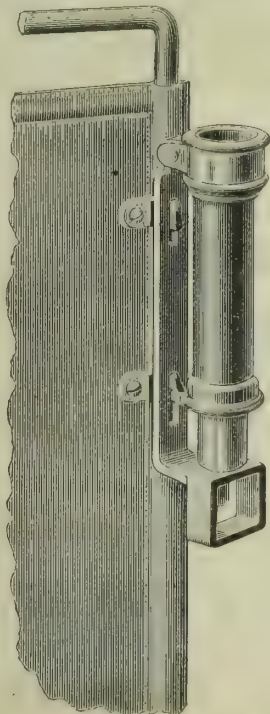
SEND FOR CIRCULAR.

E. P. HEALD, President.

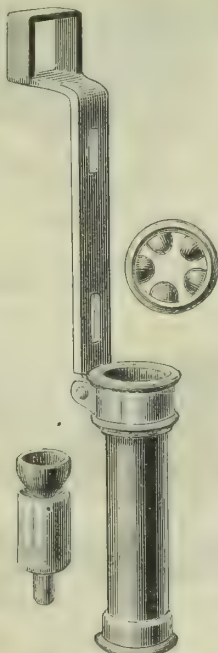
C. S. HALEY, Secretary.

THE DOG In health, habits and disease. All breeds

and treatment; 60 cuts; 25c. Thl. office.



Whipsocket in Position.



Whipsocket Detached and Apart.

THE WESTERN WHIPSCKET.

last 30 ships arrived, bringing 22,699 steerage passengers.

W. H. L. BARNES and A. G. Platt have closed the sale of 7191 acres of land in the southern portion of Lake county to Mrs. Emelie Charlotte Langtry and Frederick Gebhard.

THE California Pioneers are considering a proposition to devote the old Pioneer building, on Montgomery street, to the purpose of a home for indigent and worthy members of the society.

P. P. MAST & CO.'S MACHINES.—P. P. Mast & Co. of 31 Market street, continue their large business in their own manufactures, as set forth in our advertising columns from week to week. Their line of implements includes the well-known Buckeye hay rakes, drills, seeders and cultivators, Plano twine-binders and Rustler mowers. Mast iron turbine wind engines, and Buckeye pumps, Boss sickle grinder etc. W. W. Cunningham is the local manager of the firm. The establishment is well supplied and conducted in a business-like manner.

A NEW DRIER.—The attention of our readers is directed to the advertisement of the "Best Drier," which will be found on the last page of this issue. Much care has been taken to secure an apparatus of large capacity and economical work, and the drier is put before the public with a claim of having secured these ends. The inventor will be glad of opportunity to consult with fruit-growers concerning the device and its operation.

REMOVAL.—James Linforth, the well-known agent of the Zimmerman drier, has removed his place of business to 37 Marketstreet, where he secures larger space and better location for his business.

San Buenaventura, and is called the "Western Whipsocket," though it is in reality much more than a whipsocket. It is a combination of whipsocket, oil-can and wrench, and compels the driver to carry with him the means of removing a wheel and oiling a spindle. The device is compact, ornamental and readily attached to and detached from the dash-rail. It is made of malleable iron, nicely japanned, and is less than one inch longer than the ordinary whipsocket. In no other respect do their dimensions vary. The wrench is made in different sizes so as to fit all vehicles, and the oil-can contains sufficient oil to lubricate the spindles several times. Neither rattling nor leakage can occur. The whipsocket is especially good. In it a whip touches nothing but rubber, its butt resting on a conical bottom and its body held firmly by elastic air bulbs which will not pull out. Being adjustably secured to the dash-rail, it can be removed when the vehicle is to be washed, thus preventing wetting of its interior and subsequent damage to the whip. No other socket can be so removed, and no other socket has better fastening to the dash-rail. The engravings show the whipsocket in position and detached, exhibiting the different parts. The device is being placed on the market by the Western Whipsocket Co. of San Buenaventura, whose advertisement appears on another page.

FRUIT-PITTER.—We have examined a newly invented fruit-pitter and parer which seems to be adapted for preparing fruit for market. A fuller description with cut will appear in a future issue. Mr. Dilla of Oakland is the manufacturer.

SANTA CRUZ has been visited recently by a large number of Eastern tourists.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

SETH COOK, breeder of Cleveland Bay Horses, Durham, Polled Aberdeen Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Gen. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands, Angles and Case Strains. Pouch for raising bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER SAKS & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

EL ROBLAS RANCHO, Los Angeles, Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford Cattle. Information by mail. C. F. Swan, manager.

VALPARAISO PARK, Thoroughbred Polled Angus and Durham Cattle. Thoroughbred Berkshire Swine. Address F. D. Atherton, Menlo Park.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Pages Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Willard Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

POULTRY.

PIEDMONT POULTRY YARDS, cor. Piedmont Ave. & Booth St., Oakland. Wyandottes, L. Brahmas, P. Rocks, Langshans, B. Leghorns, B. B. R. G. Bantams. Eggs \$2 for 13; circular free; Mrs. J. N. Lund, Box 116.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, Lt. Brahmas, Houdans. Eggs, \$2.

T. D. MORRIS, Sonoma, Cal. Toulouse and Embur Geese, Bronze and W. Holland Turkeys, and all leading varieties of Thoroughbred Poultry.

D. H. EVERETT, 1616 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

J. J. ALBEE, Lawrence, Cal., breeder and importer.

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A. G. STONESIFER, Breeder of pure-blood French Merino Sheep. Hill's Ferry, Stanislaus Co., Cal.

W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

B. BULLARD, Woodland, Cal., importer and breeder of Spanish Merino Sheep. Premium band of the State. Choice bucks and ewes for sale.

J. B. HOYT, Bird's Landing, Cal., importer and breeder of Shropshire Sheep; also breeds cross-bred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep from Illinois and England for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine. High graded rams for sale.

ANDREW SMITH, Redwood City, Cal.; see adv't.

SWINE.

TYLER BEACH, San Jose, Cal., breeder of Thoroughbred Berkshire and Essex Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

L. L. DICKINSON, Central Point, Merced Co., Cal., breeder of thoroughbred Essex Hogs. Pigs now ready for sale. Prices reasonable.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

ANDREW SMITH, Redwood City, Cal.; see adv't.

LITTLE'S CHEMICAL FLUID

SHEEP DIP.

LITTLE'S PATENT POWDER DIP (POISONOUS). Information by mail.

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IMPORTANT!

That the public should know that for the past Sixteen Years our Sole Business has been, and now is, importing (Over 100 Carloads) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires, and Jerseys (or Alderneys) and their grades; also, all the varieties of breeding Sheep and Hogs. We can supply any and all good animals that may be wanted, and at very reasonable prices and on convenient terms. Write or call on us. **PETER SAKS & SON, Lick House, S. F.** San Francisco, Cal., Oct. 22, 1886.

Farmers and Fruit-Growers, Attention!

To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

FERTILIZE! FERTILIZE! NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.
Dr. J. KERRIE—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
BERKELEY, Nov. 20, 1886.

Dr. J. KERRIE, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade

fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,
E. W. HILGARD.

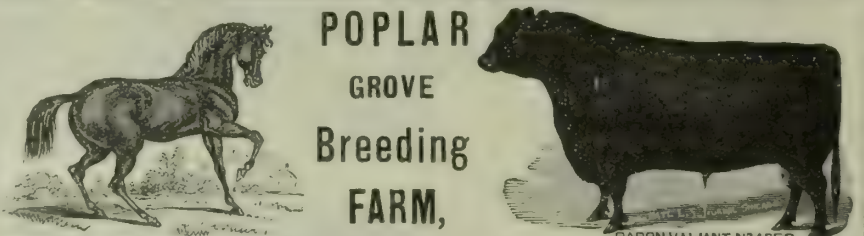
The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

FOR SALE IN LOTS TO SUIT,

On board cars at Saborito, Station of the C. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the MEXICAN PHOSPHATE & SULPHUR CO., H. DUTARD, President, room 7, Safe Deposit Building, or

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.



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POLLED ANGUS CATTLE AND TROTTER HORSES.

For information address or call on S. N. Straube as above. No trouble to show stock to intending purchasers.

HEADQUARTERS FOR Holstein-Friesians & Jerseys

A choice lot of young Cattle of the above breeds for sale at very low figures. Their breeding is A No 1 and from the BEST MILKING FAMILIES. Prices and QUALITY will suit. EIGHTEEN YEARS' experience on this Coast. Correspondence solicited. Publisher of "Niles' Pacific Coast Poultry and Stock Book," a new book on subjects connected with successful Poultry and Stock raising on the Pacific Coast. Price, 50 cents, postpaid.

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P. S. CHILES, DAVISVILLE, CAL.



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Of the best families. A choice lot of young Bulls and Heifers for sale, 4 years old and under, from the celebrated Kirklevington Oxford Count, 36723.

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Two Thoroughbred Red Mazurka Bulls, One 13 months, the other 15 months old.

—ALSO—
200 Full Blooded Angora Ewes.
M. WICK, Sundale, Butte County, Cal.



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APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

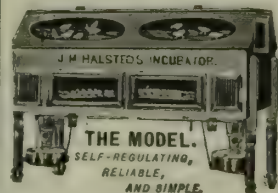
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Hatches all kinds of Eggs. Made in all Sizes.

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Price from \$20 up. Model Brooder from \$5 up.
Thoroughbred Poultry and Eggs. Send for new Circulars containing much valuable information.

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For the balance of the season I will sell Eggs for hatching at \$2.00 for 13 from my best imported and home-bred L. Brahmas, P. Rocks, Langshans, P. Rocks, Wyandottes, Brown and White Leghorns and B. B. R. Game Bantams. I will also sell one pen of L. Brahmas (5 hens and a cock), and one pen of P. Rocks for \$13 each. One pen of Langshans, one pen of Brown and one pen of White Leghorns for \$15 each. I will sell my Axford Incubator, 100-egg capacity, for \$15, or will trade for two small out-door Brooders in good repair.
E. H. FREEMAN, Santa Clara, Cal.

JOHN McFARLING,
Importer and Breeder of
Langshans, Plymouth Rocks, Brown and White Leghorns, Pekin Bantams, Light Brahmas, Part-ridge Cochins, Buff Cochins, Black Minorcas, Registered Berkshire Pigs. Also one pen of Langshans direct from China.
706 TWELFTH ST., OAKLAND, CAL.
Large lot of young birds ready for sale; send for circulars.

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Manufacture of the PACIFIC INCUBATOR and BROODER. Agency of the celebrated silver finish galvanized wire netting for Rabbit and Poultry-proof fences, the Wilson Bone and Shell Mill, the Pacific Egg Food, and Poultry appliances in great variety. Also every variety of land and water fowl, which have won first prizes wherever exhibited. Eggs for hatching. The Pacific Coast Poultryers' Hand-Book and Guide, price, 40c. Send 2c. stamp for 60-page illustrated circular to the PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

WELLINGTON'S IMPROVED EGG FOOD.
STANDARD POULTRY preparation for TEN YEARS. Sold by every principal merchant; also at 425 WASHINGTON STREET, SAN FRANCISCO.

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Complete, which makes 20 pounds of Dried Fruit of superior quality in twelve hours, and at very little cost for

FIVE DOLLARS.

The perfection of simplicity. Rights to manufacture larger capacities sold at reasonable price.

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Proprietor Napa Valley Nurseries.
NAPA CITY, CAL.

10,000 VARIETIES

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SADDLERY GOODS AND WHIPS.

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Our Retail Cash Department at 410 Market Street,
Below Sansome (SEE HORSE ON BUILDING):

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SINGLE BUGGY HARNESS, per set, \$10 to \$65, including an Embroidered Lap Duster or Neck and Hitch Strap.
SADDLES, Ladies' or Men's, \$8 to \$50, including a Brille or Saddle Cloth.
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WHIPS, 15c. to \$5 each.
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AT SACRAMENTO, CAL. Thirty-four head of young bulls, fullbloods and grades, the latter from Shorthorn cows, for sale at \$75 to \$250 per head; also 15 head of fullblood heifers at \$240 per head. These cattle are all choice selections from my herd of Polled Angus Cattle on the Loupvalle Stock Ranch in Buffalo Co., Neb. Come and see the cattle or address DR. G. M. DIXON, 700 J St., Sacramento, Cal. Correspondence solicited.

BADEN FARM HERD Of Short Horn Cattle and Dairy Cows.

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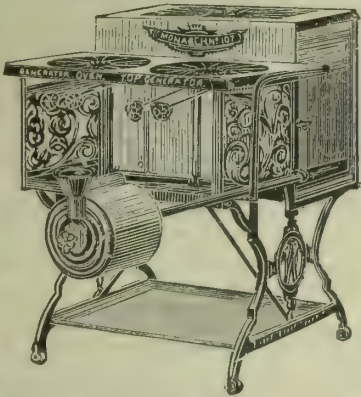
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Gasoline Stoves, \$5 to \$35. Gas Stoves, 75 cents to \$35. Oil Stoves, 75 cents to \$30.

WOOD AND COAL RANGES.—Royal, No. 6, \$16. No. 7, \$20. Pacific No. 6, \$18. No. 7, \$25. Lamps, 20c. to \$10. Hanging Lamps, \$2 to \$20. Agate Ware, Tin Ware, and Kitchen Ware at low prices.

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The Western Whipsocket.



The Best Whipsocket and Best Combination Tool in the world. A half-inch longer than the ordinary socket; yet carrying with it an oiler and wrench, without which no vehicle is thoroughly equipped for the road. In it a whip touches nothing but rubber. No rattling, no leakage. Price, by mail, \$1.50. Mention desired size of wrench. Address P. O. Box 70.

WESTERN WHIPSOCKET CO., San Buenaventura, Cal.

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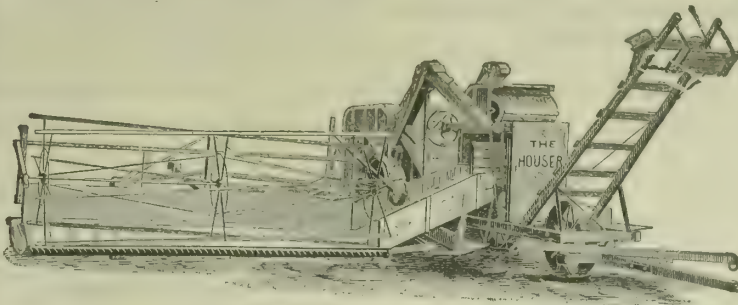
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Houser Combined Harvesters for 1888

LARGE AND SMALL.

Received First Premium, State Fair, September 24, 1887.

400 IN FIELD USE.



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No Failures. None Ever Returned. Beware of Experiments.

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They Have a Larger Sale than all Other Harvesters Combined.

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Is adapted for Small Farms—few animals; rolling or foothill land. In weight, one-half of the Large Houser. Both the Large and Small Houser have our

Improved Double Shoe Cleaner.

Which received the Premium over all competitors at both State and County Fairs and Field Contests in 1887.

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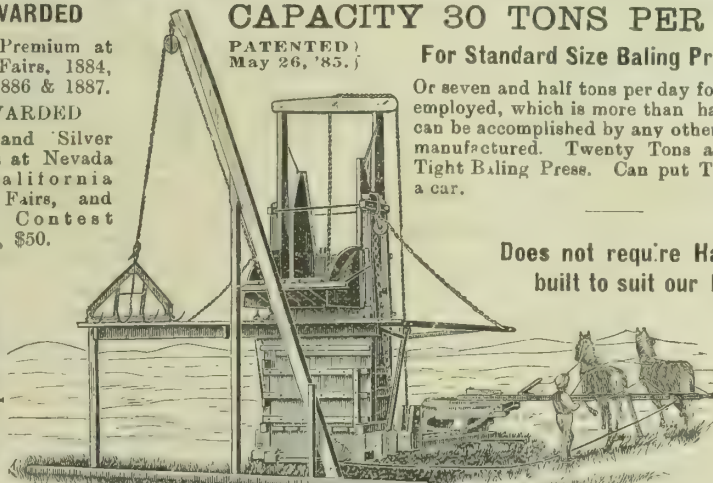
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Does not require Hay Stacks built to suit our Press.

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WORKS: First and Stevenson Sts., SAN FRANCISCO, CAL.

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CENTRIFUGAL PUMPS FOR IRRIGATION AND RECLAMATION.

TEAM ENGINES AND BOILERS of all kinds, MACHINE TOOLS, and full line of MACHINE SHOP APPLIANCES carried in stock.

ELEVATORS for freight and passenger use, both worm gear and patent double capacity hydraulic.

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ELECTRIC APPARATUS for the generation and distribution of electricity for LIGHT and POWER. KEITH SYSTEM.

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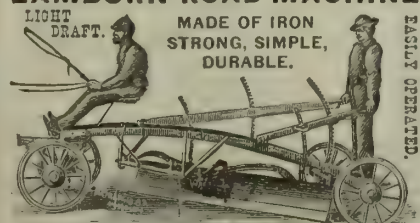
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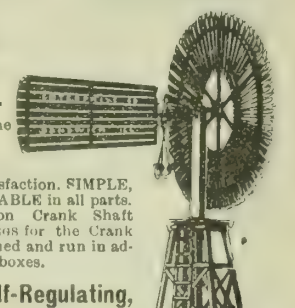
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S. F. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, June 6, 1888.

The cool, moist, foggy weather is giving place to clearer skies and warmer weather, causing heavier receipts of farm products and a gradual sliding down in prices of seasonable fruits and garden truck. Harvesting is becoming more general in favored localities. In the grain markets at the East, and also abroad, there have been freer fluctuations. The following is to-day's cablegram:

LIVERPOOL, June 6.—Wheat—Quiet but steady. California spot lots, 65¢ to 75¢; off coast, 33¢ to 34¢ just shipped, 33¢ to 34¢; nearly due, 33¢ to 34¢; cargoes off coast and on passage, quiet but steady; French country markets, weaker; wheat and flour in Paris, rather easier; wheat on passage to Continent, 56¢ to 57¢; wheat and flour on passage to U. K., 2,418,000 qrs; weather in England, damp and unsummerlike.

Foreign Review.

LONDON, June 4.—The *Mark Lane Express* says: Values of native wheats are in favor of buyers. Flour was depressed. Foreign wheat was weak. At to-day's market wheat was slack. The best kinds were down 6d and Russian 1s. Flour was 6d cheaper. Corn was 6d to 1s lower. Oats were 3d to 6d lower. Beans, peas and Linseed were unchanged.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Day.	Cash.	June.	July.	Aug.	Sept.
Thursday	92	92	91	91	90
Friday	93	—	91	92	90
Saturday	90	—	90	92	90
Monday	91	—	90	91	90
Tuesday	91	90	90	92	90

The closing prices for wheat have been as follows, at Chicago:

Day.	Cash.	June.	July.	Aug.	Sept.
Thursday	84	84	84	84	84
Friday	84	—	84	84	84
Saturday	84	—	84	84	84
Monday	84	—	84	84	84
Tuesday	84	84	84	84	84

CHICAGO, June 6.—Wheat—85¢ for cash, 85¢ for June, 85¢ for July, 85¢ for August and 84¢ for Sept. Corn—54¢ for July.

NEW YORK, June 6.—Wheat—92¢ to 93¢ for cash, 92¢ to 93¢ for June, 92¢ to 93¢ for July, 93¢ to 94¢ for August and 93¢ to 94¢ for Sept.

California Products at Chicago.

CHICAGO, June 2.—There is only a moderate supply of oranges on the market here. Fruit of good quality is in fair demand and firm at the following prices: California bright fruit, $\frac{1}{2}$ box, \$3.75 to 4.00; smutty fruit, $\frac{1}{2}$ box, \$3.00; Navel, bright, $\frac{1}{2}$ box, \$5.00 to 5.50. Apricots from California have very fair trade. It is said that three carloads have been sold this week. They are quoted at \$2.25 to \$2.75 per 20-lb crate. The arrivals so far of plums from California have consisted of a common variety which no one cares for. They had a very slow sale, bringing from \$2 to \$2.25 per 20-lb crate. Cherries continue dull and slow. They are in great abundance and meet with very little demand. California sweet, fine large fruit in 10-lb boxes, express goods, quotable at \$2 to \$2.50 for Red and \$2.50 to \$2.75 for fancy White. A good many have arrived lately by freight in bad order; these had to be closed out at low prices.

California Dried Fruit—Forevaporated or bleached apricots there is a fair demand, with some advance in prices, but hundreds are, on the other hand, dull and easier; choice unpeeled, evaporated peaches are also in fair request, but other kinds and peeled stock rule slow. Plums and prunes remain slow and are quiet, but raisins are reported selling a little better on account of prices going down a trifle.

We quote: Apricots, sun-dried $\frac{1}{2}$ lb, 8½¢ to 9¢; bleached, prime 14¢; do, choice, 15¢; do, fancy, 15½¢; evaporated, choice 14¢ to 15¢; do, 16¢; peaches, sun-dried, $\frac{1}{2}$ lb, 9¢ to 10¢; do, evaporated, unpeeled, $\frac{1}{2}$ lb, 14¢; do, evaporated, peeled, $\frac{1}{2}$ lb, 16¢ to 20¢; plums unpeeled, $\frac{1}{2}$ lb, 6¢ to 7¢; pitted (dull), 10¢ to 11¢; prunes, small, $\frac{1}{2}$ lb, 6¢; do, fancy large (dull), 8½¢ to 9¢.

Raisins, loose Muscates, 2-crown, $\frac{1}{2}$ box, \$1.35 to 1.40; do, 3-crown, $\frac{1}{2}$ box, \$1.45 to 1.50; do, London Layers, $\frac{1}{2}$ box, \$2.20 to 2.25.

Hops are meeting with fair demand, and for choice qualities there is rather a firm market but off grades are quiet. Pacific Coast choice, $\frac{1}{2}$ lb, 12¢ to 13¢; do, common to prime, $\frac{1}{2}$ lb, 8¢ to 11¢.

Boston Fruit Market.

BOSTON, May 28.—MESSRS. EDITORS: Our season has been very backward so far—fully three weeks—but notwithstanding, the trade in fruits of all kinds has never been better, nor have the shippers ever realized better results. This, no doubt, is partly owing to the fact that supplies have not been quite so heavy; still the demand is good and we regard the outlook for all fruits as excellent. Delaware, at the present time, promises the largest crop of peaches ever raised—which if realized will prevent long shipments from your State of this fruit. SNOW & CO.

Wool.

NEW YORK, June 6.—The chronic, uncertain tone and sluggish action still prevails in the wool market. The cause of some of the depressions is the fact that dealers are willing to make advances on the clip. Texas reports sales to manufacturers at 14½¢ to 16¢. The dealings here are mainly in the best grades.

The following sales are reported: 10,000 lbs. Oregon, 18½¢; 17,000 lbs. at 20¢; 18,000 lbs. scoured at 35¢ to 40¢; 10,000 lbs. medium fleece at 33¢; 10,000 lbs. fine delaine at 32¢; 10,000 lbs. three-eighths blood at 33¢; 10,000 lbs. extra pulled at 35¢; 20,000 lbs. extra pulled at 35¢; 20,000 lbs. N and N Ohio, 28¢ to 29¢; 50,000 lbs. spring Texas at 14½¢ to 15¢; 15,000 lbs. scoured spring Texas at 45¢ to 47¢; 196,000 lbs. domestic, mostly choice, 46¢ bales foreign, chiefly Mediterranean, 114 bags, on private terms.

The Philadelphia market reports operations mainly for necessities, and lower prices prevail, with sales of 2,600,000 lbs.

The Boston market was never so unsatisfactory,

and buyers' bids are low. The sales include 1,252,000 lbs. domestic, including 295,000 lbs. California spring at 12¢ to 21¢ and 40,000 lbs. fall at 8¢ to 14¢, also 1,994,000 lbs. of foreign.

California Fruits in Chicago.

CHICAGO, June 5.—Mr. Weinstein, representing the California Fruit Union, says the newly presented scheme of selling fruit by public auction instead of by private sale through commission houses as heretofore, is meeting with great favor among all the prominent Chicago dealers, most of whom express themselves as being in sympathy with the movement.

Miscellaneous.

NEW YORK, June 5.—Free arrivals of hides have curtailed the extreme views of holders, and 16c is a very full price for the best to make sales. More activity is reasonably looked for.

Hops have been sold to a degree indicating growing wants, but the old rates are full. With reduced Eastern stocks and little new coming forward, the market ought to be in better shape.

Raisins are working out steadily, with prices well supported. Other dried fruits are very quiet.

The first California peaches came to-day. About 2000 sold at from 75¢ to \$1 a dozen.

Apricots sell well at from \$4 to \$4.50 for the 10 lb case.

Local Markets.

BAGS—The pool is still trying all means possible to keep values of grain bags up. The market is quoted at from 7½¢ to 7¾¢. The demand is only fair.

BARLEY—In the sample market, there is nothing new to report. The demand is good and prices firm. New was received, but weighs less than the first received last year. In options, there has been more trading, with prices strengthening. The following are to-day's sales:

Morning Session: Buyer 1888—200 tons, 98½¢ per cwt. Afternoon Session: Buyer 1888—400 tons, 98½¢; 100, 98¢; 200, 97½¢; 100, 97¢. Seller 1888, new—100 tons, 89¢ per cwt.

FLOUR—The market is steady, with a good demand ruling.

WHEAT—In the sample market, there is a steady feeling, although buyers are trying to beat values to a still lower range. In options, trading has been free, with good and attractive fluctuations. The following are to-day's sales:

Morning Session: Buyer season—100 tons, \$1.50 to \$1.55; 100, \$1.49 to \$1.50. Buyer 1888—200 tons, \$1.49 to \$1.50; 100, \$1.49 to \$1.50. Afternoon Session: Buyer 1888—300 tons, \$1.49 to \$1.50 per cwt.

EGGS—The market is shading off slowly, under freer receipts and a lessening consumption.

BUTTER—Under heavy receipts, the market is sagging off. Packing is going on very freely. The East is sending us liberal supplies, which is against better prices for Californian.

CHEESE—The market is barely steady. The East reports a sinking market, with still lower prices looked for, which will be against our market later on, as heavy shipments will be made here.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to June 4, '87.	July 1 '87 to June 2, '88.
Flour, qr. sks.	3,982,183	3,513,339
Wheat, cts.	12,230,678	8,202,231
Barley, cts.	2,203,150	2,245,157
Oats, cts.	133,156	152,909
Potatoes, sks.	799,890	1,070,637
Corn, sks.	113,621	231,697
Rye, sks.	26,174	17,433
Buckwheat, sks.	5,865	3,054
Beans, sks.	434,159	389,447
Bran, sks.	427,055	478,071
Hay, tons.	98,929	112,076
Salt, tons.	21,988	16,410
Wool, bales.	80,421	71,887
Hides, No.	103,448	101,300
Raisins, 20-lb boxes.	138,468	112,046
Quicksilver, flasks.	17,826	28,951
Hops, bales.	13,226	15,724

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to June 4, '87.	July 1 '87 to June 2, '88.
Flour, sks.	235,766	358,052
Wheat, cts.	984,079	1,170,591
Barley, cts.	6,073	75
Oats, cts.	323,357	262,536
Corn, cts.	117,804	12,590
Wool, bales.	13,180	9,438
Bran, sks.	27,918	68,810
Hops, bales.	780	508
Hides, No.	33,632	31,416
Rye, cts.	5,289	5,289
Potatoes, sks.	144,834	82,365

Cereals.

The closing sales on the San Francisco Call Board were as follows:

Date.	Buyer Season.	Buyer Year.
Thursday	—	\$1.41
Friday	—	1.41
Saturday	—	1.43
Monday	—	1.49
Tuesday	—	1.49

Date.	Buyer Season.	Buyer Year.
Thursday	—	\$.96
Friday	—	.96
Saturday	—	.92
Monday	1.09	.92
Tuesday	—	.92

H. Kains Jackson writing to the *Farmers' Journal*, London, says: "Scarcely any reaction in price has followed on the change to summerlike weather which has distinguished the past week. The growth of vegetation is now very rapid, the progress of the season such as to at least commence making atonement for the extraordinarily protracted winter. The early sown barley has come up well, and wheat if very backward in growth looks well in color and is healthy. The ground is in a good state for getting in potatoes and mangolds, and the pastures are

growing as they should be in May, apace. The markets under those circumstances might ordinarily have been expected to show some tendency to retrogression, but the importance of the home crop is not now what it was even 10 years ago. The news of American harvest prospects weighs far more heavily than intelligence from Lincolnshire or Norfolk, and American news within the past week has assumed a very sombre hue. That the reports of damage to the growing crops are the result of the intrigues of speculators is rendered a matter very difficult of belief, seeing how generally the reports in question find credence in America itself, where in-tant contradiction could be given to such statements as that in Ohio large acres of winter-sown wheat land are being plowed up, or that Illinois and Indiana do not promise more than two-thirds of a winter wheat crop."

In Southern Russia the sowing of spring wheat has been completed under favorable circumstances, and vegetation is making good progress.

The new maize crop in the Argentine Confederation is stated to be of excellent quality and generally in sound condition.

From the Continent of Europe there is nothing fresh to report. The lateness of the season is causing apprehension, especially in France, but markets remain without quable change.

Advices from India are to the effect that there is a disposition to store wheat for the present rather than accept present prices.

In Buenos Ayres, March, the maize harvest was in progress with weather warm and dry. The estimate that one-third of the crop was lost seems to be confirmed. The yield is unequal as one to five, and the aggregate difficult to estimate.

A Liverpool merchant's letter received this week says: "La Plata maize is reported as no failure, but not so large a crop as in 1887, but fine and well conditioned. Value for shipment shows a large discount on the spot price, and as your market seems quite controlled by speculators we expect maize will rule dear all the year."

In commenting on the flour market a New York paper says: "In the winter wheat States more than two-thirds of the mills are idle for want of wheat; in instances they are not able to obtain wheat enough to supply their surrounding trade. Careful inquiry by persons in our employ at a very large number of mills, we find that they hold no considerable stocks, and are not likely to add much to them till August, and even then it is very questionable if farmers will be willing to sell their new crop unless at very high prices. Some of our correspondents express grave apprehensions as to the probable yield of wheat, as a minute examination fully confirms these convictions. The war of moisture over a vast area of country last autumn prevented the wheat stooling properly, hence much disappointment in the quantity harvested seems certain. It is quite remarkable that the weather in Europe is as backward as it is in this country, consequently greater interest is manifested in the growing crops than usual."

The New York Produce Exchange Reporter, May 26th, says: "Information in regard to the quantity in farmers' hands is overwhelming in confirming our position. In some of the great producing States there is absolutely a great dearth of supplies and this has been the fact over a large area of country since last autumn, hence we are at a loss to learn where these liberal invisible supplies are, which are said to exceed those of last year materially. This statement was a great mistake and much loss has resulted in consequence. The reduced state of available supplies in the spring and winter wheat States is now very generally admitted by all intelligent observers, and it is evident that whatever is taken for export is being drawn from our usual reserves, and these will be reduced on the first of July next to less than 25,000,000 bu., and the visible will be rapidly exhausted and will be smaller on the first of July than for some time past. The late seed time at the Northwest adds greatly to the uncertainty of the crop, and prudent merchants will act wisely if they refrain from taking the short side of the market, as the crops in Europe are generally very late and the low temperature much of the time the past six weeks renders an early crop almost impossible, and we regard the future of wheat as more than usually interesting. The business in spot wheat has been remarkably small for the season, and with a limited export call for any one disposed to sell, has been compelled to yield. With so great a falling off in the export movement, we think prices have been remarkably well sustained. The reaction in the speculative market was to be expected and is healthy."

Oregon advises report the wheat and oat surplus light, under steady outward shipments. The dry weather cause many to look for only a three-quarter crop in oats, wheat and barley. The quality, it is also thought, will be poor.

In this State, crop advices are of the same tenor as heretofore reported. It is now generally admitted that owing to the moist, cloudy, foggy weather, the bulk of the grain on the coast counties will be off-colored. The cool weather is causing grain to fill out well. Many fields having short straw will turn out a fair crop. But then, even with this improvement, the crop of neither barley nor wheat will equal last year's.

The first carload of new barley arrived to-day. It was shipped by H. Timm of Dixon, and consigned to Eppinger & Co. of this city. The consignment was sold by sample to Laumeister at 92½¢, who resold the same at 95¢. It is a bright, clean and pretty lot, weighing 43½ lbs to the bushel. Since 1870, the dates of arrival of new barley in this city and the prices at which the first lots have been sold have been as follows:

Year.	Date.	Price.
1870	June 19	\$1.20 1/2
1871	June 12	1.57
1872	June 6	1.40
1873	June 5	1.10
1874	June 9	1.45
1875	June 20	1.35
1876	May 30	.90
1877	June 30	1.55
1878	June 11	.80
1879	June 30	.75
1880	June 24	.64 1/2
1881	June 21	.90
1882	June 12	1.65
1883	June 25	.95
1884	June 28	.90
1885	June 16	1.25
1886	May 26	1.28
1887	June 3	1.15
1888	June 6	.92 1/2

Last year the first lot arrived on the 3d of June to the same consignees from Tremont, near Dixon. It turned the scale at 48 lbs to the bu., and was sold to the Laumeister mills at \$1.15.

The local wheat market held steady the past week, with a strong undertone. It is seldom that the values rule so firm toward the close of the season. Ships are weak and it is not at all unlikely but freight rat-s will rule low throughout the year.

Barley continues strong with present stocks under good control, particularly the more choice. The consumptive demand is large. Oregon will have a small crop this year. She had a surplus in 1887.

Oats have been gradually creeping up owing to a growing scarcity in Oregon and consequently lighter receipts here. The Oregon crop will be light.

Corn is without essential change. The demand is good considering the high price. At the East the season is backward. There is an increased acreage planted.

Rye and buckwheat are nominally unchanged. In the former the offerings although light are ample.

Fruits.

Clearer skies and warmer weather are ripening the fruit crops quite rapidly, or at least the writer judges so from the increasing receipts. As usual buyers try every means to break prices. Cherries are coming in freely, many of the consignments show the effects of the late rains. Canners are paying from 6 to 7¢ for Royal Annes. The crop of this variety is light, not much more than 75 per cent of that of 1887. For canning varieties of black they pay from 4 to 6¢. Hucksters have been able to buy quite freely the past week of over ripe or otherwise poor cherries at low prices. In apricots canners are bidding from 2½¢ to 3¢ delivered here for entire orchards, while doing this they at times pay as high as 3¢ for selected. Orchardists at 2½¢ are said to be drying. Peaches are arriving more freely and consequently are shading in prices while improving in quality. Canners as a rule are not contracting for many, preferring to take their chances in the open market later on. Apples are without essential change. The receipts of raspberries and blackberries are increasing and prices declining. In currants canners to clean up receipts pay on an average of \$2.50 per cwt.

In dried fruits the market is well cleaned up. It is difficult to get enough to make shipments. The same remarks apply to raisins.

Eastern mail advices report the Carolina cherry crop almost a failure.

Feedstuff.

Bran and middings are slightly lower. The demand for all kinds of ground feed is quite active for the season.

Dealers in hay do not appear disposed to anticipate their wants. They still buy in a hand-to-mouth way, in expectation that under a strong selling pressure prices will break. Receipts continue free, but then the consumption is large and steadily increasing.

Live-Stock.

Oregon advices report feed very scarce and in consequence catlemen have been and are still marketing their stock. In this State large owners have driven back into the mountain ranges. There will probably be more stall-fed cattle this year with higher prices later on. In mutton sheep the market is steadier with a slightly firmer tone. Calves are scarce. Hogs are without essential change. It looks as if the selling pressure for the present is about over. Private telegrams from Chicago and Kansas City report receipts light, market strengthening with higher prices looked for. In horses there is absolutely nothing new to report. The demand for bridle horses, matched teams, etc., continues good.

The market for dressed meat is quotable as follows by slaughtermen to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain fed and one-half from the price of grass fed, that is, animals running at large.)

HOGS—On foot, grain fed, 6½¢ to 6¼¢ per lb.; dressed, 9¢ to 9½¢ per lb.; soft, 5½¢ to 6¢ per lb.; dressed, 8½¢ to 9½¢ per lb. Stock hogs, 4½¢ to 5¢ per lb.

BEEF—Stall fed, 8¢ to 8½¢ per lb.; grass fed, extra, 7½¢ to 7¾¢ per lb.; first quality, 6½¢ to 6¾¢ per lb.; second quality 6¢ to 6½¢ per lb.; third quality, 5¢ to 5½¢ per lb.

VEAL—Choice 8¢ to 9¢ per lb.; fair to good, 6¢ to 7¢.

MUTTON—Wethers, 5½¢ to 6½¢ per lb.; ewes, 5¢ to 5½¢ per lb.; lamb, spring, 7¢ to 8¢ per lb.

Vegetables.

The market is better supplied with all varieties, except asparagus and rhubarb. Under liberal receipts prices have shaded off with considerable fluctuations reported from day to day—prices being governed by the supply. Some kinds have not touched bottom prices, but others have probably seen their lowest. Canners are still taking peas and beans.

The market for potatoes cleans up well under free shipments out of the State. Only the more choice, well-matured are given preference. The home consumption continues free. The Oregon crop is reported to be light.

Onions are improving in quality, and consequently go off more freely. Receipts continue ample.

Miscellaneous.

Beans are slow with some shading in prices for all kinds except choice grades which are in light stock. Poultry is kept down by continued receipts from points west of the Missouri river.

In hops there is nothing new to report. The consumption has been kept down by cool weather so far this year.

In wool trading continues light. Growers are generally storing. To sell, quotations would have to be submitted to, but to buy higher prices would have to be paid. The general feeling is that prices will be higher later on in the year.

Honey is weakening under freer offerings and buyers bidding down owing to reports of a large crop this year. The quality is said to be better than last years.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way	406,630	259,196
In port, disengaged	64,520	111,038
In port, engaged	12,459	20,797

Totals

To obtain the carrying capacity, add 60 per cent to the tonnage.

Tonnage on the way to Oregon, 15,077; tonnage at Portland, Oregon, loading and to load, 19,114. Total tonnage, 34,191.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.	Eureka.	Red Bluff.	Sacramento.	S. Francisco.	Fresno.	S. L. Obispo.	Los Angeles.	San Diego.
May 31 6.	Rain.	Temp.	Wind.	Temp.	Wind.	Temp.	Wind.	Temp.	Wind.
Thursday.....	.74 Nw Fr.	.10 62 Nw Cy.	.00 74 S Fr.	.70 S Cy.	.00 68 S Cy.	.00 80 SW Cy.	.00 70 Nw Cy.	.00 78 SW Fr.	.00 66 Nw Cy.
Friday.....	.32 68 SE Cy.	.46 58 SW Cy.	.00 72 S Cy.	.00 66 S Cy.	.01 66 SW LR.	.00 80 SW Fr.	.00 70 Nw Cl.	.00 74 W Cl.	.04 66 Nw Cl.
Saturday.....	.08 66 S Cy.	.14 52 SW Fr.	.46 72 S Fr.	.72 S Fr.	.04 63 W Cl.	.76 N Cy.	.00 68 W Cl.	.00 74 S Cl.	.00 66 Nw Fr.
Sunday.....	.01 66 Sw Cy.	.76 60 SW Cy.	.06 66 S Fr.	.02 64 SW Cy.	.01 62 W Cy.	.00 72 Nw Fr.	.....	.00 68 SW Fr.	.00 70 Nw Cl.
Monday.....	.02 60 Nw Cy.	.04 61 W Fr.	.78 70 N Cl.	.02 68 Nw Cl.	.03 64 W Cl.	.00 72 S Cl.	.00 66 W Cl.	.00 73 SW Cl.	.00 68 Nw Cl.
Tuesday.....	.01 68 Nw Cy.	.00 60 W Cy.	.00 76 S Fr.	.00 74 SW Cy.	.00 64 W Cy.	.00 82 Nw Cl.	.00 68 W Cl.	.00 80 W Cl.	.00 68 SW Cl.
Wednesday.....	.14 60 N Cy.	.18 60 W Fr.	.00 62 SE Cy.	.00 70 SW Fr.	.00 60 W Cy.	.00 70 Nw Cl.	.04 63 W Cl.	.00 74 SW Cl.	.00 68 SW Cl.
Total.....	.58	1.68	1.36	.....	.....	.....	.....	.....	.....

EXPLANATION.—1. for clear; Cy., cloudy; Fr., fair; Fy., foggy; — indicates too small to measure. Temperature, wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS.	ONIONS.
Bayo, chl. 2 00 @ 2 25	New. 35 @ 50
Butter. 3 40 @ 3 65	Walnuts, Cal. lb. 7 00 @ 8 00
Red. 2 00 @ 2 25	do Chile. 7 00 @ 7 50
Pink. 1 75 @ 2 10	Almonds, hd. sh. 5 @ 6
Large White. — @ —	Soft shell. 11 @ 13
Small White. 3 00 @ 3 50	Paper shell. 14 @ 15
Lima. 3 00 @ 3 50	Brazil. 9 @ 11
Fid. Peas, bl. keye 2 00 @ 2 20	Pecans. 10 @ 16
do green. 3 00 @ 4 00	Peanuts. 4 @ 6
do Niles. 1 90 @ —	Filberts. 10 @ 12
BROOM CORN.	Hickory. 5 @ 8
South'n 1/2 ton. 60 00 @ 80 00	POTATOES.
Northern. 60 00 @ 80 00	Early Rose. 35 @ 1 00
CHICORY.	Chile. 65 @ 75
California. 6 @ 7	Pearless. 40 @ 75
German. 7 @ 8	POULTRY AND GAME.
DAIRY PRODUCE, ETC.	Hens, doz. 5 50 @ 7 50
BUTTER.	Roosters. 5 50 @ 13 00
Cal. fresh roll. lb. 22 1/2 @ 25	Broilers. 3 00 @ 9 00
do Fancy brands 25 @ 26	Ducks, tame. 4 00 @ 7 50
Eastern. 20 @ 22 1/2	Geese, pair. 1 25 @ 1 50
CHEESE.	do Goslings. 1 75 @ —
California, lb. 9 @ 12	Turkeys, lb. 14 @ 18
Eastern style. 10 @ 13	Rabbits, doz. 1 25 @ 1 50
EGGS.	Hare. 1 00 @ 1 75
Cal. ranch, doz. 25 @ 26	PROVISIONS.
do store. 22 1/2 @ 24	Cal. Bacon. 11 @ 12 1/2
Eastern. 16 @ 17	Heavy, lb. 12 @ —
FEED.	Medium. 12 @ —
Bran, ton. 15 00 @ 16 00	Light. 12 @ —
Feedmeal. 30 00 @ 31 00	Extra Light. 13 @ —
Gr'd Barley. 20 00 @ 21 00	Lard. 9 @ 11
Hay. 9 00 @ 10 00	Cal. Sm'd Beef 11 1/2 @ 12 1/2
Middlings. 18 00 @ 19 00	Hams, Cal. 12 @ 14
Oil Cake Meal. 32 50 @ —	do Eastern. 14 @ 15
do new process 28 00 @ —	SEEDS.
Straw, bale. 40 @ 50	Alfalfa. 8 1/2 @ 9
FLOUR.	Canary. 3 1/2 @ 4
Extra, City Mills 4 00 @ 4 35	Clover, Red. 11 @ 12
do Co try Mills 3 75 @ 4 00	White. 20 @ 22
Superfine. 3 25 @ 3 50	Cotton. 20 @ —
GRAIN, ETC.	Flaxseed. 2 @ 2 1/2
Barley, feed, chl. 80 @ 92 1/2	Hemp. 4 @ 4 1/2
do Brewing. 95 @ 1 15	Italian Rye Grass 10 @ 11
Chevalier. 1 10 @ 1 20	Perennial. 7 @ 6
do Coast. 90 @ 1 05	Millet, German. 5 @ 6
Buckwheat. 1 50 @ 1 70	do Common. 5 @ 6
Corn, White. 1 45 @ 1 55	Mustard, white. 1 1/2 @ 2 1/2
Yellow. 1 30 @ 1 35	do Brown. 2 @ 3
Oats, milling. 1 55 @ 1 60	Rape. 1 1/2 @ 2
Choice feed. 1 40 @ 1 42 1/2	Ky. Blue Grass. 15 @ 17
do good. 1 35 @ 1 37 1/2	Ed quality. 13 @ 15
do fair. 1 30 @ 1 32 1/2	Sweet V. Grass. 75 @ —
do Gray. 1 30 @ 1 37 1/2	Orchard. 17 @ 18
Rye. 1 75 @ —	Red Top. 9 @ 10
Wheat, milling. 1 45 @ —	Hungarian. 8 @ —
Gilt edged. 1 40 @ —	Lawn. 30 @ 40
do Choice. 1 37 1/2 @ —	Mesquit. 8 @ 9
do fair to good 1 37 1/2 @ 1 37 1/2	Timothy. 7 @ —
Shipping, choice 1 35 @ 1 37 1/2	TALLOW.
do good. 1 32 1/2 @ 1 35	Crude, lb. 2 @ 4
do fair. 1 30 @ —	Refined. 6 @ —
HIDES.	WOOL, ETC.
Dry. 11 @ 12	SPRING—1888.
Wet salted. 5 @ 6 1/2	Humboldt and
HONEY, ETC.	Mendocino. 15 @ 18
Beeswax, lb. 21 @ 25	Sac'to valley. 12 1/2 @ 15
Honey in comb. 11 @ 13	Free Mountain. 15 @ 18
do fancy. 14 @ 15	S. Joaquin valley. 9 @ 12
Extracted, light 6 @ 7 1/2	do mountain. 10 @ 13
do dark. 5 @ 6 1/2	Calav & F. Hill. 12 @ 17 1/2
HOPS.	Oregon Eastern. — @ —
Oregon. 6 @ 15	do valley. — @ —
California. 6 @ 15	

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grad a sell less than the lower quotations.

Apples, bx, com 30 @ 75	do unpit. 4 @ 7
do Royals. 25 @ 50	Prunes. 7 @ 10
do Blackberries. 50 @ 75	do French. 8 @ 11
Bananas, bunch 2 00 @ 4 00	RAISINS.
Blackberries, lb. 10 @ 15	Dehesa, Clus, fcy 3 25 @ 3 50
Cherries, wh, bx 30 @ 60	Imperial Cabin. 2 00 @ 2 25
do black, bx. 40 @ 75	Crown London. 60 @ 1 00
do Royal Ann 50 @ 75	Layers, fcy. 2 00 @ 2 25
Cherry plums. 10 @ 12 00	do Loose Musc. 1 90 @ 2 10
do Navel. 1 75 @ 2 50	do Loose Musc. 1 60 @ 1 90
choice. 3 50 @ 5 00	Cal. Valencia. 1 60 @ 1 80
do do Com. 2 00 @ 3 00	do Layers. 1 50 @ 1 60
Peaches, bx. 40 @ 75	do Sultan. 1 60 @ 1 75
do evaporated 11 @ 13	Dried, sack, lb. 5 @ 6
do quartered. 11 @ 13	Outside brands of raisins
Apricots. 8 @ 13	sell at from 25 cts to 50 cts less
do evaporated 15 @ 17	than above quotations.
Blackberries. 18 @ 25	Fractions come 25, 50 and 75
Citrus. 9 @ 10	cents higher for halves, quarters
Dates. 5 @ 6	and eighths.
Figs, pressed. 3 @ 4	VEGETABLES.
Figs, loose. 3 @ 4	Asparagus, bx. 1 00 @ 3 00
Nectarines. 8 @ 11	do ext choice 4 00 @ 5 00
do evaporated 12 @ 15	Okra, dry, lb. 15 @ 20
Peaches. 9 @ 10	do Pars. ip. 1 50 @ 1 75
do evaporated 20 @ 25	Peppers, dry, lb. 8 @ 10
Pears, sliced. 4 @ 7	do g. een, lb. 10 @ 15
do qtd. 4 @ 7	Squash, Sum. 50 @ 75
do evaporated 11 @ 12	String beans, lb. 3 @ 7
Plums, evaporated 11 @ 12 1/2	Turnips, chl. 1 00 @ 1 25

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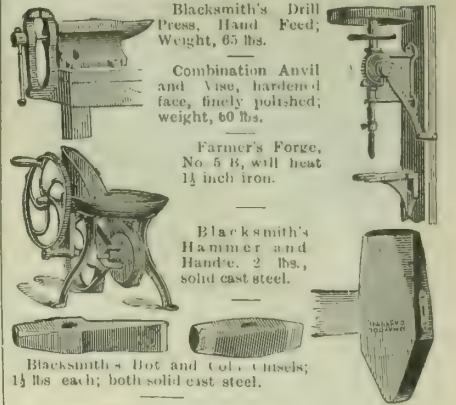
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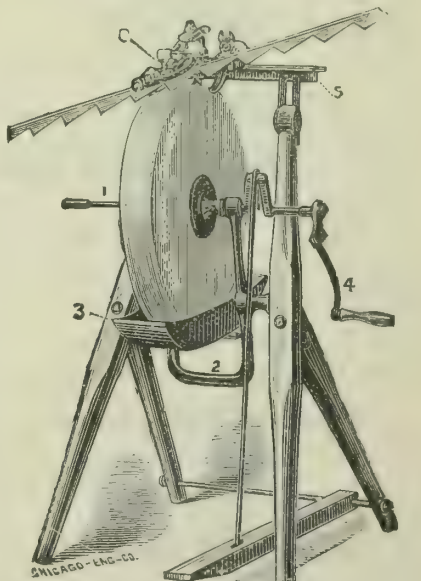
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Combination Anvil and Vise, hardened face, finely polished; weight, 60 lbs.
Farmer's Forge, No. 5 B, will heat 1 1/2 inch iron.
Blacksmith's Hammer and Hand, 2 lbs., solid cast steel.

Blacksmith's Hot and Cold Chisels; 1 1/2 lbs. each; both solid cast steel.
Blacksmith's Tongs, Wrought Iron, 18 inches.
Screw Plates, 3 Tps, 3 Set Dies, cut 1/2 and 3/4 inch.
Farrier's Knife.
Farrier's Pincers, Cast Steel; 12 inch.
Sheeping Hammer and Handle; weight, 9 ounces.

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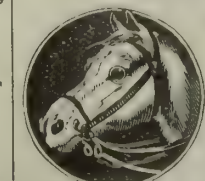
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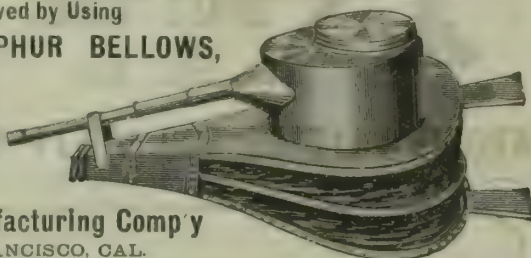
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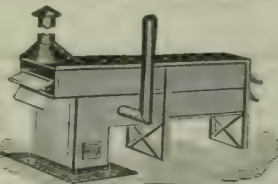
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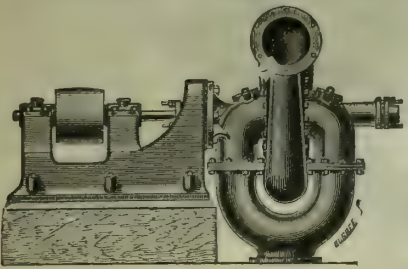
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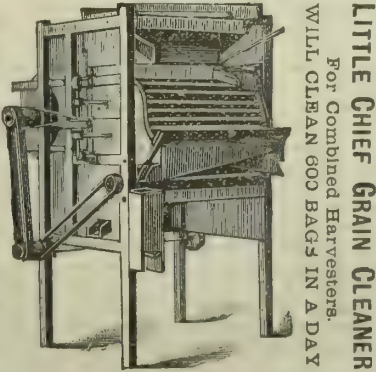
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of Wheat in a day.

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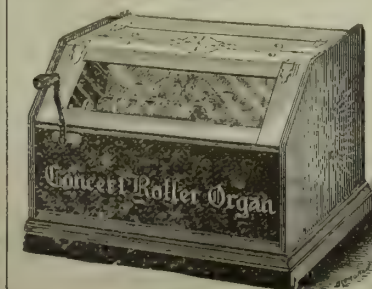
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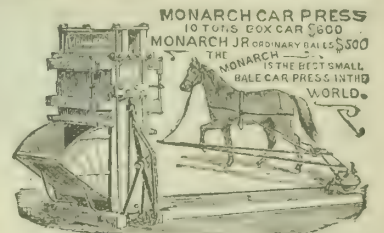
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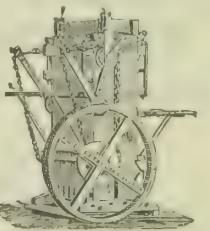
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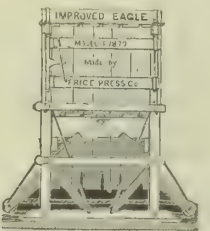
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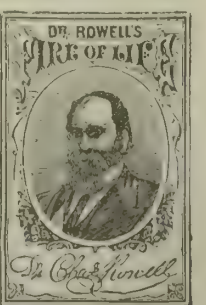
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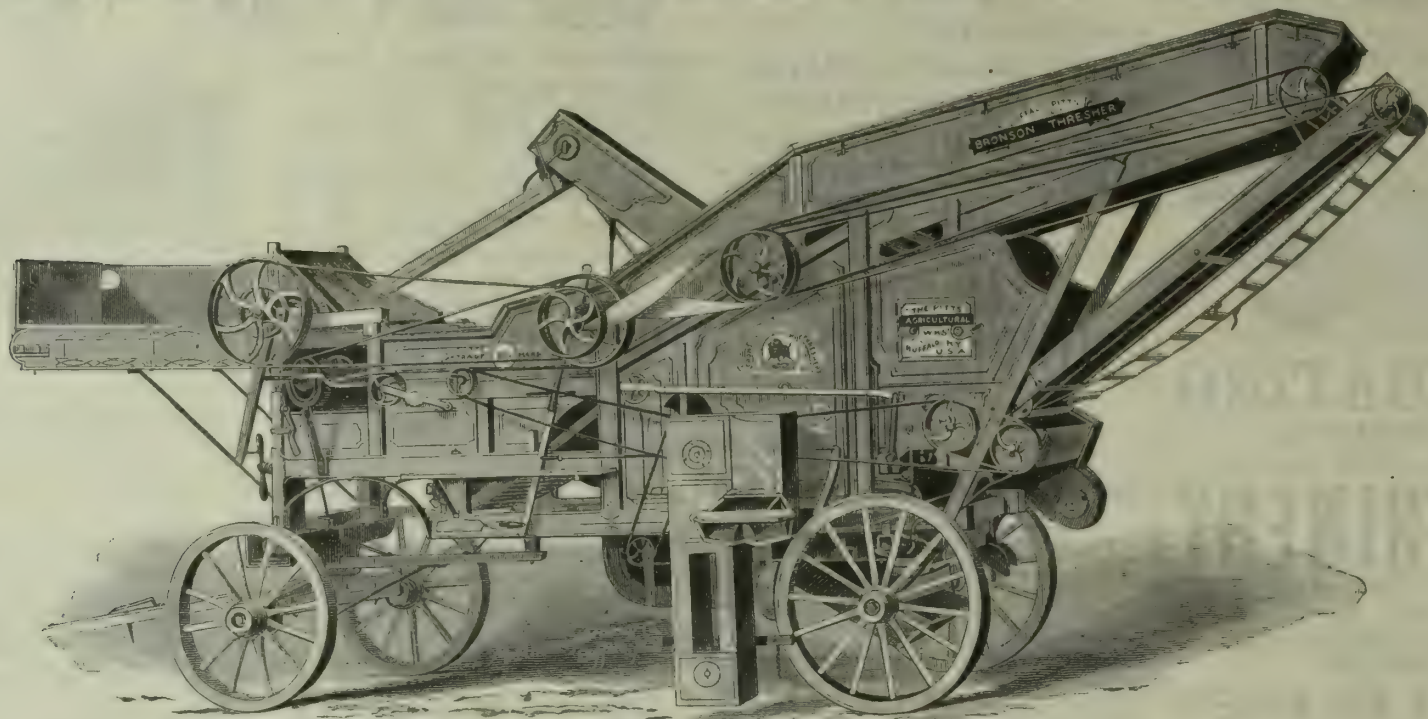
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The above separators have Iron Axle Wagons, 5-inch Tires, Chaff Carriers, 12 Double Bar Cylinder, Cast Steel Cylinder Shafts, Steel Laid Teeth, Extra Large Cleaning Capacity, entire machine highly finished.	
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The longitudinal motions of the Fingers and End-Shake Shoe operate to counteract each other, both being driven from the same crank shaft, but in opposite directions.

SPECIAL IMPROVEMENTS.

Although for the past two or three years we have felt each year that our Threshers had arrived at a degree of perfection that left no room for improvement, yet each succeeding year we have been able to do "a little better," and for this year we have an unusually brilliant list.

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FIG. 2.

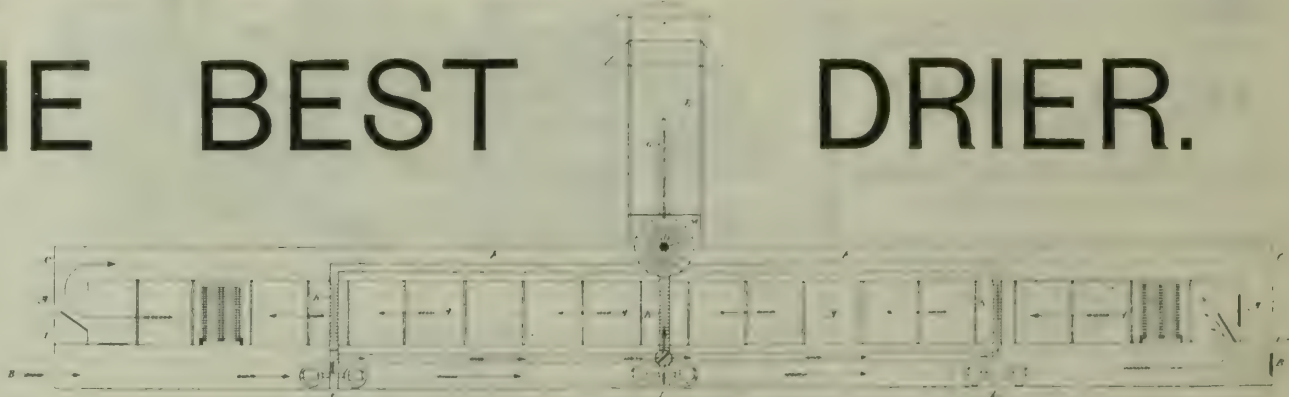


FIG. 1.

Referring to the accompanying cuts, Fig. 1 represents a longitudinal sketch of largest sized Drier of this kind, having a capacity of 50 tons of grapes. It has 2500 trays placed on 14 cars, occupying a drying chamber 100 feet in length. In this size an exhaust wheel draft is used. It is capable of being reduced in a few minutes to any desirable smaller size, and is therefore adaptable to any emergency as to capacity and use of fuel. When reduced one-half, or less than the normal size, a natural draft is used. The draft is reversible or respirating, passing a part of the time in one direction and a part of the time in the opposite direction, at the will of the operator, as occasion may require. By this operation every individual piece of the fruit or material to be dried, and every side of such piece is exposed to the direct action of the hot air current, and the process of curing, as the term applies, to hay, hops, raisins, tobacco, fish, meats, etc., by this operation, may be readily accomplished. As only a brief description can be given here in connection with Figs. 1 and 2, it may be simply stated that the heating apparatus of the drier is situated underneath the drying chamber, separated by a sheet-iron floor, the walls of the heating chamber being constructed so as to reflect the heat upward, and do not in any perceptible degree absorb heat. The sheet-iron floor radiates whatever heat it receives directly into the drying chamber, but the hot-iron current passing swiftly over the heaters and along the flues, carries with it practically all the heat generated by the heaters. The radiators in the drying chamber are closely connected with the heaters, and are so arranged as to make the heaters or the radiators radiate more or less heat, as may be required. The heaters, it will be seen, also have a reversible draft, which is made to correspond with the direction of the flow of the air current in the drying chamber.

In Fig. 1, on line A A, is the drying chamber, divided into spaces for the cars. Two of these spaces show the position of the cars loaded with trays standing within the drying chamber. This is a rear view of the chamber. The cars are moved in and out through apertures on the opposite side (as shown in Fig. 2). On line B B is the heating chamber. The space on line C C shows the exhaust passages connecting with the exhaust chamber at M, where the exhaust is made artificially through the wheel or naturally through the tower E, as may be required. The smoke-return flues, F, F, also terminate in a common upright flue or smokestack, G. In the tower within the smokestack is an exhaust steam pipe, H, used to accelerate the draft in the smokestack and tower when a natural draft only is employed.

On line I, I, is the sheet-iron floor before mentioned. The top of the tower, J, is so constructed that a slight breeze assists the natural draft, and in any case prevents the wind from blowing downward into the smokestack or tower. The radiators are located at K, K, in spaces between the cars at required intervals, and are used to reinforce the hot-air current as fast as it tends to decline. Two of these only are used at a time, the middle one and the one nearest the incoming draft, while the one nearest the outgoing draft is disused. It is not desirable, for obvious reasons, to add heat to the current after it passes the middle of the chamber. Compensation to that part of the chamber is rendered by reversing the draft. The gates for changing the draft are not here referred to by letter, as it will be readily seen that when the draft is

changed, the gates now open will be closed, and those now closed will then be open. The position of the dampers in the connecting flues will also be changed accordingly. The arrows show which way the draft is going at this instant; when the draft is reversed the arrows will all point in the opposite direction.

The heaters, L, L, L, are arranged in pairs, and are from 6 to 10 feet in length by 2 feet in diameter. They are provided with adjustable partitions, so as to cause a greater or less amount of heat to radiate directly or to pass into the radiators. Perfect control of heat is secured in this manner. The engine boiler is placed in the heating chamber beside the heaters, and the boiler flue is connected directly with the middle radiator. Thus it will be seen that every particle of heat generated is utilized.

Fig. 2 shows a sketch of the cross section of the building and its parts. In this figure A represents a side view of the radiator extending across the chamber; B a tray-laden car, drawn out to show position of radiator; C shows a side view of one of the heaters or of the boiler in the heating chamber and its connection with the radiator; M shows rim view of exhaust wheel; N the engine standing on the ground under the fuel shed, which extends the whole length of the building. The belt pulley and shaft of wheel is also shown over head. The lines P and Q represent the doors regulating the draft artificially through the wheel or naturally through the tower. Their manipulation will be easily understood. O is the receiving room for fruit, extending the whole length of the building. On the floor is a track running lengthwise of the building, on which are run supply cars to supply and relieve the cars in the dryer. There are no doors to the openings in the drying chamber, the cars being provided with the ends boarded up, forming shutters at each end, so that when the car stands within or without the chamber the aperture is always closed. The top, bottom and sides of the car are also enclosed by a simple apparatus, so that no matter in what position the car stands, cold air cannot be drawn into the chamber while the car is passing in or out. The cars, no matter how heavily laden, are moved either way readily by one person.

Modifications of the drier, as here represented, ranging from a capacity of 300 to 2500 trays, and costing for the apparatus from \$400 to \$4500, according to size and the quality of trays used. With the best galvanized wire screen trays 3 feet square, engine, wheel, boiler, cars, heater, radiators, flues, and all other apparatus, exclusive of building and labor, putting in apparatus, but including superintendence, a drier of the above description would cost about the latter sum, or with wooden trays about \$2800. The main requirements of the building are a good foundation, good floor and roof. Notwithstanding the fact that this drier, or most of its important improvements, have been and are being patented, the cost of the same is not materially enhanced thereby. Another fact should be well considered, the purchaser not being subject to the cost of experimenting and probable loss by so doing, is perfectly safe in contracting for the purchase of one of these driers, as the proprietor guarantees its proper working, and is responsible for all he contracts to do. For further particulars apply to

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TWENTY-PAGE EDITION.

Vol. XXXV.—No. 24.

SAN FRANCISCO, SATURDAY, JUNE 16, 1888.

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Orange Varieties Popular in California.

B. M. Lelong, Secretary of the State Board of Horticulture, has done a very creditable and timely piece of work in the preparation of a treatise on citrus culture in California, with a description of the best varieties grown in the State and varieties grown in other States and foreign countries; also practical suggestions on gathering, packing, curing, pruning, budding of citrus fruits and fruit trees, with account of diseases, etc. To have this information in the form of a public document is very desirable, now that there is such wide interest in the growth of citrus fruit trees in different parts of the State. Mr. Lelong has been among orange trees all his life, and is practically familiar with the subject which he expounds.

Mr. Lelong's treatise enables us to present on this page outline engravings of orange varieties which he deems the best grown in this State. At the head of the list, of course, is the Washington or Riverside Navel, or as the Government pomologists propose to call it, the Bahia. Mr. Lelong's book has for its frontis-

shows. Col. J. R. Dobbins of St. Gabriel, and J. W. Wolfskill of Los Angeles are mentioned by Mr. Lelong as leading growers of this variety.

Fig. 2 is the Maltese Blood, a popular variety. The fruit is small to medium; oval and

skin, and being very uniform in size packs well. It ripens late, and keeps well on the trees as late as August in Southern California. It does not drop at maturity. The tree is of dwarf habit, medium thorny, a good bearer and very desirable. It is a great favorite in the San

St. Michael. Those commended for trial are Jaffa, Majorca, Hart's Tardiff, Parson Brown, White Orange, and King Orange. Foreign varieties which have been tried here and are not recommended are as follows: Australian Navel, Homosassa, Large St. Michael, Small St. Michael, Duroi, and a number of others less known than these. He gives a full list of Japanese oranges but commends these: Tangerine or kid glove, Satsuma (Unshiu) and Kinquat (*Citrus Japonica*).

Varieties of California origin, besides Wolfskill's Best, which are commended, are as follows: Mayberry's Premier, Baldwin's Favorite, Wilson's Best, Konah, Cooper's Seedling and Kercheval's Queen. Of California varieties not recommended are the following: Nicaraguan, Tahiti, I X L, Wolfskill's Eureka.

To other parts of Mr. Lelong's treatise we will refer at another time. Residents of the State can obtain copies as soon as the supply comes from the State printer, by sending four cents to pay postage to B. M. Lelong, 220 Sutter street, S. F. In sending applica-

FIG. 3.—Mediterranean Sweet.



FIG. 4.—Paper-rind St. Michael.

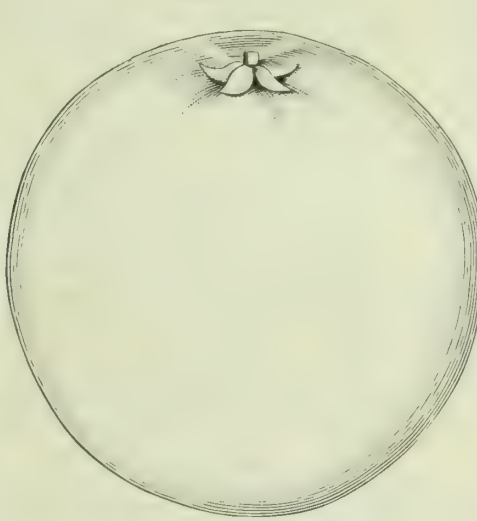


FIG. 1.—Valencia Late.

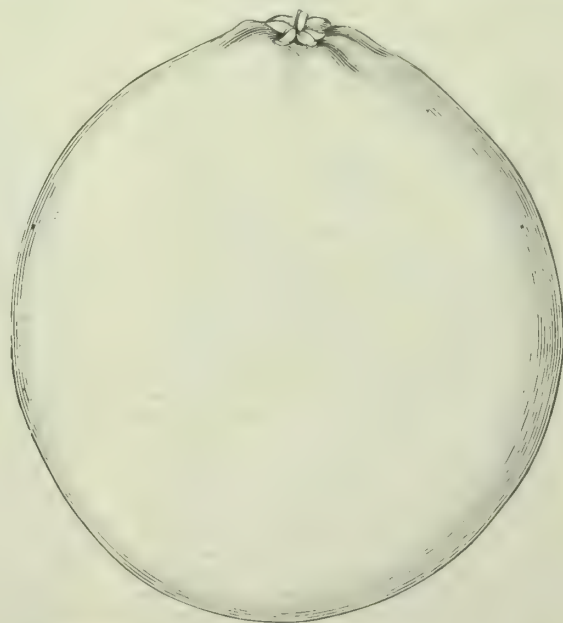


FIG. 5.—Wolfskill's Best.

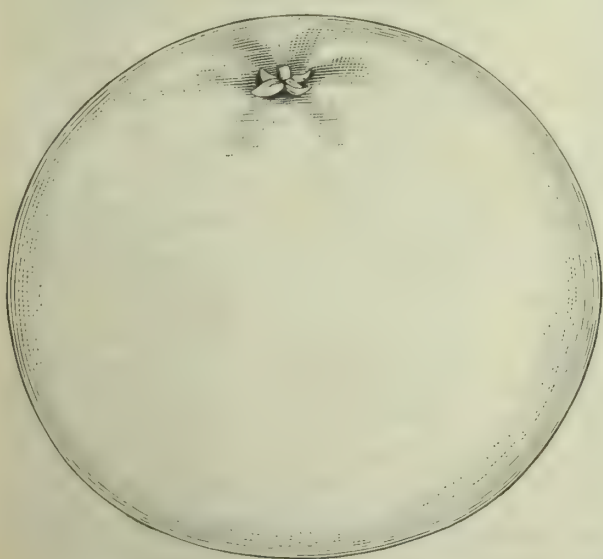


FIG. 2.—Maltese Blood.



A FEW OF THE BEST VARIETIES OF ORANGES GROWN IN CALIFORNIA.

piece the colored plate of this variety, which Prof. Van Deman used in his report as U. S. Pomologist in 1886. This variety is so generally known in this State that we need not attempt renewed illustration of it at this time. Other varieties shown on this page are less known but are of great value and worthy the attention of planters.

Fig. 1 is the Valencia Late orange which Mr. Lelong says has fruited for six years in this State, and is one of the best varieties grown. The trees do not begin to bear as soon as some other budded sorts, which is much in its favor, as most budded foreign varieties bear too soon and thus check the attainment of proper size by the tree. The orange is also very late in ripening, so that it can be shipped after other varieties are gone. The Valencia Late resembles the Paper-skin St. Michael in color and firmness, but is oblong and larger, as the engraving

has fine texture and flavor. The pulp is streaked and mottled with red. It has few seeds. The tree is thornless and of dwarf habit, and may be planted closer than freer growing kinds. Mr. A. B. Chapman of San Gabriel is the largest grower of Maltese Blood, and he regards it as one of the best varieties he has. His shipments to Eastern markets have brought large returns.

Fig. 3 is the famous Mediterranean Sweet. The fruit is medium to large, pulp and skin of fine texture, very solid and few seeds; ripens late, often not until May or June. The tree is thornless and of dwarf habit of growth and is inclined to overbear. It is perhaps the most widely distributed variety in the State, next to the Washington Navel. It was introduced and named by T. A. Garey of Los Angeles.

Fig. 4 is the Paper-rind St. Michael; fruit small, round, very firm and very juicy; pale thin

Francisco market. Fig. 5 is a California seedling, Wolfskill's Best, which Mr. Lelong places first in his list of desirable California seedlings. It originated with J. W. Wolfskill of Los Angeles. The original tree now stands over 30 feet high and is as large as any seedling of its age and shows the variety to be a good grower. The original tree is not very thorny. The fruit is of excellent quality, somewhat flattened, deep orange red, fine grain and pulp. The tree is a good bearer, and the fruit ripens early and should be picked before May. It is the earliest in ripening of all other native varieties. It has been widely distributed throughout the orange districts of the South.

Mr. Lelong's list of varieties of citrus fruits is probably the fullest in the English language. Besides the kinds already mentioned he commends the Rio, Asher's Best and the Azorean

tions, care should be taken to write names and post-offices plainly.

In his introductory to the work, Secretary Lelong says: "We may safely say that in this State, citrus culture is yet in its infancy, and we look hopefully to its promising future. Only in the past few years did we know what were the best varieties to grow, such as would be profitable, and would bear transportation, manner of packing, curing, etc., but through energy, persistency and hard work we have accomplished that end, and to the world we have made known the quality of our fruits; which cannot be surpassed. The awarding of gold medals to California at the New Orleans World's Fair for the best 20 varieties against the world, is conclusive evidence of this fact."

The orange interest of California is advancing. The outlook for the next crop at the South is said to be very promising.

THE VETERINARIAN.

The Functions of the Stomach in Ruminants.

(Concluded from Issue of June 2d.)

EDITORS PRESS:—The intestines of the ruminant are not so large as in the horse, but considerably longer. I will now, imperfectly I fear, but as well as I am able, endeavor to explain the physiology of the structure I have been attempting to describe. The food having passed down the esophagus, comes in contact with the two muscular pillars which are immediately over the left sac of the rumen, and, either by instinctive influence or by mechanical force, the pellet being hard and the muscles of the gullet strong, these pillars are forced open and the food falls into the left sac of the rumen. The food is then, by the contraction of the muscular coat of the rumen, propelled through its different compartments, becoming mixed with the fluid which is there secreted, and also with that that has been swallowed and entered into the rumen. It is macerated and prepared for another process.

The animal takes a deep inspiration. The diaphragm becomes tense and presses upon the rumen and reticulum anteriorly. The abdominal muscles contract and lend their aid posteriorly. The stomachs themselves also act powerfully and contract upon their contents, and a portion of food (which had been previously forced out of the rumen, and through the valvular fold, and into the reticulum, and had there become enveloped in mucus, and formed into a pellet) is pressed through the muscular pillars into the esophagus, while at the same time another portion is forced through the valvular fold from the rumen, and is ready to enter the reticulum as soon as it has become released. By the contractile action of the spiral muscle of the esophagus this pellet is conveyed into the mouth where it is remasticated and prepared for digestion.

Here I cannot but allude to the beautiful design of nature, as manifested in the structure and functions of the rumen. I should have mentioned before that no change takes place in the food during its stay in the rumen except maceration, accomplished by the warmth and moisture in which it lay, and the alkaline principle that was developed, and hence that it was necessary that it should remain there some time in order to undergo that process. How has nature provided for this?

The food passes first into the left sac of the rumen, and is thence propelled into the right which is inferiorly situated. How is it to be raised thence again? What power can throw the food from the lower into the upper stomach? The right sac is always full, rumination going no farther than emptying the left sac. There is always plenty of food macerating there, and although no power would be able to throw the food from the lower into the upper stomach, yet, when the upper one is filled as well as the lower, we can easily imagine that the muscles of the rumen are sufficiently strong to cause the food to revolve through the different compartments; and so that which had been long macerating will, in its revolution, pass into the upper stomach, and that which had been lately gathered and lay at first in the upper sac, will descend into the lower one, and the process of maceration will be constantly going forward, and no food will reascend to the mouth for a second mastication which had not been duly prepared. This has been proved by experiment. A sheep was kept without food for several days, and when killed the right sac of the rumen was found full.

Other experiments have proved that it is rarely that the food begins to be returned to be remasticated in less than 16 or 18 hours, and that the return is not perfectly accomplished in less than double that time. It is, therefore, not the food that has been just swallowed that the cow ruminates, but that which has been macerating in the lower sac of the rumen for 24 hours upon the average. The singular division of the rumen into these two compartments renders it impossible for rumination to commence before both sacs are tolerably full, and as certainly stops it when the upper sac begins to be empty, and thus secures the perfection of the maceration, and the more easy grinding down of the food under the teeth, and the subsequent extraction of all the nutritive matter.

But during all this time the food will undergo, to a considerable extent, the process of fermentation, and in that process much acid will be eliminated, and this will become a source of great irritation and annoyance. How beautiful is nature's contrivance to prevent this, and even to extract good out of evil. The fluid which is secreted by the rumen consists chiefly of an alkaline principle. This, previous to the commencement of the fermentation, combines with and dissolves certain portions of the vegetable matter contained in the stomach. It is an active and beneficial solvent. When the acid produce of fermentation begins to accumulate, it performs another office—it combines with it and converts it into a neutral salt, and that neutral salt, once formed, is useful. It stimulates the muscular fibers of the coats of the stomach, and increases their action in hurrying the food along, in order to be discharged

from the stomach. So admirable are nature's ways.

The food is remasticated, and returned again to the esophagus; and now, either from some instinctive influence, or owing to its having assumed a more pulpy consistence, it no longer forces open the muscular pillars, but passes forward into the maniplus. The semi-fluid portion goes farther; it runs on immediately into the abomasum, while the parts that have not yielded to the macerative power of the rumen, or that have escaped the action of the grinders, are caught up between the folds of the maniplus, and by the united action of the muscular fibers of the leaves, and the hard prominences with which the cuticle covering the leaves is beset, they at length become perfectly comminuted, and then, having been reduced to a pulpy mass, they are allowed to pass into the fourth stomach.

Here it is that the food meets with the gastric juice secreted from the villous coat, and by which it is dissolved and reduced to one homogeneous mass, called chyme. It then passes through the pylorus into the first bowel (duodenum), where it meets with the biliary and pancreatic fluids, and by their influence, and some other power, the clymous mass is separated into the chyle or nutritive part and the feculent or innutritive part. The chyle is absorbed by the lacteals and conveyed by means of the thoracic duct into the system; the feculent matter passes through the intestines and is voided.

DR. A. E. BUZARD, M. R. C. V. S. L.
No. 11 Seventh St., S. F.

Dehorning Cattle.

EDITORS PRESS:—In answer to a subscriber, amputation of the horns in cattle is not only necessary in cases of fractures, but in disease, faulty direction, deformity. Amputation is also resorted to to allow of the escape of collections of matter in the frontal sinuses (the sinus being continued into the core of the horn), which would be impossible for it to escape through the nostrils or to remove the larvae of the *cestrus bovis*.

It has also now become the fashion to quite an extent to render horned cattle "polled" by removing their horns when young—say about two or three months old, as it is believed that animals deprived of their horns yield more milk and flesh.

Amputation is performed on calves at the age of two or three months. The rudimentary horns being removed, with the view of increasing the milk and flesh-producing qualities of the animals.

Operation.

It must be understood that the horn of the young animal is mainly secreted from the band which surrounds the base; when the band is destroyed the appendage does not grow again.

In operating an ordinary gouge will be sufficient, but an old-fashioned gun-wad punch is very convenient; it must be sharp and fastened in a handle; the circular opening of the instrument should be large enough to surround the base of the horn.

Clip the hair off around the little prominence which marks the site of the young horn; then throw the calf on its side and have him held by two assistants. The operator, with the left hand resting on the head, passes the instrument perpendicularly over the horn, and, pressing strongly and in a slight rotatory manner, cuts through the soft tissues to the frontal bone, completely isolating the little horn. The hand is then depressed until the instrument is more or less horizontal, and the portion is gouged out. The wound is sponged; then apply a styptic, such as sulphate of copper, turpentine, alum, sulphate of zinc, etc., or suppress the hemorrhage by the actual cautery (hot iron). Remove the other horn in the same manner. No further treatment is necessary.

DR. A. E. BUZARD, M. R. C. V. S. L.
No. 11 Seventh St., S. F.

THE PUBLIC LANDS.

Government Surveys of Public Lands.

EDITORS PRESS:—As considerable has been said about the necessity for additional surveys of the public lands of California, I wish to give a few details of some of the old surveys.

The surveys made in this county 20 or 30 years ago range from poor and very poor down to scandalous. They were made by the mile and accepted without examination. Many lines were never run except on paper, and nearly all those actually made are inaccurate in direction and in length, and, worst of all, the corners are entirely lacking in many (probably one half the cases) and in the others very poorly and slightly marked. For instance, I'll take half dozen sections in corner of T. 31 N., R. 2 E., M. D. M. The lines vary about five degrees in direction from that given; one certain mile is 60 rods too long; a certain distance given at 35½ chains is 40½; another given 28 is 30; another at 60 is 80, and so on. The township does not match with the next one south by three-fourths of a mile, and on the west side of township there are no corners at all, so far as known.

In one place the original field-notes say two certain corners are 154 to 157 links apart; in another place they say they are together. In

many cases field-notes say that corner posts were marked by pits or trenches according to law. In every case this is believed to be false, as a pit or trench has never yet been found as far as known.

In lieu of the witness trees and other marks required by law, what do we find? Frequently nothing; sometimes a half-rotten small pine stick, sometimes with a small rock or two laid by it; sometimes a good witness tree properly marked; sometimes a simple blaze on the tree without any mark whatever; sometimes the marks made in the outside bark; in one case a letter T on the bark is all that identifies a corner.

Now remember that all these instances are in a few sections in one township. There is no provision in law whereby these lost corners can be restored. One surveyor may make a corner with great care, and next week somebody else makes another one elsewhere. Any man who has a wish to know whether he is living on his own land, must go to a heavy expense and survey sometimes for miles around to get anything like an approximate idea of his lines. Sometimes the whole value of a place depends on a spring, and a few feet would locate it on one or another section. I know several sections that have only one known corner, and one case where it will require 13 miles of surveying through heavy timber and shrub to locate one corner. Don't you think, Mr. Editor, it would be a good idea for the Government to do some of this surveying over again?

The U. S. has \$600,000,000 stacked up, and some people at Washington can't sleep for planning new ways of getting rid of it. Yet, when a few dollars are really needed, they can't be had. In the matter in hand the rule should be better and sufficient pay and better work. The Land Office at Washington sets the price of surveying at \$5 for section lines. It probably never occurred to the officials that there are a few trees on some of our California lands. In these mountains it requires hard work to average two miles a day with six men to help. In one case over three hours cutting were required on one quarter of a mile. In the heavily wooded hills section lines cannot be run properly for less than \$9 to \$10 per mile.

Shingletown, Shasta Co.

W. S. PROSSER.

HORTICULTURE.

Fruit Specimens for the Government Pomologist.

Those who have new fruits which they desired tested by the Government pomologist, Prof. H. E. Vandeman, will be interested in the following directions for selecting, preparing and sending specimens, which we have just received from the Commissioner of Agriculture.

It is essential that all specimens of fruits sent to this department to be examined by the pomologist, and intended to represent certain varieties, should be characteristic in all respects and should fully and fairly exemplify their peculiarities. To this end the following instructions should be followed:

1st. Select such as are of average size, typical in shape and color, and not too soft to carry safely.

2d. Cut a small branch showing bearing wood, and if possible with one or more fruits and characteristic leaves attached, and when possible another showing the mature one-year-old wood. It is of the utmost importance, not only to the pomologist in identifying and comparing varieties, but also to the artist in making illustrations, that the branches and leaves should accompany the fruit.

3d. Each fruit, whether attached to a branch or not, should be separately wrapped in several folds of tissue paper, and then packed in moss, cotton or very soft papers, to fill the space between the fruit and the box which contains them.

4th. In sending such as are liable to shrivel, or such as have fresh leaves attached, the packing should be dampened. The box should be wrapped in several folds of strong paper, and securely tied over all with twine. There is no objection to sealing a package sent under a Government frank.

Great care should be used to send nothing by mail that may decay and injure the contents of the mail-bags. There is no objection to receiving overgrown or curiously marked specimens of fruits which are of special interest. Boxes made especially for carrying pomological specimens by mail, and franks for pasting on the outside of such packages, will be sent to any one applying for the same. When a frank of this department is used, no postage is required, and such packages may be mailed at any post-office within the United States. Large boxes or barrels may be sent by express and the charges guaranteed, which will be paid here.

NORMAN J. COLMAN, Commissioner.

H. E. VANDEMAN, Pomologist.

Fruit Packages.

[An essay by GILBERT TOMPKINS, San Leandro, read at the Santa Rosa Fruit-Growers' Convention.]

There has been no material change in boxes or crates this past season. As a general rule, they have been made according to the sizes declared standard at the Fruit Union meeting in January, 1887. The quality has been above the average, but on account of high quotations for lumber the price has been somewhat higher than heretofore.

The weights that the different sized boxes will

hold are overstated in the schedule in several instances. The weights given are supposed to be net; they really represent the gross weight. The four-inch plum-box is put down as holding 20 pounds of fruit—16 would be nearer the truth. The apricot and peach-boxes fall short in about the same ratio, although the way in which a box is packed is an important factor in counting the loss. The cherry-box comes nearer the mark than any, often holding more than the 10 pounds given it by the schedule. The sides composed of two strips were little used, the main objection being the extra work in putting them on the box, although some report that the fruit carried best in boxes of this pattern.

In nailing boxes together wire nails have been largely used, and are much better than the cut nails, splitting the wood less and holding better. The price per pound is about 50 per cent more than for the common nails, but there are so many more wire nails in a pound than there are of the clamsier cut nails, that the difference is more than made up by the better work of the wire nails.

So much for the packages—custom and practice have shaped them somewhat as we want them. If as much could be said of the manner of packing, the fruit business would be better for it. The average box is very badly packed. In some cases the fruit about half fills the box. Even where the box is well filled, the difference between the top and bottom fruit is something awful. Good fruit at the surface, rubbish underneath; not only in boxes packed for the local trade, but actually in the large boxes of fruit sent in loose, where it is the simplest matter in the world for a buyer to move aside the three or four respectable uppermost specimens and lay bare the rubbish of the lower levels, which does not put him in a good humor with the fruit or with the man who sends it.

A limited but painful experience in buying fruit in the San Francisco market gave the writer some idea of the importance of uniformity and honesty in packing fruit. A buyer soon finds out where he gets and where he does not get what he pays for. Of course there are times when the best of fruit will hardly pay for its boxes and freight, but at such times poor fruit is dumped, although good fruit at least does not leave a man in debt.

It is undoubtedly a hard undertaking to build up a reputation for honest work. Your men have been brought up on the other plan, and it is no small matter to get them out of their old habits. The picking season is always a rushing one, and skill-d help is invariably scarce, consequently it is the easiest thing in the world for careless ways to creep in the packing-house. Right here is where better and more attractive work must be done. Perseverance in well-doing is as needful here as in all other walks of life.

Fruit in bright, clean boxes will almost always sell at an advance over fruit of the same grade put up in rough or soiled packages. Layers of paper on the top and bottom of the boxes almost entirely prevent bruising and add greatly to the looks of the article. I am not sure but that it would pay with a fine grade of fruit to wrap each piece in the way it is done for eastern shipment. Put up in this way it will keep in good condition much longer than when packed loose, and consequently is in demand for shipping to interior points that are out of the fruit belts, and especially to points on the northern coast. Any one shipping fruit put up in this way should, if possible, get it to the San Francisco market on the day before the Oregon steamers sail. These steamers leave two or three times a week and frequently take large quantities of choice fruit. All the San Francisco papers give the sailing days.

It is impossible to give anything more than the most general directions for packing fruit in an article of this sort. If you wish to see packing as a fine art, go to some point where men who understand the business are packing for eastern shipment; watch their packers closely and try it yourself on the spot. Don't leave until you fully understand the wrapping and placing the fruit and can do it with reasonable neatness and speed. If you are within a day's journey of Sacramento, go and see how W. R. Strong & Co. do it. You will be well repaid for your journey.

WARPING OF WOOD.—It is said that the wood on the north side of a tree will not warp as much as that from the south side, and that if trees are sawn in planes that run east and west, as the tree stood, it will warp less than if cut in the opposite direction. However this may be, it is certain that the tendency to warp when sawn into boards is much greater in green than in dry wood, and that the convex side of the curve is always toward the heart. This warping, due to unequal shrinkage, and to the more open texture of the external portion of the tree, is not found to occur in the middle plank or board of the log, excepting as it may, in slight degree, reduce the breadth. This quality of not warping, which is in many cases absolutely indispensable for certain uses, as, for example, in the sounding boards of pianos, is secured in the case of spruce timber by first quartering the logs, and then sawing them with the angle downward. It is then sawed into boards very nearly at right angles with the line of annual growth, and a small triangular strip must be taken off to make the board square edged, but qualities of stability and strength are secured that could not otherwise be had.—*Mechanical and Milling News.*

THE STABLE.

Horse Talk.

EDITORS PRESS:—Some time since in editorial comment on an article by Mr. Jewett of this place, you asked if I would not contribute an article on the horse for your paper. My time is very much taken up, but in answer to a similar request, I furnished some matter for our local paper, the Hanford Sentinel. One of these articles I inclose to you, and if you think it will be of interest to your readers, you can republish.—N. W. MOTHERAL, Hanford, Cal.

Time is money. A horse that can go ten miles an hour and carry his owner to his business is worth at least twice as much as a horse that can go only half this distance in the same time. One hour each day of a business-man's time within one year, would be hard to estimate. A horse that could do this work for 15 or 20 years is worth much more than a horse that could last only five years. A horse that could carry a light boy or draw a light sulky and do this work, would not be so valuable as a horse that could carry a heavy man or draw a heavy buggy. A horse is valuable just in proportion to the amount of service he can render. All men do not want to ride or drive, but their business requires heavy horses for draft. Hence there is a demand for all the various breeds of horses. As there are but few men who can keep separate horses for the saddle, for the road and for heavy work, there has been a great demand for the horse-of-all-work. It can be readily seen how fast horses have been sought after, and have brought high prices in the markets of the world. The demand has led to the development of speed in horses and this to racing, and as like begets like in Christian countries, even racing has been encouraged by the Government, notwithstanding its acknowledged demoralizing tendency, for the purpose of producing a superior breed of horses. The breeding of our best horses has largely been given into the hands of men who are rearing them for the turf. Lately speed has been sought for at the expense of everything else, and this is giving us fast horses unfit for anything but the speed-ring. When racehorses were required to run four miles and carry heavy weights, none but good serviceable horses could succeed. When trotting horses were required to trot long distances, and to carry a heavy man, or draw a heavy wagon, none but the very best horses could succeed. The horse called the Arabian, in English horse literature, was from Barbary, on the northern coast of Africa, and were called Barbs. Early in the sixteenth century those horses were imported into England and crossed upon the best horses of that day. These Barbs have always been classed with thoroughbreds, and a horse whose pedigree runs back to one of those Barbs, without a mixture of coarse blood, is considered a thoroughbred in England. The American racehorse is an English importation and is an improvement in some particulars over the English thoroughbred. Having been bred in England with great care for 300 or 400 years, and the Barbs from which he sprung claiming a pure pedigree running back to the age of Mohammed, the thoroughbred has peculiar traits fixed, and will be more likely than any other horse to transmit his action, staying qualities and great strength to his offspring. The trotting horse of America runs back to Messengers who was imported about 100 years ago. He was a thoroughbred. No one until recently seems to have doubted this, as Miller's Damsel, his daughter, the dam of American Eclipse, and others of notoriety have always been considered thoroughbreds. The same has been said of Lexington and Norfolk. The trotting action was possessed by Mambrino, the sire of Messenger; and Infidel, by Turk, after he was put in training for a racehorse, trotted 15 miles in an hour on a public road. This is where Messenger got the trot from which he transmitted to his offspring. There are many thoroughbreds who have the same trotting tendency. Prince, who beat Hero, the pacer, in a 10-mile race, making the last mile in 2:39, was by Woodpecker, out of a mare by Langford. He was first trained to run. Van Tramp, the half brother of Flying Dutchman, had to be whipped and spurred to get him out of a trot. A thoroughbred horse from a family with trotting action would, if the ordinary rules of breeding apply to trotting horses, be more likely to transmit the trot than any other breed. Gov. Stanford is trying this on mares by Hercules, Bonnie Scotland and Lexington with success, producing such horses as Ansel, Palo Alto and others. Hiram Woodruff, who handled the fastest trotters of his day, and whose opinion is worth a great deal among horsemen, delivers himself on this point, using the following language: "I do not mean to commit myself to any theory of breeding, but will point out the indisputable facts that he (meaning Messenger) was a thoroughbred stallion that got trotters of true action and bottom to stay all day, and that his sire had got plenty of them before him, they both being trained and successful running horses." I will give a few of the celebrated horses and mares to show the relation of the blood horse to the trotter. Lady Suffolk, granddaughter of Messenger on both sides; O'Blennis by Abdallah, who was a grandson of Messenger out of Arizona by a son of Messenger. Henry, a thoroughbred, who beat Eclipse in a four-mile race, could trot, according to his trainer, in three minutes, sired the dam of American Star. Trustee, by Imported Trustee, the great 20-

mile horse. Flora Temple by One-Eyed Hunter by Kentucky Hunter, a thoroughbred. Highland Maid who gave Flora Temple all she could do was by Saltram by Imported Whip out of a mare by Gray Messenger. George M. Patchen got by Cassius M. Clay, dam by a full brother of Trustee the 20 miler. Lady Thorn, by a great grandson of Messenger out of a mare a grand-daughter of American Eclipse and Sir Archy Goldsmith Maid by Alexanders Abdallah a grandson of Messenger dam by Abdallah. Enough of this sort of literature might be produced to make a volume, but suffice it to say that the staying trotting horses all have more or less thoroughbred in them. Men who talk

AGRICULTURAL ENGINEER

Buck-Scrapers for Earthwork.

In the engineering features of the construction of ditches, levees, etc., in reclamation and irrigation enterprises in California, the question of the best method of moving masses of earth is a very important one. In a paper read before the Technical Society of the Pacific Coast by George J. Specht, he presented some very interesting notes on earthwork, relating

protect the land against the water flowing into the Sutter basin at periods of flood, which basin forms a large inland lake. The levees built in this section of the country are constructed usually with an outside slope of 3:1 or 4:1, and an inner slope of 1.5:1 or 2:1, and a top width of from 6 to 10 feet. The earth which is used to form the embankment is taken from both sides of the levee, and is put in place by means of scrapers.

The Sutter County Land Company's levee, as built at present, is 6' wide on top, with slopes of 3:1 on the inside, and 4:1 on the outside; its height varies from 6 feet to 14.5'. This type will probably be changed gradually to a 10' wide crest, with slopes 6:1 outside, and 2:1 inside.

In the construction of the levee just referred to, buck-scrapers and a few dump-scrapers were used. The buck-scrapers were 8 feet long and 23 inches wide, from outside to outside. The other dimensions can be seen in Sketch No. 1. Four horses are required to move one scraper. The driver stands on the end of the tail-board, pressing by his weight the edge of the scraper upon, and into the ground. This weight was not properly applied in the scrapers used, and two additional men were required to weight them down during the time of filling. The horses pulling ahead, earth accumulates in front of the scraper, and it is moved and deposited where required. To dump the earth, the driver steps off the tail-board, and the forward pull of the horses turns the scraper on its lower edge and empties it. The scraper then runs on its side-boards over the deposited earth to the other side of the levee and into the borrow pit. The side-boards are protected by flat iron $\frac{1}{2}$ inch thick. In the pit the driver takes hold of the tail-board, presses it down upon the ground and steps upon it, and again proceeds as above described.

A certain number of scrapers, varying according to the requirements, were worked in one gang, continuously moving from one side of the levee to the other, an operation by which the earth is well packed. The first load is taken near the foot of the slope, and the circuit enlarged with each trip until that particular section of the pit is scraped clean. In order that the work may proceed without interruption, it is absolutely necessary to have sufficient ground plowed ahead of the scraper gangs.

The capacity of one buck-scraper during the construction of the Sutter County Land Company's levee was as follows: Seventy thousand cubic yards were removed in 1277 scraper days, or one scraper moved per day about 55 cubic yards; 294 000 cubic yards were moved in 3249 scraper days, or one scraper moved per day 90.5 cubic yards.

The small capacity in the first case was due to the inexperience of the contractor, as well as of the teamsters, and to the fact that it was an old levee, partly finished the year before, which necessitated a higher pull. The total work done was 364,000 cubic yards, moved in 4526 days, or one scraper moved per day 80.5 cubic yards on an average. The cost varied from 9.63 to 11.4 cents per cubic yard.

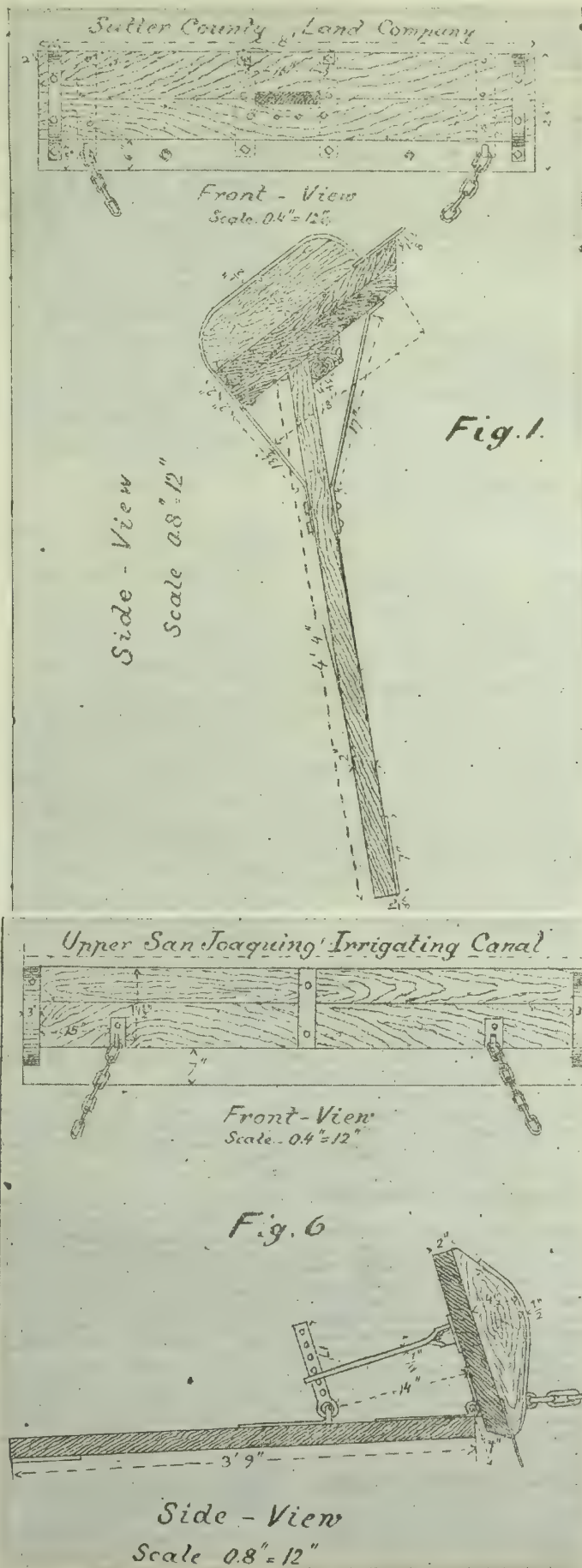
Mr. Specht in his paper gives a number of sketches showing sections of the levee. As, however, we only desire in this article to give some details of the work of the scrapers, we omit the sketches of the levees and canals and only give Figs. 1 and 6, showing the appliances referred to.

He gives in his paper a sketch of the scraper used at the Upper San Joaquin irrigating canal in Fresno county several years ago. The canal runs for several miles along a high bluff, which is apparently the shore of the old river channel. This bluff, which is composed of sediment, sand and hardpan, 2:1 to 1.5:1 for about 75 per of its length. There is no rock, and the hardpan occurs in strata of from a few inches to one foot in thickness, separated by quicksand. The hardpan is sufficiently solid to stand with a slope of 0.5:1, while the underlying sand rests only at 2:1 or 3:1. The work of excavation and building lateral embankments was done by buck-scrapers and dump-scrapers. The dimensions of the buck-scraper are shown in Fig. 6.

As all the loads had to be moved down hill, the work performed daily by one scraper was large. Observations showed that, with a total length of the round trip of 400' and a vertical distance of 40', in 9 actual working hours one scraper made 95 round trips, carrying at each 1.3 cubic yards. All the conditions were very favorable. This is the average of 1000 observations.

The maximum load observed was 1.64 cubic yards. Later observations of the same piece of work showed an average daily capacity of one scraper of 128 cubic yards. The daily expense of each buck-scraper was \$4 65. The average capacity of one scraper per day was 131 cubic yards.

ANOTHER survey is soon to be made by the Southern Pacific Company north from Los Angeles, it being the intention of the company to build a road which will be less expensive to operate than the present main line. The new line will leave the main track at a point about a mile south of the San Fernando tunnel, and will follow very closely the old emigrant wagon road through the Santa Susanna range. The passes through these mountains will be effected at the Canyon de Lacles, and the road will run through the mineral land district and out into the Santa Clara valley. The object of this route is to avoid the San Fernando tunnel and loop on Mount Tehachapi.



BUCK-SCRAPERS FOR EXCAVATING, ETC.

about the trotter being a distinct breed must remember that it takes more than "one swallow to make a summer."—N. W. M.

IRON IN MILK.—Dr. Lyon has been making an extended investigation of the amount of iron in milk, and finds that cow's milk contains more of this constituent than either human or asses' milk. In asses' milk he found .0025 per cent of iron; in human milk, .0015 per cent, and in cows' milk, .0040 per cent.

THE International Congress of Anthropology, the first ever held in America, began its session at Columbia college this week.

specially to the enterprise of the Sutter County Land Co., which owns several thousand acres of land in Sutter county, about 16 miles south of Marysville, 8 miles east of the Sacramento river and 6 miles west of the Feather river. This land occupies nearly the center of the Sutter basin, which plays a very important part in the drainage of the northern part of the State, serving during periods of flood as a relief basin to the Sacramento and Feather rivers, whose waters, owing to insufficient capacity of the river channels, are backed up from the lower end of the basin.

These levees are not exposed to the constant wash of a river current, their only service is to

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Unnecessary Expenses.

In a very timely address before Danville Grange, Hon. D. N. Sherburne considers the complaints that taxes are high and our State and county governments more costly than need be. Among other things, he says:

Our State Board of Equalization seems of little use. To be sure they assess the railroads, but what use in that when the railroad companies are above laws and pay no more taxes than they are a mind to? At first it was thought that the State Board could compel an equal and just assessment of all the property in the State. But the Supreme Court did not understand the Constitution as its creators did, and, by a decision in favor of the tax-shirkers, took away their powers in this respect. Therefore this board is but little use, only to draw their pay; Railroad Commissioners ditto.

We have a Surveyor-General's office that costs about \$10,000 per annum. Can any one tell what use we have for this office? The Constitution gives the Legislature power to abolish this office, and it should be abolished if found useless. Our Constitution does not provide for deputy State officers, but does provide that no clerk in any State office shall receive more than \$1600 per year. But the Legislature has got around the Constitution in this respect, by letting each officer have one deputy at \$2400 per annum.

The State and district agricultural societies cost \$104,000 for two years. This expense should be materially reduced or done away with. Then we have a military organization that costs \$251,000 for two years. This, in my mind, is a useless expense. We have no use for an organization of this kind, only for fuss and feathers; giving a lot of men a chance to play soldier—to parade and picnic at public expense.

Our last Legislature was extravagant beyond comparison; in fact, it boomed everything. The leaven infused by the members from the South leavened the whole loaf. They boomed the university to the extent of about \$20,000 more than was needed or asked for, and every other State expense about in proportion, and tried to boom the courts. But the voters stopped their wild career in that line.

This is only a sample of the way our money is spent. No wonder our taxes are oppressive. What can we do about it? We should work for reform and retrenchment; for just compensation for faithful and honest services in office; do away with all unnecessary clerkships and supernumeraries; send men to the Legislature pledged to reform and retrenchment—pledged not to party but to the people, and to keep out of Legislative caucuses where public expenditures are concerned.

The times call for reform. Then let us work in our respective parties to nominate reformers, and let it be known that such only can secure our votes.

Oldest Member.

EDITORS PRESS:—Sacramento Grange claims to have the oldest member on this coast; not only the oldest member but the most punctual, and who can render his work better and without the book than any member of his age in any Grange.

Bro. Davenport, our Chaplain for several years, who is 87 years old, does his work in the Grange readily without the book, a feat done but by a few of the young members. He is prompt in attendance and seldom absent from his post. He enjoys the reunion of other Granges, and is always ready when called upon to give his sentiments in a clear and business-like manner.

He has more hair on his head to-day than half of those that claim so much piety or show symptoms of vast stores of knowledge. Good wholesome work has never hurt him, and he attributes that as much as anything to his longevity.

He managed his farm until the last few years, when he sold out and moved to the city. He enters into the affairs of the Grange with an interest of a member of half his years. He is treated by the members with that fine sense of feeling that becometh a man of his years.

We feel proud to claim a member of his years, that we may have the benefit of his experience and council. I shall not attempt to write the biography of this brother, but if any one thinks they can equal it I will not make another attempt.

I have seen so many persons lauded to the skies and costly monuments erected to

their distinguished memories after they passed away, that I want to use a little of my influence to have some of these after-thoughts distributed to the living.

When a person has done a good work, act or deed, tell them so while living. Let them receive their earthly rewards on the earth, their spiritual in the spirit land. Monuments of brass and stone with high-sounding inscriptions are like the pardon that comes to the condemned after he is executed.

D. F.

From the Worthy Master.

Worthy Master Overhiser writes: Having received an invitation from Alhambra Grange to be with them on Saturday, June 16, and confer the fourth degree on a class and render the secret work, I have promised to be present on that occasion.

I have received an invitation, through Bro. Frisbie (which I now intend to accept, unless something beyond my control prevents), to attend the reunion of March Grange, on the 14th of July.

Last Thursday San Joaquin County Pomona Grange held its regular meeting. A communication was received from San Joaquin county Board of Trade requesting us to take charge of the exhibit at county and State fairs, which, after due consideration, we decided to do, providing the Board of Supervisors will appropriate a sufficient amount to cover the expenses of the fair, should we fail to draw enough from the State and county agricultural societies to meet all necessary expenses. As this is a county exhibit, we deem it right for the county to stand in and pay the difference.

A committee of three were appointed to wait upon the board, and, if a favorable response is given them, the committee will go to work at once and collect the products of the county for the exhibit.

Fourth of July Coming.

An additional question for June discussion has been added to the list, as will be seen in the Lecturer's desk. We believe that highly interesting Grange meetings can be held on the Fourth of July, or on the previous or following Saturdays, and therefore advise all Granges that can, to make due effort to duly observe this grand national holiday. Next week we shall publish the Farmer's Declaration of Independence, which may afford some opportune thoughts for expression (as the almanac says) about these days. In fact, it might not be amiss to read the entire document once a year in our Granges, or at open meetings and farmer's gatherings.—Patron.

Wheatland Grange.

MESSRS. EDITORS:—Wheatland Grange did not hold a picnic on the 1st inst., but they had a grand reunion or strawberry festival in their hall. The strawberries turned out to be raspberries, however, which all said were better. The day was cool and pleasant, and in due time our hall was well filled with our own members and their families, with a liberal supply of visitors from our neighboring Granges.

I. W. HUFFAKER, Sec.

State Grange Literary Exercises.

EDITOR PRESS:—The following named members have been appointed to act as Literary Committee at the next session of the State Grange: Bro. W. W. Greer, Sacramento Grange, Chairman; Sister A. T. Dewey, Temescal Grange; Sister M. B. Lynder, Alhambra Grange; Sister Wm. Johnston, Franklin Grange; Sister S. J. Cross, Roseville Grange; Sister A. P. Roache, Watsonville Grange; Sister C. E. Kinney, Temescal Grange; Sister E. W. Davis, Santa Rosa Grange; Bro. Norman Alling, Stockton Grange; Sister N. Alling, Stockton Grange. Wm. L. OVERHISER, W. M. C. S. G.

Questions for Subordinate Granges.

Free discussion of the following questions is invited by all subordinate Granges in California and Oregon, and it is requested that reports of the same be sent to the Grange organ, as well as for local publication.

JUNE 9TH.—How shall farmers celebrate and commemorate our American Independence?

JUNE 16TH.—What are the political duties of American voters at the present hour?

JUNE 23D.—Who will attend the State Grange at Tulare, and how shall we enjoy ourselves and aid to the interest of that occasion?

JUNE 30TH.—American patriotism and how to educate and imbue Young America with a true and lasting love of country.

The dates named for discussion can of course be varied according to circumstances.

IN Oregon, as in California, there is much life and activity in the Grange, as is evinced by the many accounts of picnics, county meetings, etc., as well as the extended reports of State Grange which appear in the Patron.

Here They Are Again.

The same old fraud, with a fresh coat of whitewash, turns up again this season in the rural districts. The smooth rascals have a special regard for you, and they want you to sign your name. They have been playing their game successfully in the neighborhood of Pomona, and the Progress tells how they do it, as follows:

A party of three middle-aged men, with smooth tongues and quick wits, are working a new fraud in this region, and it is well that the people should be posted concerning them. They claim to be agents for a large nursery concern, which they call the Central California Nursery Company, and which they claim is trying to introduce its new varieties of grape vines and fruit trees in Southern California. The "agents" method is this: They drive up to the home of a fruit-raiser, concerning whose financial standing and responsibility they have already quietly learned, and ask permission to send him, free of expense, next spring, a quantity of their new fruit trees, in order that he may try them and report the quality of fruit produced on them to the neighbors. When the fruit-raiser is given documents assuring him that he will surely have nothing to pay for the trees, he almost invariably jumps at the bait with uncommon avidity. Then the "agents" produce a blank, which they politely explain is merely to show the California Central Nursery that the trees and vines will be accepted, and in 9 cases out of 10 the paper is immediately signed by the intended victim. The "agents" drive away, and the fruit-raiser goes into the house to tell his family what a bonanza he has struck. A few days later his promissory note may turn up at the bank and his joy is turned to wrath. Look out for the scoundrels and pass them round.

Sacramento Grange.

EDITORS PRESS:—The last meeting of Sacramento Grange, No. 12, held on June 9th, was "Literary Day."

Worthy Master Holmes being absent, W. O. Bro. Jos. Sims called the Grange to order at two P. M. After the usual order of business was disposed of the Grange took a recess, and in open meeting was called to order by the Chairman of the day, Bro. Robert E. Greer.

After a few preliminary remarks by the chairman the following program was rendered: Song by the Grange; remarks by D. L. Bro. Geo. W. Hack; piano solo, Hattie Sims; reading Grange paper, edited by Mrs. W. W. Greer; song by the Grange; recitation, Flo M. Greenlaw; reading (original poem written by Mrs. Jos. Sims) Jos. Sims; piano solo, Gussie Wilcox; reading, Ida Flint; song by the Grange.

The Committee of Arrangements consisted of Bro. Robert E. Greer, chairman, Sister Carrie Holmes, secretary, and Sister Clara Hack.

At the close of the meeting remarks were made by W. L. S. G. Bro. Daniel Flint, Bros. Myron Smith and Chas. A. Hull, and Sister Jones of Yuba City.

Sacramento County Pomona Grange meets on June 30th. A full attendance is desired as business of importance will come before the meeting.

The order of Patrons of Husbandry in Sacramento county is in a flourishing condition; the subordinate Granges are in good trim and working order.

Under the efficient care of the present Worthy Masters and good guidance of our D. Lecturer, Bro. Hack, we hope to make rapid strides during the next year. Yours fraternally and sincerely, W. WALTER GREER.

STATE GRANGE MEETING.—The editor of the PRESS would be pleased to receive communications and fraternal suggestions concerning the next session of the State Grange at Tulare. We hope Patrons from Southern California and from all parts of the State and Oregon will give us hints and suggestions for the good of the Order in connection with the coming session, which we trust will be the largest and best ever held.

HENRY S. GRAVES of West Butte died of pneumonia on the 3d inst., aged 58 years. He was a pioneer of '49, one of the founders of the Sutter County Farmer, a leading Good Templar and an honored and beloved member of North Butte Grange, which has adopted resolutions of profound respect to his memory, and sympathy with his widow and children.

SAN JOSE GRANGE had co-operative institutions up for discussion again on the 2d instant. Among those who spoke upon the question were Bros. Feely, Saunders, Wingate and Dunn. The committee has sent to England for data regarding the Rochdale system, and the subject will be further considered at future meetings.

THE Worthy Master is having blanks printed for the use of Deputies and Granges, for the purpose of trying the inspection service in California which has proved so popular in the Granges of some of the Eastern States.

WASHINGTON GRANGE on the 9th unanimously decided to continue the payment of 20 cents per quarter per member until the next meeting of the State Grange. This Grange originally voted for the increase.

The New Overland Rates on Fruit.

The Transcontinental Association, through Chairman Leeds, has issued the following fruit circular: Rates on deciduous fruits taking effect June 14th:

In carloads of not less than 20,000 pounds, from fruit-shipping points on the California Central, California Southern and Pacific system of the Southern Pacific Company, to Denver, Pueblo, Omaha, Council Bluffs, Kansas City, Galveston, Houston and San Antonio, by freight train \$1.12½ per 100 pounds; by passenger train, \$2.25 per 100 pounds. To Chicago, St. Louis, New Orleans, St. Paul and Minneapolis, by freight train, \$1.25 per 100 pounds; by passenger train, \$2.50 per 100 pounds. To New York (Jersey City delivery) and Buffalo, by passenger train, \$3.12½. To Boston by passenger train, \$3.22½. To intermediate points, or points common with those named above, rates by freight train will be the same. The passenger train rates will apply only to points named or to points intermediate on the line by which the fruit is carried.

Parties shipping ten carloads of fruit to start at one time from Sacramento or other fruit points, can have same run in special trains, approximating passenger train speed, to Missouri river, Chicago or St. Louis. For this expedited service charge will be as follows, in addition to freight train rates as above:

To Omaha, Council Bluffs, Kansas City or intermediate Missouri river crossings, \$1275 per train of not over ten cars, each loaded not to exceed 22,000 pounds.

To Chicago, St. Louis or points common therewith, also to St. Paul and Minneapolis, \$1500 per train of ten cars, of 22,000 pounds each.

If more than ten cars are offered for a special train, by the same party, the charge in addition to the freight train rate for the extra cars, will be: To Omaha, Council Bluffs or Kansas City, \$85 per car of 22,000 pounds. To Chicago, St. Louis or other points common therewith, also to St. Paul and Minneapolis, \$100 per car of 22,000 pounds.

If a train expedited to the Missouri river contains from six to ten cars for Chicago or other points East, they will, at request of shippers, be run from Missouri river to Chicago as a special train, for which the additional charge will be \$225 in excess of the through rates to Chicago, as shown herein.

When special trains to Missouri river contain five cars or less, destined Chicago or other through point named above, each car so destined will be charged regular freight train rate if run east of the Missouri river, by freight train, or 18½ cents per 100 pounds additional, if by passenger train.

To New York City, approximate passenger train time, in trains of ten cars or over, five of which may be dropped at Chicago, \$2 per 100 pounds in excess of the rate charged to Chicago.

Rates named herein apply from fruit shipping points on the California Central Railway, California Southern Railroad and the Southern Pacific Co.'s Pacific System, but do not apply from points on the Vaca Valley and Clear Lake Railroad, Sacramento and Placerville Railroad or Northern Division of the Southern Pacific Railroad.

All charges on green fruit, whether by regular freight or passenger trains, must be prepared, or guaranteed by a good and sufficient bond.

All charges for special fast trains must be prepaid. Consigning the train to one party is for the purpose of collecting the expediting charge, which is a round sum for the special service. Each car will bear its own regular freight service charge and may be billed to a separate consignee.

The carriers will not run in special fast trains cars loaded in excess of 22,000 pounds; and reserve the right to determine the number of cars in excess of ten which may be taken in one train.

This special fast train arrangement is open to any corporation, person or persons, firm or firms acting in concert, who assemble on a given day at Sacramento or other shipping point, the requisite number of cars; but the expedited service will be treated as a unit, and no cars will be taken into a train without the consent of the party or parties acting together who have engaged and made up said train.

The rates named in this circular are guaranteed only on condition that the initial carrier shall determine the routing.

When ventilators, grates or doors are left open by or at request of shippers (which must be in writing and carefully filed by the agent) the carriers will not be responsible for damage or theft, and no claims for losses of this kind will be entertained.

The following dispatch, concerning the first auction sale of fruit, was received by the California Associated Press:

NEW YORK, June 13.—There were auctioned this morning 440 crates of California apricots at \$2.35@2.30; also 426 boxes California peaches at \$2.65@2.25. The lot was consigned to Dudley, Clapp & Doe.

6 P. M.—The agents of the California Fruit Union report concerning the first auction sale to-day of fruit consigned by the California Fruit Union that it was a success, some 200 buyers attended. The bidding was very lively. The peaches sold from \$2.65 to \$2.25 per box and apricots \$2.35 to \$2.30. Some of the peaches were a little soft, but on the whole the fruit was in prime order and promises well for future arrivals. One carload was sold in Boston to-day by auction, at equally good prices.

AGRICULTURAL NOTES.

CALIFORNIA.

Amador.

MONEY FOR THE PAVILION.—*Jackson Sentinel*, June 6: Judge Armstrong on Monday rendered a decision in favor of the legality of the order of the Board of Supervisors allowing the Directors of the Agricultural Association \$1000 for the erection of a pavilion. The decision was rendered on the ground that the appropriation on its face showed that it was made in good faith for the purpose stated, and that the question of good faith not having been raised by the pleadings there was nothing to show that the appropriation was not a legal one. The decision will give general satisfaction.

Butte.

CROPS PROMISING.—*Biggs Argus*, June 7: Ex-Supervisor J. S. Crain informs us that this year there is a better wheat crop than he has ever seen in this section of Butte county. Mr. Crain has raised 33 successive crops within a radius of five miles of Biggs, and always had a fair yield, but this year beats them all. Mrs. Mary Nantz has a 200-acre field of Patent Office wheat on her adobe farm about three miles west of Biggs that will make an enormous yield this year. Judge Crain handed us this week a bunch of long, full and plump heads which he plucked from the fields that show a fine prospect. M. B. Case, one of our most industrious and enterprising adobe farmers brought to our office this week several bunches of wheat which he pulled from various fields on his way to town. The heads were of the club and white varieties, and every mesh had from three to four grains. Mr. Case says there are thousands of acres of this class of wheat on the adobe and there are numerous fields that will harvest from 35 to 40 bushels to the acre.

NEW WHEAT.—*Chico Enterprise*, June 6: The first sample of new wheat of the season was brought to the office of Roper & McIntosh, the grain-buyers, to-day, and is a fine sample. The grain is from the ranch of Sam Morton, southwest of Nelson, grown on black land, and puts out about 25 bushels to the acre. Mr. Morton has 400 acres of this to harvest. Next week the harvest will be in full blast all over Butte county.

Colusa.

CENTRAL CANAL.—*Colusa Sun*, June 9: The directors of Central irrigation district held a meeting last Tuesday, and resolved to issue the bonds authorized by a vote of the people, and put \$100,000 of these bonds on the market at once. The secretary was instructed to get the lithography done and to insert the advertisement according to law for the sale of the bonds. Bids are to be opened on the 10th of July. The board will meet again next Monday, with Engineer Grunsky, and in all probability prepare to have the contract advertisement run parallel with that of the sale of bonds, so that work may be commenced by the 15th of July. It is then the intention of the board to push the work to a finish.

Contra Costa.

SHADE TREES AT ANTIOCH.—*Martinez Item*, June 6: The Ladies' Arbor Society holds its regular monthly meeting this evening. Great interest is still manifested in the society. The trees planted on the public roadway to the depot are growing finely.

ALMONDS.—Yesterday Jasper Jones brought in a specimen of soft-shell almonds grown on the ranch of his father, Nathaniel Jones, near Lafayette. Upon one limb about 18 inches long, in a space not longer than 10 inches, can be counted over 50 good-sized, thrifty almonds. The trees from which they were cut were planted eight years ago, and the land has never been irrigated.

Fresno.

FAIR DATE FIXED.—*Fresno Expositor*, June 6: At a meeting of the directors of Agricultural District No. 21, it was decided to hold a fair next fall, commencing September 25th and closing on the 28th. In the meantime the association proposes to erect a large pavilion at the fair grounds to accommodate exhibitors. A great speed program will also be arranged for the occasion. The time set for holding the fair is two days after the close of the Stockton fair.

Humboldt.

PRUNES AND WALNUTS.—*Rohnerville Herald*: On the Frame place, one mile east of town, Mr. Perrott, the present owner, has growing and well loaded with fruit 2500 prune trees of the favorite varieties. The trees are from three to four years old, and are as thrifty looking and prolific as any we have seen. The crop will be a valuable one. On the grounds of Judge Bryan in this place an English walnut tree, planted a few years ago as an experiment, is also loaded with nuts equal to any raised in this State.

Inyo.

READY FOR WATER.—*Independence In* dex, June 6: The Inyo Canal Company has seven miles of canal completed and is now ready to turn in the waters of Owens river in quantity sufficient for the irrigation of 5000 acres of land. A temporary headgate has been put in and will be used until such time as low water favors the building of a permanent gate. In the erection of the latter 11,000 feet of lumber will be required—a work of no small importance. Water will be turned

into the canal in a day or two, or as soon as the ditching machine is moved to the depot, to which point the canal is completed. Up to this time the canal has been used as a road, and as the machine will have to be moved in it, water cannot be turned in until it is moved.

Los Angeles.

HOMING PIGEONS.—*Los Angeles Times*, June 7: L. Thorne, living at 520 Los Angeles street, imported a pair of Antwerp carrier-pigeons about three years ago and began raising them. He now has quite a large flock, and lately has been giving them a trial. Last Saturday he flew 20 from Downey, and they made the trip home in 15 minutes. Monday 20 were sent off from Norwalk. One of them failed to get in, but the others made the trip in 17 minutes. From Orange 19 were started yesterday, and they arrived here in 1 hour and 30 minutes. They appear to have gotten lost or belated on the trip. A number of little missives were brought in by the birds.

Placer.

HANSELL RASPBERRY.—*Auburn Herald*, June 2: Under the skillful cultivation of Mr. A. S. Whitmore of Newcastle, the Hansell raspberry is gaining an extended reputation. This variety is a hardy grower and prolific bearer, but requires a rich soil for its highest development. It is an early and late bearer. The berries are not so large as those of some other varieties, but are firm and compact, weigh two pounds more to the case than other raspberries, and bear shipping better. They have been shipped as far east as Chicago, are good keepers and do not drip. Mr. Whitmore ships raspberries earlier than any one else, and consequently receives a higher price. This year he received \$4.50 a case for his best berries. Last Sunday he picked 83 cases, and will, according to report, receive over \$1500 for his crop this year. His raspberry patch is somewhere between an acre and an acre and a half in extent.

A FRAGRANT FREAK.—*Newcastle News*: Ed. B. Silva showed us a strawberry Monday that was a curiosity. It was a double berry, fully matured and ripe, having a perfect green leaf on each point. At first we thought the stem must run clear through the berry, but an examination showed that the berry was soft and natural all the way through. All the same, two perfect leaves had formed at the lower ends of the berry. What caused it?

Sacramento.

HEADING BARLEY.—*Galt Gazette*, June 9: John McFarland is entitled to the credit of doing the first heading of grain this season in this vicinity. He started his headers last Saturday to cut barley. His grain crop is excellent and will be fully up to an average.

San Benito.

MONTHLY HORSE MARKET.—*Hollister Free Lance*, June 8: The fifth monthly horse market, under the auspices of the Board of Trade, was held yesterday. There was a good attendance. Out of 103 horses registered, 85 were brought in and 18 were sold. Arrangements were also made for the sale of five others, to be consummated Monday. The principal purchasers were from San Francisco. The aggregate amount of money brought into the county by yesterday's sale will approximate \$2300. The monthly horse market is an established success. Ninety-one horses have been disposed of through this medium, bringing into the county not less than \$15,000, which has been distributed among our farmers at a time when it was most needed.

San Bernardino.

ORANGE CULTURE—DOES IT PAY?—The *Riverside Press* is considering this question and gathering facts to illustrate the real situation. H. E. Allatt, agent for the Russ Lumber Co. and one of the city trustees is thoroughly reliable. He has an orange orchard that covers 4.04 acres of land. He harvested this year his fourth crop and sold the same on the trees for \$2.05 per box. The variety of the oranges is not given but probably most of them were seedlings, or else he sold at a very low figure. His crop amounted to 1029 boxes, no account being taken of culls. The gross returns were \$2111, which gave him an average of \$522 per acre for his crop on the tree; and allowing the \$22 per acre for cultivation—hardly enough—he had 500 per acre net for his crop. The yield amounted to about 3½ boxes to the tree. Wm. Houlding this year picked 530 boxes of oranges from an acre and a half and sold the crop for \$1060—over \$700 an acre. Last year the place formerly owned by A. J. Twogood, but then and now the property of Mr. Hewitson, yielded \$6200 for six acres of orange orchard, and this was the net receipts as shown by the returns of C. E. Packard who marketed the crop.

San Diego.

CHERRY ORCHARD AT MESA GRANDE.—*Cor. Julian Sentinel*, June 8: After crossing a number of small streams on the Mesa Chiquita, the pioneer fruit ranch of J. E. Gedney is reached. He has every kind of fruit adapted to this climate, among which are several hundred cherry trees, all loaded to the ground with the ripening fruit. The ravages of the birds have often been urged as an objection to the cultivation of cherries in this country, but these are entirely unprotected, and Mr. Gedney says that what the birds take he does not miss. He sells his cherries for from 18 to 25 cents a pound, and as each tree has from 150 to 200 pounds of fruit (the trees are all quite young yet) it will be seen that it makes a very profitable crop. He selected for his orchard the driest, steepest and

rockiest looking land to be found on the whole mesa—enough to satisfy any one that there are thousands of acres in that vicinity that may be made as profitable, and the people are very zealous in their work in that direction.

San Joaquin.

BIG BLACKBERRIES.—*Stockton Independent*, June 6: H. R. Allen, who lives four miles north of Lockeford, has left at this office a branch from a blackberry bush that is loaded with luscious fruit, large, plump and delicious. The berry is of the variety known as the Early Harvard, and commenced ripening May 20th. It was grown without irrigation. The size of the fruit is equal to any ever seen.

San Luis Obispo.

AGRICULTURAL ASSOCIATION.—*S. L. O. Tribune*, June 8: At the meeting of the association held Saturday there were present Messrs. Warden, Orcutt, Leedham, Van Gorden, Murphy and Webster. The committee on pavilion reported through J. H. Orcutt that they had leased ground from the county at the nominal rental of \$1 per annum for 20 years. That they had endeavored to raise a sufficient sum to build a pavilion, but thus far had been only partially successful. Warden, Andrews, Orcutt, Steele and Jack were appointed a committee on pavilion, with full power to do anything requisite in the premises. Resolved, that Mr. Leedham be appointed the official representative of the county at the coming Mechanics' Institute Fair, and that we endeavor to secure by subscription the funds necessary to defray the expenses incident to the exhibit. Leedham, Webster and Orcutt were appointed a committee on premiums and pavilion. Resolved to hold meetings henceforth the first and third Saturdays in each month until after the fair.

Santa Barbara.

MUSTARD.—*Lompoc Record*, June 2: Within two weeks mustard harvest will begin on the Santa Rita rancho. The crop is not up to the yield in our best years, but the increased acreage will bring it up to the general output from this section. There is a worm working on the mustard that promises to do great damage. Some think it will destroy from one-fourth to one-third of the entire crop. The mustard louse is also at work more in some places than others. So of the worms. All crops are not affected alike. Two weeks more and we will be enabled to speak more definitely concerning the damage.

Santa Clara.

BUSY CANNERS.—*San Jose Times*, June 8: The Dawson cannery on the Alameda has put up so far, in round numbers, 6000 boxes of cherries, 2000 of currants and 1500 of gooseberries. The canning of currants and gooseberries will be completed within a few days. Of cherries the proprietors expect to can about 2000 boxes more, which will probably keep going the 200 persons now employed by them until apricots come on, after about two weeks. During July they will continue on apricots and also commence on blackberries, raspberries and peaches, and their force of employees will be increased to 300 or 400. Most of their work is paid by the piece, women making from \$1 to \$1.50 and men from \$1 to \$2.

Santa Cruz.

FROM THE BEET FIELDS.—*Pajaronian*, June 7: We continue to hear good reports of the excellent showing made in the appearance of the beet crop. Samples of beets brought to town show a vigorous growth, and point to the conclusion that a portion of the crop will be ready for harvesting before the factory is finished. An experimental sugar-beet farm is being conducted by Dr. Von Wachtel, on the Johnson place, near the factory, and he is having the thinning done by girls. He is well pleased with their work, and thinks he has the best lot of workers in the valley. He states that over half of the beet acreage of this valley has been thinned and cultivated, and that of the remaining part a considerable portion is not ready for thinning. As a large number of boys are honorably promoted from the schools last week, and hence were excused this week, farmers have found less difficulty in obtaining help for the battle with the rapidly growing beets. So far as we have heard, the boys, when superintended by the farmer or some other competent person, have given splendid satisfaction. The beet factory is paying out over \$2500 per week for labor. The weekly output of that amount of money, in addition to the usual circulation, is felt by traders in a town the size of Watsonville.

FLAX.—Through G. A. Trafton Mr. Hatfield, who visited this valley last fall to canvass its advantages for a flax-mill, distributed a quantity of flaxseed, most of which was planted by Nels Struve. The flax looks well, has made a fine growth, and has a fiber of remarkable strength. Samples of Struve's flax are displayed at the office of Hawkins & Peckham.

Sonoma.

PAYING POULTRY.—*Healdsburg Enterprise*, June 6: Dr. T. W. Brotherton of this place is quite extensively engaged in raising thoroughbred poultry. He has two Petaluma incubators of 70 eggs capacity constantly in use, and thus far has made this system very profitable, and attended with less care than allowing the hens to set. He has a flock of six black Spanish hens, which he claims to be the best laying fowls to be found, laying from four to six eggs per day the year round. The Doctor also has 40 Brown Leghorn hens which laid

during the months of January, 1116 eggs: January, 1303; March, 1205—a record which is hard to beat. The yard is situated on the sunny side of the slope near his home, and divided into small yards separated by wire fences. The doctor takes good care of his poultry, and thereby makes a success of the business.

Tulare.

EARLY ROSE POTATOES.—*Visalia Times*, June 7: Yesterday J. L. Morrow brought in from his ranch, 12 miles east of this city, a sample of what can be done in the line of large, mealy potatoes. From one vine he gathered 32 potatoes that weighed 14 pounds. Further, the vine was a volunteer product, growing in a field where potatoes were raised last season, and none were planted there this year. Still further, he has 25 acres of this volunteer crop, which he is now gathering, and it is yielding 150 sacks per acre, the yield of the 25 acres aggregating 3750 sacks. The entire crop has been sold to an Eastern gentleman, in the sacks on the ranch, for 75 cents per sack, bringing the sum of \$2812.50. The crop grew on unirrigated but moist land, such as is to be found along the bottoms of the Kaweah and St. John rivers. All the expense incurred was that of digging, which will amount to not more than \$25, or \$1 per acre. They are of the Early Rose variety and as large as those usually grown in this section. The purchaser will take advantage of the late low rates adopted by the railroads and ship them east to supply the demand there.

THE FRAZIER VALLEY IRRIGATION CO. will commence the construction of their ditch next week. The water will be taken out of Tule river at the old Johnny Campbell ranch and conducted through Frazier valley to the John Tuohy ranch on Lewis creek, a distance of 22 miles.

RABBIT-DRIVE AT PIXLEY.—*Tulare Register*: On Friday June 1st occurred the big rabbit-drive that has been advertised for the past month. People flocked to the scene from all directions. It is estimated that there were between 300 and 400 vehicles in line and between 2000 and 3000 persons of both sexes and all ages. It was a fine day for a drive, being cool and breezy. Like all other drives, however, proper caution was not observed in keeping the ranks closed on the wings, and, consequently, thousands of rabbits escaped before reaching the corral. With what were killed outside the trap, the number of dead rabbits would reach somewhere in the neighborhood of 5000.

Ventura.

LOTS OF 'COTS.—*Ventura Democrat*: There are within three miles of this town 1000 acres of apricot trees in a single locality, all bearing. This, we are informed by a gentleman, who claims to know whereof he speaks, is the largest body of bearing apricot trees in the world.

Yuba.

MARYSVILLE DOTS.—*Appeal*, June 8: Over 75 tons of wool have been shipped from this city to Boston within the past 10 days. The dairymen in this vicinity say that they have had good grazing for their stock on the highlands up to the present, and now the lowlands, which are looking fine, will be used. Ten tons of apricots were placed in the assorting room of the Marysville cannery Tuesday morning. The cannery opened yesterday with 155 employees, only seven of whom were Chinamen, and few white men could be obtained to do their work. Supt. Skinner last evening estimated that they had put up close on to 20,000 cans. From this on for two weeks they will consume from 10 to 15 tons of apricots, and after that more. Good grain hay was offered at \$10 per ton yesterday. The lively stables are laying in a good supply at that figure. Last year \$7 and \$8 was all they paid up to the corresponding date.

THE BROWN VALLEY IRRIGATIONISTS met there Monday morning, quite a large number of the foothill farmers being present and much enthusiasm being manifested over the decision of the Supreme Court of the Wright bill. Speeches were made by A. S. Wright and E. A. Forbes. The Executive Committee met and reports of subcommittees were received. A thorough survey and a complete and reliable report of the topography of the country will be made by Engineer Meek, together with estimates of probable cost. A practicable ditch route will be selected, and the eastern boundary of the proposed irrigation district will be run out. The engineer and his crew started for the initial point of operations, as agreed upon by the committees, the same being the Black Divide in Oat Hills, and work on the survey is now going on.

Yolo.

"SKYHIGH" APRICOTS IN NEW YORK.—*Winters Express*, June 2: Last week we mentioned a shipment of eight boxes of apricots to N. Y. made by Mr. G. W. Hincley of Skyhigh ranch. Mr. Hincley has since received the return of sales, which states that his fruit was the very first to arrive in the N. Y. market. The 'cots were packed in little cherry boxes and sold for \$5 a box, or 50 cents per pound. The expenses for transportation, etc., amounted to \$14.50, which leaves Mr. Hincley the neat sum of \$25.50 for eight cherry-boxes of apricots. The fruit arrived in good condition and sold readily at the price named. The apricots sent by Mr. Hincley were picked from the trees when thoroughly ripe, but before they had softened were carefully packed, and the result of the sale shows that it will pay to be careful.



Seeking Rest.

BY SAM BOOTH.

Coming one day to the portals
Where the angel sentries wait,
A pilgrim, old and weary,
Stood by the Golden Gate.
His feet were sore and bleeding,
For hard was the way he had trod,
And long, long years he had journeyed
Toward the city of our God.

With awe and reverent feeling
He raised his trembling hand,
To knock at the shining portal
That opened to the heavenly land.
When, spoke the great Archangel,
Who stood with a flaming sword,
"None enter here save those who come
In the name of Christ, our Lord."

Abashed stood the trembling pilgrim,
Then with faltering step and slow,
And with look full of infinite yearning,
Was turning away to go,
When lo! 'mid a throng celestial,
A glorious presence came,
While a burst of heavenly music
Rang out the one great name.

"Fling wide," said he, "the portals,
And let the wanderer in,
His soul by faith and suffering
Is purified from sin.
Come in, come in, poor pilgrim,
To thy home among the blest,
For he who hath helped my poor ones
Himself shall enjoy my rest."

San Francisco, May, 1888.

"Behind a Frowning Providence."

Gloriously bright rose the sun one June morning years ago. Long, warm rays shone across the spotless floor, and touched the rows of shining dishes on the dresser, in Mrs. Prime's cosy kitchen. The little maid who stood at the open window was thinking of something far less pleasant than the peaceful scene before her. Her cheeks were pale and her eyes swollen with weeping, as she stood there looking languidly out. Only yesterday she had thought herself the happiest girl in the world, when out there under the lilacs she had promised to be Robin Moore's wife. To day she was the most miserable, for she was accused of a crime and was about to lose her only means of support. Yes, she, Mollie Gowen, whose character had always been the best, was accused of theft by the employer whom she had served faithfully these four years.

It came about in this wise: The day before our story opens, Capt. Prime brought home thirty silver dollars and placed them away in the desk that stood in one corner of the keeping-room. Before doing so, however, he showed them to his wife and Molly, and allowed little Hittie to play with them awhile. In the afternoon he went to the neighboring village, leaving the desk unlocked, as he often did. It was sunset when he returned, and just as he entered the house he saw Molly come out of the keeping-room. She started and turned pale at sight of her master, who asked her with a smile:

"Did I frighten you, Molly?"

Molly laughed nervously as she replied, "Yes, sir, I did not hear you come in and you startled me."

The captain thought no more of the occurrence then, though it surprised him to see Miss Molly so nervous. Presently Mrs. Prime came in with Hittie in her arms. "Oh, it was your voice that woke me," she said to her husband, "I had one of my headaches this afternoon, and I think Hittie and I have slept nearly two hours."

In the evening after her work was done Molly came in, dressed for a walk, and asked permission to visit a friend who worked for a neighboring family. It was granted, and Molly started out, but had not gone far before she met Robin, and instead of visiting her friend she strolled down by the river with him.

Shortly after, the captain came in and went to the desk for something. On opening the drawer, he found that his money was not where he left it in the morning. He searched each drawer in turn, then called his wife. "Hannah, have you moved my money?"

"Why, no," responded Mrs. Prime, coming to the door and looking in. Again they searched the desk, but with the same result.

"Call Molly," said the captain. "She has gone over to Mr. Ford's to see Eunice," responded his wife.

"Has any one been here to-day?" "No, I asked Molly that question when I woke up, and she said she had not seen any one this afternoon."

"What was she doing in the keeping-room to day when I came home?"

Mrs. Prime looked surprised: "I did not know she was in there," she replied.

The captain then told his wife of Molly's confusion that afternoon.

"But, Ezra," she replied, "you surely don't suspect Molly? Why, I would as soon think of Hittie as of her!"

"What else can have become of the money?" he queried.

This was a problem that Mrs. Prime could not solve, so she remained silent.

Just then Molly came in looking flushed and tired from her rapid walk.

"Where have you been?" demanded the captain.

Molly looked confused. She was not used to being asked such a question, and the captain's manner was so stern it frightened her. She could not tell him about Robin, so she remained silent.

The captain's brow grew stern. If Molly had answered him frankly he would have believed her, but her silence strengthened his suspicions.

"Have you been to see Eunice?" he continued.

Molly hung her head and answered faintly, "No."

"What were you doing in the keeping-room this afternoon?"

There was such a lump in Molly's throat that she could not answer at first, but, after a moment, she said: "I went in to see if it needed dusting."

"It took you some time to make that answer," said the captain sarcastically. "It is of no use, Molly; you may as well tell me at once where my money is."

Molly turned pale and looked helplessly at him. Even Mrs. Prime's faith began to waver, and she said gently: "Tell him, dear. He won't be hard on you."

This was too much for the poor girl, who burst into tears and cried out vehemently: "I don't know anything about your money! What do you mean?"

"Come, come!" said the captain angrily, "this won't do, you see you are found out. I wouldn't have believed it of you! I would have trusted you anywhere! I suppose I ought to send you to jail; but I won't on your mother's account. If you will restore the money, I'll forgive you; but if you do not I shall send you home without your pay, and everybody shall know why, so that they may not get deceived in you as I have."

Poor Molly crept off to bed with a bursting heart, and wept through the long hours of the night. Not only the thoughts of her disgrace, which was terrible to the proud girl, kept her sleepless, but the thoughts of her mother and sister, who were dependant on her for support. How would they live now?

As Molly turned from the window, Mrs. Prime came in. Her motherly heart was filled with pity at the sight of the girl's pallid face, and taking her cold hand she said: "Keep up good courage, child, I believe in your innocence, and some time the money will be found, I am sure."

Tears sprang in Molly's eyes at the kind words. One at least believed in her and trusted her still. How the thought comforted her!

That night, when all her preparations were made for leaving, she took Hittie up to kiss her good-by. The child was very dear to Molly, who took a great deal of care of her; but Hittie struggled angrily, crying out: "Go 'way! Oo s'an' touch me! Oo's a bad, wicked girl, for my daddy says so!"

A hard, rebellious feeling crept into Molly's heart as she set the child down and took up her bundle. She found Mrs. Prime waiting for her in the hall and the gentle woman kissed her cheek and pressed something into her hand.

"Don't give up, Molly," she whispered, "remember I trust you." "God bless you for that!" said Molly fervently, as she turned away to hide the falling tears.

When she had reached the highway, she opened her hand and there lay two shining gold dollars, her month's wages. Somehow the little gold pieces warmed the girl's heart and assured her again that the whole world was not against her.

How merrily she had tripped along this road a week ago, singing as she went; but now she walked with lagging steps, dreading to tell the folks at home her trouble, yet longing for their sympathy. The air was filled with the melody of the birds, and the sound of distant water at the mill, but Molly heeded not the sweet sounds, nor

saw the blue hills penciled against the summer sky.

The great rose-bush beside her mother's door was flaming with red roses, and a light breeze scattered the petals all around her as she went up the path. Little Betty ran out to meet her, crying joyfully: "O, Molly, have you come home to make a visit? How glad I am!"

Molly could not answer, but taking her sister's hand in hers, she went into the room where her mother sat. What a feeling of comfort and rest her mother's presence gave the poor girl; she had one friend, at least, who would love and trust her, come what might.

Without a word she threw herself down at her mother's feet, and burying her face in her lap, burst into tears. Mrs. Gowen stroked her daughter's hair silently and waited for her to grow calmer. At length she told her story, much to her mother's indignation.

"Did they not know you better than that?" she asked. "You who have worked for them so long and so well! Don't be afraid, Molly! God is with the innocent and He will overrule this for your good, child. Behind a frowning providence, God hides a smiling face."

"And O, mother," continued Molly, "I was so happy before this happened, for I had promised Robin Moore to marry him; but now I never can unless that money is found, for people shan't say Robin has married a thief."

The news of Molly's disgrace spread like wild-fire. Those who envied her her pretty face and the marked preference which handsome Robin Moore showed her, pretended to believe her guilty, and treated her with coldness when they met, but the majority of her neighbors were very indignant, and pronounced Capt. Prime a "purse-proud old Pharisee." These sympathizing friends gave many proofs of their good-will, and helped Molly in every way they could.

"One thing I am learning, mother," she said with a sad smile, "and that is to know my friends."

The next evening after Molly's dismissal Robin came to see her, and was very bitter toward Captain Prime, whom Molly defended stanchly. "Circumstances were all against me," she said, "and it is no wonder he thought so. If ever the truth is known he will feel badly enough, for he is a just man."

Robin urged a speedy marriage, but Molly would not hear of it. "No," she replied, "I will never marry you till this is cleared." In vain he protested; she remained firm and he was forced to submit, vowing vengeance, however, when the truth would be known.

Dreadfully the weeks crept by and still Molly was without work. Day after day she sought employment, but the scandal outran her and she was looked on with suspicion. If any one did hire her for a day, she had the mortification of knowing she was watched. She kept all these things from her mother's knowledge; but they weighed on her proud spirit and she grew pale and thin. Their little hoard of money was all gone, and the meal was getting low, so poor Molly's reflections were gloomy enough as she sat by the window one afternoon knitting and watching the dusty road. Suddenly she dropped her work, crying: "Oh mother! Captain Prime is coming up the lane. What if—oh, can it be he has found his money?"

"Very likely he has," replied her mother, calmly.

The Captain rode up to the door and springing from his horse, rapped loudly. "Please go to the door, mother," said Molly, faintly, "I can't."

Mrs. Gowen opened the door and greeted her visitor with quiet dignity. He asked for Molly and was invited in. Going straight to the trembling girl, he took both her hands in his and began: "Molly the real thief is found. Will you forgive me for unjustly accusing you?"

For a moment Molly felt as if the solid earth were slipping from beneath her feet, and she would have fallen if he had not caught her. She revived immediately and cried out: "Thank God! Oh, thank God!" Then her tender heart went out toward the real culprit. "Are you quite sure this time, Sir?" she asked earnestly.

"Quite sure," he answered, "for she has confessed."

"Oh, sir," said Molly, "don't be hard on her! Think of all she has suffered, for if I who am innocent, have suffered so keenly, what must the guilty one have endured?"

Capt. Prime was deeply touched by this appeal, though he answered lightly: "Oh, I shan't hurt her, though I don't think her crime has cost her much sorrow; but you haven't said you forgive me, Molly. Do you?" "Freely!" she replied, "you are so good yourself that it makes you angry with wrong-doers."

The captain winced. "Say rather I was too uncharitable and harsh; but I have learned a lesson I shall not soon forget. Why don't you ask me who the thief is?"

"I would like to know if you wish to tell me," she replied simply.

"Well, then, it was no other than Hittie. Yesterday I had occasion to go into the parlor, which, as you know, Mrs. Prime opens only on great days. Hittie was with me, and she ran up to the sofa and said, 'Don't touch my moneys, daddy!' 'Where are your moneys, daughter?' I asked her. 'In here,' said Hittie, crawling under the sofa. I looked under and there in the dark corner was my money in three neat piles."

"As nearly as I can find out, Hittie took the money from the drawer some time that afternoon, and carried it into the parlor, where she played with it awhile and then hid it under the sofa and forgot all about it until she went into the room with me yesterday. So you see my own daughter was the thief after all."

"I remember finding her in there, now," responded Molly, "though I had forgotten it before."

"Well, Molly," said the captain, rising, "Mrs. Prime misses her swift handmaiden. When will you come back?"

"Never!" said a new voice, and Robin, who had entered unobserved, came forward and stood beside the blushing girl. She is going to be married as soon as she gets her wedding finery made."

"Oho!" laughed the captain, "that is the way the wind blows, is it? Well, well! I shall give you a wedding present when the time comes." And with these words and a bow to Mrs. Gowen, he left the house.

Robin would take no denial this time, so Molly consented to be married on the first of the following December, and in spite of what he had said, she went back to her work the following day. Mrs. Prime and Hittie were overjoyed to see her, and she was happy once more.

When, in November, she finished work and went home to get ready for the wedding, Mrs. Prime gave her a gold eagle besides her wages, then, calling her into the keeping-room, showed her a beautiful silk lying on the table. "There, dear," said she, "is your wedding dress."

Molly gazed at it for a moment, in speechless admiration, then, turning to her mistress with swimming eyes, she cried out: "O Mrs. Prime, how good you all are to me! This is too lovely!"

"Nothing is too good for you, Molly," said Mrs. Prime, fondly.

The wedding day dawned bright and fair. Capt. and Mrs. Prime were present, and, after the ceremony, the captain put a slip of paper into Molly's hand, saying: "Here's your wedding present, my dear." The paper proved to be a check for \$500, a great fortune for the simple girl.

Molly often visited her friends, the Primes, and in a few years a little girl named Hannah went with her. Hittie grew up to be a good woman, and always loved Molly dearly.—Dora Annis Chase, in *American Cultivator*.

The Worst for the Farmer.

The *Encyclopædia Britannica*, speaking of barley in its article on Agriculture, says:

"It is, however, in the production of malt liquors and ardent spirits, and in the fattening of live stock, that our barley crops are chiefly consumed. We have no doubt that it would be better for the community if this grain were more largely used in the form of butcher meat and greatly less in that of beer or whiskey."

It has been customary for farmers to look upon distillation as beneficial to them, from the ready market which it affords for barley, and more especially for the lighter qualities of this and other grain crops. But this is a very short-sighted view of the matter, for careful calculation shows that when the laboring man spends a shilling in the dram-shop, not more than a penny of it goes for the agricultural produce (barley) from which the gin or whiskey is made; whereas, when he spends the same sum with the butcher or baker, nearly the whole amount goes for raw material, and only a fraction for tradesman's profit. And not only so, but the man who spends a part of his wages upon strong drink diminishes, both directly and indirectly, his ability to buy wholesome food and good clothing; so that apart from the moral and social bearings of this question it can abundantly be shown that whiskey or beer is the very worst form for the farmer in which his grain can be consumed. Were the \$250,000,000 at present annually spent in Great Britain upon ardent spirits (not to speak of beer) employed in purchasing bread, meat, dairy produce, vegetables, woolen and linen clothing, farmers would on the one hand be relieved from oppressive rates, and on the other, have such an increased demand for their staple products as would far more than compensate for the closing of what is at present the chief outlet for their barley."

My Neighbor's Plants.

My neighbor across the street had a handsome bay window added to the sunny side of her house last fall, and was immediately seized with a desire to have that window filled with plants and flowers during the winter. She had little experience with plants, in fact she had always thought them "too much trouble to bother with." But the bay window fired her with a new ambition, and she went to work with a great zeal and energy collecting her plants. I gave her a great many tips, and several well rooted plants, she bought a number of a florist, and other friends remembered her so that the shelves and brackets in the bay window were all filled, and the window looked very pretty from the street. I was away for several weeks, and soon after I came home my neighbor came over to my house and said:—"I do wish you would come over and see my plants. They're not doing a bit well, and I don't know what is the matter with them; I work and fuss over them all the time, but it don't seem to do any good." I had noticed that the plants seemed in a decline. Some of them had, in fact, quite given up the ghost, and all seemed struggling with a destroyer of some sort.

"Plants never would grow for me," my neighbor continued. "Some folks have a sort of a—knack with plants, and they grow for them without the least trouble." "I don't think so," I said, "plants won't grow for any one, without proper care." I went over to see her plants, a more enfeebled, dejected and hopeless looking lot of once promising plants I never saw. "They need water," I said.

"Think so?" she asked. "Well, I used to water them two and three times a day, because I read in a paper that plants needed lots of water. Then I read that they oughtn't to be watered oftener than once or twice a week, so I stopped watering them."

"Different plants need different quantities of water," I said.

"Do they?" she said innocently. "I supposed they all needed it alike."

"The soil needs enriching in some of the pots."

"Now do you really think so? Well, I thought so too at first, and I put coffee grounds, and soot water, and fertilizer, and bone dust, and liquid manure, and everything I could hear of on them, but it didn't do any good."

"Did you try them all at once?"

"Oh, no; one day I tried one, and the next day another and so on. I read somewhere that soap suds was good, and I doused them good with that, but I don't think it helped any. I washed them well with ammonia and water last week, and I am afraid the ammonia was too strong for some of them."

Some one of her dozen or two of fertilizers had evidently been too much for several of the plants, for they were done with this life.—*Vick's Magazine.*

Summer Exercise for Women.

For several years I have marked a gradual, steady improvement in the physique of our women, due to a better understanding of physiology and observance of sanitary law. Comparatively few remain now who compress vital organs into wasp waists by lacing; sanitary underclothing is more generally worn, and heavy boots with low heels have taken the place of the ridiculous French abominations that once deformed women's feet and ruined their natural gait. False modesty has given place to true, with very great gain to female health and corresponding increase of promise for coming generations.

We are training physically future children when we give their prospective mothers better, stronger bodies, and physicians rejoice at the advent of every plan for further gain in this regard. Systematic out-of-door exercise is the very best prescription that can be given to women, during June, and a few hints as to its employment will answer many questions that have been asked me lately.

It is useless and worse, to persist in claiming that physical exercise for men and women should be alike in degree or kind. In happy, sexless childhood, boys and girls may indeed be allowed the same diversions and muscle training; but when their lives begin to separate by development of sexual instincts (and it is marvellous how early these occasionally manifest themselves), it is no longer practicable nor right to insist upon a similarity of exercise for dissimilar structures.

Women seem to think that house-work, the daily toil that reaches from sun to sun, is sufficient; whereas it is as apart from exercise as labor is from rest.

And yet to be at its best, our exercise must be so regular and systematic as to seem almost like toil. For a general rule, there is no form that does women so much good as walking.

The best period is in the forenoon, when natural forces are mounting up and carrying weakness upon their tide. After the morning bath and toilette, and time will permit the arrangement, an early breakfast of milk and a biscuit should be taken and a start made.—*Dr. Wm. F. Hutchinson, in The American Magazine for June.*

A HIGH-PRICED PIANO.—The highest-priced piano in America is owned by Mr. H. G. Marquand of New York. The works were made by Messrs. Steinway & Sons, and the case, which was built in London, was designed and painted by Alma Tadema. It cost \$46,000.

YOUNG FOLKS' COLUMN.

Prehistoric Arizona People.

EDITORS PRESS:—Since writing to the young readers of the RURAL, I have had a long talk with a Mayo Indian. (Look in your school atlas at Sonora for Rio Mayo). This Indian is much such a looking man as were the former people whose cities covered Salt River valley—at least the measurement under the rules of phrenology would decide him as such—but I will only say that this Mayo is a large strong man, very mean and quarrelsome, and in his way is very religious. He thinks God plans now to kill people who displease Him. I have had an excellent opportunity to examine the shape of the heads of many of the prehistoric people whom Lieutenant Cushing has dug out of their tombs. Oh! horrid, isn't it, to be digging up the graves of other people!

It seems that all common people when they died these prehistoric people burned (cremated), but their rulers or priests they buried in their churches and in their church-yards, which they walled in by high walls, situated always exactly with the points of the compass, and nearly always exactly that of a square.

These people wrote books and letters, but their books were made of slate-rock and their letters were written on strips of wood or pieces of pottery made of clay and mica. They had no letters to spell, as we do, but had characters somewhat like the Chinese.

But what about that howling beast I wrote of in my last letter? Lieutenant Cushing found 13 of them near my house. Here is my theory, and it is based on what I have learned from ideas still held by Indians now living. When sickness like measles, smallpox or other calamities got among this people, they attributed the cause to an angry God, and to appease the wrath of this God the prettiest and best children were sacrificed to Him—that is, killed and burned. This killing and burning of these innocent children were attended with much display and ceremony, and for the form of burial a small portion of the charred remains were put into this stone-like small pot, when they placed the figure of this beast in a praying or howling attitude, standing with his head over the pot of charred embers, ever beseeching. This was worship with the Arizona prehistoric man, who lived long, long ago. Now we dig up these things and think how foolish such ideas are.

Two years ago the Yampais, in Northern Arizona, found some men digging after the curious things in a burying-ground, and one Indian, who talked a little English, came and told the party to quit and put everything back as they found it and then get away speedily, or they, the Indians, would kill every white man in the party. Such deeds as these often make bad Indians. What would you do if Indians, or anybody else, were to come and dig up the graves of your grandfathers out of curiosity?

That is the way we white people treat the Indian, and if the Indian don't like it we call him a bad Indian and get after him, and take his land from him, and put him on a reservation and tell him to be good.

Next time I write to the young people who read the RURAL I will tell them of the Supuy Indians whom I saw down in a vast crevasse, with walls that were perpendicular more than 200 feet high. Yes; and they killed a little girl, too, when we were there, because the little girl's mother had died; because, they said, by so doing the little girl could go along with her mother over to the spirit land.

Tempe, Arizona. GEO. KAY MILLER.

A SENSIBLE DEER.—The Lake *Avalanche* says that last fall Dr. Downes lost a pet deer by its running away to the mountains. On May 21st the deer appeared again, came directly to the Doctor, laid its head on his arm and acted very strangely. While he was not noticing it, it ran away, but returned the next day and repeated its strange actions, as though it wanted the Doctor to follow, which he did. After going some distance from the house, the Doctor found a young fawn only a few days old, which he took in his arms and carried home. The deer evidently had been trying to get the fawn to the house, but could not on account of its weak condition. The doctor is delighted at the new addition to his family of pets.

GROWTH OF AMERICAN RAILWAYS.—The evolution of the railway and of its rolling stock follows the same laws which govern the rest of the world; adaptation to circumstances decides what is fittest, and that alone survives. The scrap-heap of a great railway tells its own story. Our railways have now reached a development which is wonderful. The railway of the United States, if placed continuously, would reach more than half way to the moon. Their bridges alone would reach from New York to Liverpool. Notwithstanding the number of accidents that we read of in daily papers, statistics show that less persons are killed annually on the railways than are killed annually by falling out of windows.

WOOD PULP VS. PLASTER OF PARIS.—Wood pulp is rapidly being substituted for plaster of paris in the manufacture of all kinds of building ornaments in France, where a new method has been devised.

GOOD HEALTH.

THE TEMPERATURE OF THE SKIN.—The experiments of Davy long ago demonstrated irrefutably that the temperature of the interior of the body varied little in man with race, climate or season; yet it is familiar to all that the temperature of the skin varies considerably in different parts—the extremities for example, and those parts of the skin where the circulation is feeble being cooler than other parts. Quite recently some interesting experiments to determine these variations of the surface have been made by Professor Kunkel at Wurzburg. Taking the skin of the face in the first instance, he finds that in men from 20 to 30 years of age it varies from 85° to 89° Fah., with an approximate average of 88°. The skin of the more exposed parts of the body, as the tip of the nose and the lobules of the ear, in which the circulation is slow and feeble, exhibited a lower temperature, not exceeding in many instances 75°, or even descending as low as 71° 5". The skin covering the muscular portion of the body is warmer than that over the bones and tendons. Contraction of the muscles caused the temperature of the superjacent portion of skin to rise one degree or more. The decrease of temperature from the skin to the outer covering in a room at a temperature of 63° was as follows: On the skin 88°, on the linen shirt 82°, on the vest 75°, and on the coat 72°. The highest temperature was found to occur in men in the full vigor of life. As a singular fact, Dr. Kunkel states that children otherwise in perfect health showed a much lower degree of surface temperature—from 77° to 84°—than adults. He does not appear to have followed out Professor Lombard's observations on the temperature of the head.

THE SAFEST WAY TO FALL DOWN.—"The special providence that seems to hover over drunken men and children has something of an explanation," said a well-known and eminent medical man to a reporter, "in the fact of the main cause of the breakage of bones from falls being from a resistance of the tendons more often than from the violence of the shock incident to the actual fall. A child or an intoxicated person will rarely endeavor with any great effort to recover their balance when they slip or topple over. Hence no special resisting force is exercised, and they sink into a collapsed heap without serious injury. When an adult in possession of his full sound senses undertakes with endless contortions and gyrations to save himself from going down, he draws every muscle and sinew taut, and if the wrench is too severe the bone breaks. There is no way of definitely proving it, but it is asserted, and I believe with some degree of truth, that some, at least, of the fractures resulting from falls, especially from a high, happen before the actual shock with the substance one falls on occurs. It's strange, but I guess it is the truth."

CALIFORNIA CLIMATE.—The complaint is sometimes made by Eastern people that the average of human life in California is not as great as it is in the Atlantic States. If that is so—which we doubt—it may be explained by the fact that great numbers of invalids come to this State, by which our death rate is unnaturally increased; and again, people do not take the same care of themselves here that they do East. If men do not reach the average of life here it is also in part because they abuse themselves in various ways here as they do not in the East. They work too hard. Our "glorious climate" gives them strength beyond that usual in other places, and they do not perceive it until they have overtasked themselves in labor or in the pursuit of business. Moreover, a large portion of our people live too high, drink too much, go to excess on tobacco, and in every other thing in which people can exceed the limit prudence would dictate. The graveyards are not peopled by middle aged and young men because of climatic conditions.

INTERESTING TO EVERYBODY.—The feet can be kept warmer in cold weather by wearing a shoe with a light sole than a thick one. With the former the shoe has a chance to work, thereby keeping up a circulation. This, of course, applies only when the weather is dry; but when it is wet, and rubbers are necessary, it is best to wear a single-soled shoe inside. In the summer the thick sole should be worn, for it keeps the heat from striking through to the foot. This is all so contrary to the preconceived opinions of the public that it is doubted whether it will receive much credence, but it is the fact all the same.—*Shoe and Leather Reporter.*

TONGUE INDICATIONS.—According to Dr. Howship Dickenson, a furred tongue is not necessarily an alarming symptom. To some persons it is normal to have a clean tongue, and to others equally normal to have a coated tongue, so that it is impossible to fix any degree or limit of coating as a necessary accompaniment to perfect health.

MILK IN SUMMER TIME.—An argument against allowing children to drink milk in the summer time is drawn by Dr. V. C. Vaughn of the University of Michigan, from the liability of the fluid to develop the poison—tyrotoxin—which is supposed to be the immediate cause of summer diarrhoea.

DOMESTIC ECONOMY.

FRUIT CAKE.—Five eggs, one cup of butter, two cups of sugar, one half cup of syrup, one teaspoonful of soda dissolved in a little sweet milk, two teaspoonfuls of cream of tartar, two cups of flour, one teacup each of citron, currants and raisins.

ORANGE COOKIES.—Into two tablespoonfuls of butter rub one large cup of brown sugar and two quarts of flour. Season with a great deal of orange peel, well grated, and mix with enough molasses to roll thin. Cut in fancy shapes and bake in a quick oven.

OMELET.—Beat the whites and yolks of eight eggs separately until light, then beat together, and add one tablespoonful of cream; put a piece of butter the size of an egg in a frying pan, and when boiling hot pour in the omelet, shake slowly until it begins to stiffen, then let it brown; fold double and serve hot.

FISH CHOWDER.—Take any large fish and cut in thin slices, lay some slices of fat bacon at the bottom of the pot, and then a layer of fish, onions, cracker dust, red and black pepper, salt and butter; then more layers until all the fish shall have been used. Cover the whole with water and cook until well done.

PICKLED OYSTERS.—Rinse the oysters in their liquor, strain it upon them, and let them come to a boil, and take them out of the liquor to cool. Prepare cider vinegar by boiling it with peppers, a little salt, mace, olives and nutmeg, and, when cold, pour it over the oysters, and keep them in a covered stone jar.

PEANUT CANDY.—Remove the shells and brown skins from the nuts. Then boil two cups of molasses, one cup of brown sugar, a piece of butter the size of a small egg, and a tablespoonful of vinegar. Boil until nearly brittle, then place the peanuts in a buttered pan, pour the candy over them, and cut into squares or bars.

CHEESE SOUFFLE.—Beat two eggs very lightly and mix with them a seasoning of salt, pepper and cayenne, three tablespoonfuls of milk and two ounces of grated cheese. Beat the mixture thoroughly, then pour into the tin and bake in a brisk oven. Sometimes a teaspoonful of finely minced onion is added, and by some is considered a decided improvement.

CHICKEN SOUP.—Take all the bones of a chicken, crack them and add the dark meat; cover well with water and stew for three or four hours. Flavor the broth with some thinly cut lemon peel; salt to taste, and add a little sage tied in a piece of muslin. All fat must be removed. This soup, when cold, will be a delicate jelly, and can be melted down as required.

INDIAN MEAL GRUEL.—Make a thin paste of one teaspoonful of flour two tablespoonfuls of best corn meal and a little water. Stir this into a quart of boiling water, or milk and water in equal proportions, as preferred. Cook until the meal has set, stirring constantly; then turn into a double boiler and simmer for 1½ or 2 hours. Season with salt and strain. If too thick, thin with milk or cream.

COLD SLAW.—Cut the cabbage very fine. For a quart of cabbage take the yolks of three eggs, beat them well, 1½ cups of vinegar, two large spoonfuls of sugar, one cup of thick cream, a teaspoonful of mustard, salt and pepper. Mix this with the eggs. When hot, add the cabbage, cover and stew until it is thoroughly hot. Let it cool before bringing to the table. Some add olive oil, but we like butter.

SALMON CROQUETTES.—Boil half a pint of milk, thicken with a tablespoonful of flour and let it become cold. Mince a pound can of salmon or one pound of fresh salmon. When very fine add a saltspoonful of white pepper. Moisten the minced salmon with the boiled milk, work to a paste and add bread crumbs if too thin. When wanted, shape into cakes, rolls or cones, dip in egg and crumbs and fry in hot fat.

CONSOMME FOR FAMILY USE.—Put in a soup boiler a roast fowl, or any portion of roasted fowl, two pounds of lean veal, some roast beef bones and two pounds of soup beef, with two gallons of water and four tablespoonfuls of prepared seasoning. Boil slowly, skim well, add a carrot, a turnip, two leeks, an onion and half a parsnip. Cover closely, and let simmer for hours, then remove all fat, and strain through a wet cloth.

CLAM PATTIES.—Chop the clams fine, put them in a saucepan with a little milk and a portion of their own liquor, and stir in the yolk of an egg; season with pepper and salt to taste. When they are scalded add a tablespoonful of butter mixed with a little flour, let it simmer until the flour is cooked, then remove. Have ready some puff paste or other rich crust with which line patty pans, fill them with the clams, make a ring of the paste to partially cover them, and bake in a quick oven.

POTATO TURNOVERS.—Mash some dry mealy potatoes while they are warm; add a piece of butter, and mix with them two or three beaten eggs according to the quantity of potatoes. Dredge a pasteboard, spread on it the potatoes a good half-inch thick. When cool, cut out in squares or round cakes five inches across. Put on each a large tablespoonful of any remnants of meat or poultry minced fine. Turn over half of the cake to cover it, coat them over with egg and bread crumbs, and bake a delicate brown in a moderate oven.



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Business Announcements.

[NEW THIS ISSUE.]

Fruit Evaporators—J. H. Wylie.
Agricultural Implements—Truman, Hooker & Co.
Agricultural Implements—Bull & Grant Farm Imp't Co.
New Music—Oliver Ditson & Co., Boston.
Horse Sale—Killip & Co.
California Military Academy—Oakland, Cal.
Barley Crusher—M. L. Mery, Chico, Cal.
Irving Institute—Rev. E. B. Church.
The Florida Dispatch—Jacksonville, Fla.
Fruit Pitter—Wiester & Co.
Grangers' Co-operative Business Assn.—Sacramento.
Commission Merchants—Witzel & Baker.
Goats—J. Weyand, Little Story, Cal.
Baskets—Pacific Split Basket Co.
Brick Machinery—J. W. Penfield & Son, Willoughby, O.
See Advertising Columns.

The Week.

All reports indicate a fair measure of progress in the producing districts. The showers have continued beyond expectation, based upon ordinary experience, and fears of injury to fruit crops have naturally arisen. Such fears have not been well grounded, and anticipated evil has not come. Considering the fact that fruit is grown in countries subject to summer rains should have reassured our people. Even such unusual things as showers in June are not likely to do harm in California because the showers are short and light and the air so dry that moisture is speedily dissipated.

The growth of pasture plants and grains where not dried by previous drouth, has progressed considerably during the showers and the consequent cool air. Much grain has headed well which the usual spring weather would have checked. Consequently there will be plumper grain and more of it than was once expected, but the aggregate crop will be a small one. Hay has, in some cases, been hurt by the rain in coast and northern valleys, but not generally. The fruit is coming on well; the

canners are working full force and shipping is active from the earlier districts. The city fruit and vegetable stands are putting on their summer garb of abundance and variety.

Our Republic.

It is said of Christ that on one occasion he was approached by some of the disciples of John the Baptist who said to him: "Art thou the Prophet that should come, or shall we look for another?" So we have men in our day, many thousands of them, who are ready to say of our Government: "Is this the perfect Government that is to be, or shall we look for its fall, and another and a better to take its place?"

Yes, there are pessimists in the land who see nothing but ruin and disaster, and predict some sudden change, either a revolution to antique imperialism, or a general disorder from which some new form of civilization shall arise. The millionaire leans to the imperial as the best guarantee for vested rights, while the poor rather affect anarchy and socialism as the precursor of a better distribution of wealth.

In truth, there is much in the present structure of society in this new State of California, and also in the whole Union that cannot be commended as either just, rational or indicating wise and permanent Government. A change for the better is most essential to our peace and happiness, and the security of Government and liberty.

It is a fixed axiom of the best minds in the world that good government and free people cannot exist in an atmosphere of extreme wealth and abject poverty. There is no dissent from this opinion among those who have written upon it. From the earliest times till now political philosophers have all agreed that a certain equality and independence are essential to a rational freedom.

George Washington, in his last address to the nation, gave new emphasis to this axiom. He said: "Should the time ever come when wealth, faction or combination may defy and evade the commands of the people, government will be at an end and the republic and liberty only a sham."

It is manifest to all that a degraded, wretched and criminal class is equally dangerous to well-ordered liberty. We have seen symptoms already of what they can do. Our cities are all at their mercy. Fire and explosion in these days of dynamite admit of no defense. The will only is wanted, and we have seen that even that will is being cultivated with assiduity. Our safety lays in the moderation of all those causes that lead to these extremes.

Shall we accomplish that moderation? Most assuredly! It may come late. It may require much crime and suffering to inspire us to action. But when the time comes that these things must be amended or the Republic must die, the amendment will come, and the Republic ride the storm in safety.

The trouble is people have expected too much of the Republic. A proclamation cannot make liberty. A Government cannot establish liberty by law. The people in their minds and hearts must be in accord with the proclamation and the Government or it will be of no avail. It only makes liberty possible to those who are ready for it. It puts a weapon in the hand of the slave if he will use it. But if his education, heart, nature and affection fit him for a slave, no law can liberate him. He who would be free must assert himself.

Then some of us seem to think that a free people will all at once become a good and just people because they are free. It is simply impossible. The new law must first have the assent of the mind. Then it becomes the practice and a habit. Then the whole nature becomes Republican, and the people and the Government are in perfect harmony. This will come, but it will take time.

The Republic is not on the downgrade. It is going upward. Its recovery from the evils resulting from slavery is an evidence.

Here is another evil right at our doors: Wealth, corporations, trusts, syndicates and other combinations, pursuing the methods of the Old World, and the common law, rather than the genius of the Republic, have aimed to do just as slavery did—to seize the Government and override the law. They have assumed a position almost impregnable, just as slavery did. See how they are entrenched.

The majority of the Senate of the United

States are millionaires, the heads of corporations, the leaders in all manner of monopoly. They buy their places with money and corrupt influence.

The laws as they are, with the interpretation of the Supreme Court, just suit them. No law can be changed without their consent. No change of judges can occur without their consent. They hold the door and can resist change so long as they can buy those seats.

Then what are we? Slaves! No more! This Senate is impregnable except by a sublime effort. Will the people make it? Surely. As in the case of slavery, whenever the issue is made, "the people will win, and the Republic live more pure for the ordeal. And more, we shall make monopoly impossible for all future time as we did slavery."

We are working toward perfection in Government and not away from it. The people, the press, 40 Legislatures and Congress are all working, thinking, talking, and enacting for better Government. If a millennium is possible for man they will find the way to it; and if it is not they will find the next best.

Crime, evil, pain and suffering are the inheritance of man. We all have more or less. Government can only ameliorate, increase pleasures and obviate pains in a certain degree, and experience alone can develop how this is best to be done. Patience and hope will wait contentedly for the development, helping it along as best they may. Anarchy is political death, not health, life, happiness or justice.

While society is constructed on the best pattern known to man, and the unfortunate are cared for in asylums, hospitals and almshouses, few have any real right to complain; and most find themselves infinitely superior in all their conditions to anything they could provide for themselves in a state of nature. Let us have peace in our journey to a higher wisdom.

More New Apricots.

New seedling apricots are appearing and putting forth claim to especial excellence. We have often claimed that ere long the chief growth of orchard fruits in this State would be of varieties of local origin. We are especially well provided with California seedling peaches, and in apricots we have many good seedlings and more to come. Two new ones which we hear of this year are first a seedling by W. B. Holliday of Martinez, which is held by the *Gazette* to be a very handsome fruit, equal in size to the Royal and as early as the Pringle. It bore for the first time this year and will be fully tested in the future. Another is a seedling of the Moorpark by Hugh C. Jones, which has been named "Jones' Early" at the Marysville cannery.

The *Appeal* says it "ripens two weeks earlier than the Moorpark, and also ripens uniformly, which is not the case with the parent variety. The fruit is ripe and beautifully clean and bright, and commands a premium over the average price of two cents a pound paid this season. The Jones' Early is a prolific bearer, about 70 pounds of fruit being taken from a tree only three years old this year." Nothing is said about the size. There is also a Moorpark seedling in Alhambra valley, Contra Costa county, which has been highly praised. Moorpark size and quality with more trustworthy bearing, and even ripening, would be worth a fortune to the originator.

THE TRANSACTIONS of the California State Agricultural Society for 1887 make an octavo volume of but little less than 900 pages. Besides the usual acts, reports, and addresses, the book embraces an essay on "Fruit-Growing in California," designed especially to aid beginners, by Gen. Chipman of Red Bluff; G. W. Meade & Co.'s annual review of the raisin, dried fruit, nut and honey product of the State; a communication from the U. S. Commissioner of Agriculture relating to pleuro-pneumonia; an elaborate treatise on "Olive Culture" by Elwood Cooper; grain and flour statistics; the extensive Meteorological Review of Sergeant Barwick, and other valuable and interesting matter. We are indebted for a copy to the courtesy of Secretary Smith.

THE Colusa Town Trustees, in deference to poor widows who own cows, have exempted milch cows from the operation of the pound ordinance.

The Fairs.

We are likely to have a series of industrial exhibitions this fall which will surpass anything ever set forth in California. The spirit of the boom, and its concomitant, the effort put forth by local organizations of progressive citizens in almost every county to see to it that their territory is given its proper place in the eyes of those seeking homes and investments, will result in a more systematic effort to make this year's fairs, both general and local, better represent the industrial conditions and opportunities of the country.

The two great opportunities for organized work for great occasions are the county exhibits at the State Fair in Sacramento, and at the Mechanic's Fair in this city. The managers of both these exhibitions are now actively promoting interest in the different counties. The Mechanic's Institute has appointed good local committees in several counties, and will be glad to do the same for any county in which there appears to be a disposition to bring forward a poor exhibit. The space in the pavilion has not yet been allotted but no doubt it soon will be, and we advise all who contemplate exhibiting to make early application and thus secure favorable places. Last year there was some dissatisfaction resulting from tardiness in securing positions.

There is quite a rivalry between the two great fairs to secure the fullest and best county exhibits, and efforts are being put forth to that end. The result will be the improvement of both fairs, and on this account at least the existing feeling between the two societies is hardly to be regretted. The State Agricultural Society has commissioned Dr. Latham to push missionary work in stirring up the counties in the interest of the Sacramento display, and he is now urging the proposition strongly in the Sacramento valley counties. The county exhibits of last year must prove of lasting benefit to the counties making them. Governor Waterman and four other leading citizens of the State were appointed to award the premiums, and they made an elaborate report upon the exhibits of each of the 10 competing counties, and their resources and the advantages they offer for settlement. This report is printed in the annual report of the society, which goes to every part of the civilized world, and it has been also printed in pamphlet form, and will be extensively distributed. The same course will be pursued this year. A committee of able and distinguished men will be appointed, and the counties exhibiting will receive a full, complete and comprehensive notice, which will have a wide publication.

Every county which has pride in its achievements and faith in its future should lose no time in preparing for this year's exhibitions. Where the county is hard to move in the matter let individual effort and enterprise act. Every county in the State, either by joint or individual displays, should be represented at one or both of the great fairs.

The district county and town fairs should also be brought up to the highest pitch of excellence. The State is full of strangers. They are wandering about seeking something good. They do not all settle down to possess the first fine thing they see. They are pushing out, away from the railways, across mountains into the uttermost corners of the State to see if something especially good has not been overlooked. The fact is that much of the best of the State has been overlooked by many, but it will not always be neglected. Good local fairs properly advertised will draw even to remote localities, very desirable people. Let this be the incentive to extra efforts at all local fairs this year.

NEW OVERLAND RATES ON FRUIT.—Just as we go to press, the railroad authorities have issued their new rates on eastern shipped fruit. The announcement will be found in full upon another page of this week's *RURAL*. We have not time to study the rates closely or comparatively, but give the statement at once so that our readers may all have it at the earliest moment. Shipments of early fruits have been unusually large, and, if nothing unfavorable appears at the other end of the line, the amount of fruit which will cross the continent will cast all previous exports in the shade.

VENTURA county claims the largest apricot farm in the State. It has 1000 acres.

Gen. Sheridan.

One of the great heroes of the war, General Sheridan, has been lying at death's door for the last two weeks or more, and it is probable that his course in this world is at an end. Since illness prostrated him he has had renewed evidence of the esteem in which he is held by his fellow-citizens. He has received his commission as General of the United States Army, and from his sick-bed issued his first order. At the National Democratic Convention in St. Louis

the head of his soldiers that the artist has caught in his portraiture, but it will serve well to bring the hero to mind in the time of his great danger and suffering.

Gen. Sheridan was born in Albany, N. Y., March 6, 1831. His parents were Irish and came to this country a short time before his birth. He graduated at West Point in 1853, and for four years was assigned to frontier duty. In May, 1862, he was appointed Colonel of the Second Michigan Volunteer Cavalry, and his gallantry at Stone River and other places

Water Supply of the Yosemite.

At the meeting of the Yosemite Valley Commission, held last week, a resolution was unanimously adopted setting forth the need of guarding the water supply of the falls in the valley. It is held that the streams which feed the falls are being denuded of their timber, grass and shrubbery, and that the snow, upon which the volume of water depends, exposed to the sun will disappear in early spring, causing destructive floods in the lower part of the valley early in

Fire.

The day our last issue went to press, a fire started on G. D. Connor's place 20 miles east of Sacramento, burned over 200 acres of pasture, got into a wheat-field and gave 50 fighters plenty of work before it was subdued.

This is at least the third reminder we have had that it is time to be on guard against the small beginnings of what may become great and costly conflagrations. Every year as early summer comes along, it seems necessary to repeat



GENERAL PHILIP H. SHERIDAN.

last week, a resolution of sympathy and solicitude was adopted by a rising vote. Besides these public declarations of respect there are expressions of universal interest and sympathy from private individuals, and hope is general that the hero of the Shenandoah may yet live many years in the land for which he has performed such signal services.

Our engraving presents a view of Gen. Sheridan as he is commonly held in the public mind, a daring soldier at the head of his cavalry. It is, probably, rather the popular idea of Sheridan in action than his real appearance at

in the West, and how like a storm of fire he dashed down the Shenandoah valley, and after several brilliant successes, entirely wiped out the Confederate army under Gen. Early, has become matter of school history. The picture represents him on the celebrated Winchester ride, when he snatched victory from the jaws of defeat.

At 57 years of age Sheridan ought to be in the prime of life, especially as there is a sort of rule that the soldier who has escaped the perils of war enjoys life longer than the average men,

the season, and leaving the channels of the falls dry in autumn. To prevent this result, our Legislature is asked to petition Congress for a grant of land along the courses of the streams, whereby they can be protected from the destructive influence of sheep-grazing, from forest fires, from the precipitation of the debris, from the demolition of the forests, and from all other destructive influences.

The idea is a good one. The charms of the Yosemite should be faithfully guarded. As our State grows in population the greater treasure the valley will become,

the old, old cautions about the matches heedlessly dropped, the cigar stump thoughtlessly tossed away, the hunter's paper gun-wadding, and the camper's neglected embers.

We suppose there must be some field and forest fires the coming summer, but an earnest yet kindly word fitly spoken to the inconsiderate and careless may prevent a good many of these disasters, so let us each speak such words as we have occasion, with discreetness and to the point, and act accordingly. A little timely thought may save great losses and so make great gains.

THE VINEYARD.

The California Grape Interest.

Arpad Haraszthy, for eight years president of the State Board of Viticultural Commissioners, has just completed his annual report of viticultural progress and will soon send it to Governor Waterman. As Mr. Haraszthy is now retired from the commission, having been succeeded in office by John T. Doyle of Cupertino, he takes this opportunity of reviewing at some length the progress of vine-planting and wine-making in this State.

It is assumed that there are now planted in California 150,000 acres of vines, which will all be in full bearing within three years. Allowing these an average value of \$300 per acre, without other improvements, we will have a valuation of \$45,000,000. Of course there are vineyards not worth \$200 per acre, but these are few in number and either planted with the Mission or some other equally common varieties of grapes. On the other hand, many of our vineyards are worth considerably more than \$300 per acre, which difference would more than balance the discrepancy of the above estimates. Mr. Haraszthy reckons the value of the improvements necessary to carry on the vineyard business successfully at \$20,000,000. These improvements consist of fences, houses, barns, cellars, presses, tanks, casks, distilleries, agricultural implements and machinery, live-stock, etc. These two estimates thus made would place the present capital invested in viticulture in California at \$65,000,000. Comparing the present valuation with that existing previous to the creation of the State Board of Viticulture, we are confronted with the following interesting results: Thirty-five thousand acres in vines, of which 80 per cent were Mission grapes, at \$300 per acre, which gives \$10,500,000; proportionate other improvements necessary to carry on the vineyards, etc., \$4,000,000. Total investment, \$14,500,000. Thus showing a direct increase of \$50,500,000 in the viticultural investments within the last eight years, and, of course, yielding a proportionate greater income by taxation to the State through the enhanced value of vineyard and contiguous lands.

Eleven Years' Wine Production.

The amount of wine produced during the past eleven years is given as follows in gallons:

1877	4,000,000	1883	8,500,000
1878	5,000,000	1884	10,000,000
1879	7,000,000	1885	11,000,000
1880	10,200,000	1886	18,000,000
1881	8,000,000	1887	15,000,000
1882	9,000,000		

It is estimated that about 2,000,000 gallons of wine are yearly consumed in this city and Oakland. The demand of the interior, Arizona, Oregon, Nevada, Utah and Washington Territory amounts to about 3,000,000. Last year about 7,000,000 were sent East. It is urged that the State does well to foster an industry that yields such returns and a forecast for three years is made. Assuming that our 150,000 acres will be in full bearing at the end of that time, that 15,000 acres of these are planted for raisins, and 10,000 for table grapes, we have left 125,000 acres for wine and brandy making. These figures will yield us a possible one and a half million boxes of raisins; 40,000 tons of table grapes for export and home consumption; 50,000,000 gallons of wine and one and a half million gallons of brandy. The total valuation of these three products will be \$16,300,000. The reputation of our wines is favorably increasing both among ourselves and among the wine-drinkers in other countries. This is owing chiefly to the laudable ambition of our wine-makers, not only to increase their knowledge in the modes of fermentation, but also to their persistent efforts to secure better quality, through the planting of vines better adapted to their locality, and selecting the finer varieties of grapes even at the expense of quantity. Last year 8,496,344 gallons of wine and 256,104 gallons brandy, came to this city from the interior. In 1875 the receipts here were only 1,996,629 gallons of wine and 52,036 gallons of brandy. Since 1875, 38,791,384 gallons of wine valued at \$21,025,045, have been sent out of the State. Shipments last year amounted to 6,901,771 gallons of which 4,943,739 gallons went by rail and 1,958,032 by sea. Brandy shipments from the State last year were 472,752 gallons valued at \$774,313. Since 1875, 2,598,794 valued at \$5,201,412, have been sent from the State. A bad reputation which California wines some years ago earned abroad is attributed to the general use of Mission grapes which experience has shown only produced an ordinary coarse wine, taking an indefinite period to mature. Most of our vineyards are now planted with vines yielding finer qualities and greater quantity.

"What to do, and how to be happy while doing it," is the title of an octavo pamphlet of 188 pages by A. I. Root of Medina, O. It is intended to show the advantages of a "small farm well tilled," and gives the latest and most improved methods of cultivation, fertilization, raising of small fruits, vegetables, care of poultry, bees, etc., under eastern conditions, but still makes a "country scrap-book" of economical and useful suggestions for farmers and persons of small means.

QUERIES AND REPLIES.

Wire Worms.

EDITORS PRESS:—Inclosed we send you a specimen of a worm which has got away with all of our garden truck by eating holes through the seed, and if any should escape them they eat through the root and stock of any and all of the vegetables that we have planted. We will be very much obliged if you or any of your readers can tell us a way to exterminate them.—D. & W., Tehama county.

The insects are "wire worms," the larvae of a small beetle of the *elateridae* or skip jacks or tumble-bugs, as the boys call them. They are beetles which, when placed on their backs, throw themselves over, right side up, with a snap. There are many remedies for the worms, some of which are practicable in the gardens, but obviously not in field cultures. Disting root from the stovepipe or chimney around the plants before a shower or before watering is an old prescription. It also is a good fertilizer. Salt sprinkled in the same way, but not in quantity enough to kill the plants, is also commended. Wire worms can be trapped by taking potatoes, cutting out the eyes so they will not grow, cutting the potatoes in halves, thrusting a pointed stick in each piece, and then burying it a couple of inches under ground near the roots you wish to save. The worms will go into the potatoes from choice, and every second day the potatoes can be pulled out by the handle, the worms killed, and the trap reset. Mr. Cooke reported that ground on which it was impossible to grow lettuce because of wire worms, was cleared of them by the potato-trap remedy. Wire worms are said to be exterminated by growing a crop of white mustard on the ground and turning it under when a foot or so high. After the mustard is turned under, sow your garden crops.

Who Has Red-Polled Cattle?

EDITORS PRESS:—Please inform me through the PRESS if there is any of the red-polled milch cattle in this State.—JOHN MEWHINNEY, Pomo, Mendocino Co.

We should like to know more about this stock. If we mistake not, a reader of the RURAL reported having them a year or more ago.

In Pleasants' and Vaca Valleys.

EDITORS PRESS:—The writer took a ramble last week through the beautiful fruit section known as Pleasants' and Vaca valleys, and thinks a few items jotted down on the trip may be of interest to some of your readers.

On the way from Woodland to Winters—20 miles—the party often spoke of the fine looking grain. A good many fields of summer-fallow stood as high as the fences; winter sown, rather short, but well headed.

The apricot crop is heavy around Winters, and thence up to the entrance to Putah Creek canyon, but in Pleasants' and the upper end of Vaca valley they are pretty light.

Stopped on the way over and back at the orchard of Brinck Bros., saw them shipping Royal 'cots and Alexander peaches to Chicago. Everything if handled systematically there. We were told that the reports from the fruit already sent were good, and that they thought the cool moist weather had ripened the fruit perfectly, thereby insuring its good carrying quality. The crop is not very heavy, but they were making the most of it.

All the way through the valleys the scenery at this time of year is beautiful. Orchards and vineyards, from the lowest part of the valley to the very top of the lower hills, all looking so fresh and green. As we began to descend into Vaca valley we noticed that the apricots were more abundant, and down near Vacaville the crop is good—at least around Mr. W. W. Smith's where we made our stay. Mr. Smith has all his trees well bear, and has picked them off so that the ground beneath is covered.

If any of your readers think Mr. Smith does not know how to entertain strangers, let them give him a trial. The writer has not in his remembrance a more pleasant and profitable time spent in talking fruit and orchard culture. Any one seeing those tall cherry trees and the beautiful arches underneath will not soon forget them. We there had a chance to see the tree from youth to maturity, which is an object-lesson not to be found in books, and also learned the names of the apricots asked for in the RURAL of May 19th. Tree number 1 goes by the name of "Large Early"; number 2 is the "Breda"; number 3 is the "Royal."

Everything on Mr. Smith's place looked well except the morning-glory, which looked very weakly. There were not over a dozen vines, and those Mr. Smith promptly pulled up. I guess that is the best solution of the morning-glory question—plenty of cultivation and constant watchfulness to keep it underground. Another thing I noticed that looked badly was digging up grapevines that the phylloxera had killed. I fear that pest has come to California to stay. If so, the vineyard is only a question of time, especially the wine vineyard, for they appear to attack the wine grape first.

Peaches, prunes and plums were a good crop everywhere I noticed them; but the pear is rather light, so far as I could learn.

There is no prettier scenery on the coast than those fruit regions present at this time of year,

and any one, who has time for such an outing, cannot do better than take a trip up Vaca and Pleasant valleys and get acquainted with her genial and whole-souled people.

J. R. SPRINGER.

Woodland, June 8, 1888.

Sheridan's Ride.

Up from the south at break of day,
Bringing to Winchester fresh dismay,
The affrighted air with a shudder bore,
Like a herald in haste, to the chieftain's door,
The terrible grumble, and rumble and roar,
Telling the battle was on once more,
And Sheridan twenty miles away.

And wider still those billows of war
Thundered along the horizon's bar;
And louder yet into Winchester rolled
The roar of that red sea uncontrolled,
Making the blood of the listener cold,
As he thought of the stake in that fiery fray,
And Sheridan twenty miles away.

But there is a road from Winchester town,
A good, broad highway leading down;
And there through the flush of the morning light,
A steed as black as the steeds of night
Was seen to pass, as with eagle flight.
As if he knew the terrible need,
He stretched away with his utmost speed;
Hills rose and fell; but his heart was gay,
With Sheridan fifteen miles away.

Still sprung from those swift hoofs, thundering south,
The dust, like smoke from the cannon's mouth,
Or the trail of a comet, sweeping faster and faster,
Foreboding to traitors the doom of disaster.

The heart of the steed, and the heart of the master,
Were beating like prisoners assaulting their walls,
Impatient to be where the battle field calls;
Every nerve of the charger was strained to full play;

With Sheridan only ten miles away.
Under his spurning feet the road
Like an arrow Alpine river flowed,
And the landscape sped away behind
Like an ocean flying before the wind,
And the steed, like a bark fed with furnace ire,
Swept on, with his wild eye full of fire,
But lo! he is nearing his heart's desire—
He is snuffing the smoke of the roaring fray.
With Sheridan only five miles away.

The first that the General saw were the groups
Of stragglers, and then the retreating troops;
What was done—what to do—a glance told him both.
And striking his spurs with a terrible oath,
He dashed down the line mid a storm of huzzas,
And the wave of retreat checked its course there,
because

The sight of the master compelled it to pause.
With foam and with dust the black charger was gray;
By the flash of his eye, and his red nostril's play,
He seemed to the whole great army to say,
"I have brought you Sheridan all the way,
From Winchester down, to save the day."

Hurrah, hurrah for Sheridan!
Hurrah, hurrah for horse and man!
And when their statues are placed on high,
Under the dome of the Union sky—
The American soldiers' Temple of Fame,
There with the glorious General's name
Be it said in letters both bold and bright:
"Here is the steed that saved the day
By carrying Sheridan into the fight,
From Winchester—twenty miles away!"

—Thomas Buchanan Read.

SAN FRANCISCO AT AN ENEMY'S MERCY.—With the evident want of preparation, granting our present defenses their full value, the San Francisco bay could be entered by an enemy's fleet without meeting with any material opposition. The city and surrounding towns could be shelled; the communications with the interior could be cut off, and irreparable loss would be suffered by the destruction of our naval and military stores at Mare Island and Benicia.—Gen. O. O. Howard, in the *American Magazine*.

PERSONAL.—We had a call on Tuesday from James Harold of the *Town and Country* of Sydney, Australia. Mr. Harold was a resident of California a few years ago and now returns to revisit the old scenes and to study our horticulture, with a view of culling whatever information may be of interest to the readers of the enterprising journal with which he is connected.

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It cures disease originating from a disordered state of the blood or liver. It invigorates the stomach, liver and bowels, relieving dyspepsia, indigestion and constipation; restores the appetite and increases and hardens the flesh. It stimulates the liver and kidneys to healthy action, purifies the blood and beautifies the complexion.

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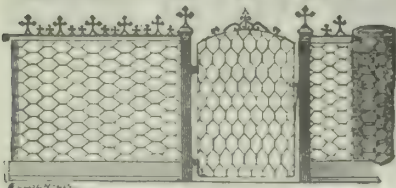
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GEO. SHAND.

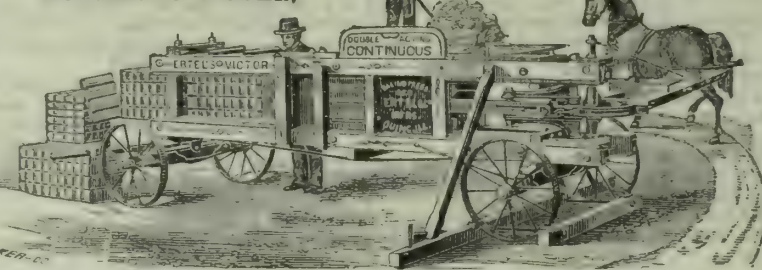
ORLAND, CAL., August 5, 1887.
Mr. M. L. Mery - DEAR SIR: In reply to yours of August 1, 1887, regarding the mill I bought of you, would say that the No. 2 gives perfect satisfaction, and that I can crush from 1000 to 1200 sacks of Barley per day. I will recommend it to the public for good work and lots of it.
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I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

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And any work for which a Scraper can be used. This implement will take up and carry a load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk, as desired. It will do the work of Scraper, Grader and Carrier. Hundreds of these Scrapers are in use in all parts of California. References given on application. ADDRESS ALL ORDERS TO G. LISSENDEN, Manufacturer, Stockton, Cal.

Viticultural Commission.

The regular semi-annual meeting of the State Viticultural Commission was called to order by Vice-President Wetmore Monday morning. There were present Commissioners Wetmore, Krug, West, De Turk, Shorb, Manlove and Doyle, also Chief Executive Officer Wheeler and Secretary Clarence J. Wetmore.

Chief Executive Officer Wheeler reported that the report of the last convention would be ready in a short time for distribution; that the 1887 report of the Commissioners would soon be ready to be sent to the State printer; also that he has had translated a treatise on wine-making by Ladrey, and when printed by the State printer would be for free distribution.

The Chief Executive Officer was then instructed to confer with the Committee on Distillation and prepare an essay on distillation, and to submit the same to the board.

The election of officers for the ensuing year then took place, resulting as follows: President, Charles A. Wetmore; vice-president, I. De Turk; treasurer, Charles Krug; secretary, Clarence J. Wetmore; Chief Executive Officer, J. H. Wheeler.

Mr. Doyle then offered a resolution, which was adopted, directing the Chief Executive Officer to ascertain and report to the board under what section of the Revised Statutes and Departmental Rulings cherry juice, so called, is admitted by the custom officers at a less rate of duty than distilled spirits, which form a component part of it of chief value.

At the afternoon session Mr. Krug moved that the president appoint a standing Committee on Statistics, whose duty will be to supervise and direct the gathering of statistics in conjunction with the officers of the commission. The motion was carried and the president appointed the following committee: Messrs. Krug, West and Shorb.

At Tuesday's session C. A. Wetmore, chairman of the Committee on Permanent Exhibit and Viticultural Trade Exchange, reported that the members of the committee had consulted together and had agreed upon the following prospectus:

Prospectus of proposed Permanent Exhibit and Viticultural Trade Exchange, under control of State Viticultural Commission.

First—A commodious store should be rented, on ground floor, with good cellar, in a favorable locality.

Second—Transfer of all the present offices of the commission to such store, after fitting up suitable rooms by proper partitions, etc., reserving the larger portion of such store for (a) permanent exhibit of wines, brandies, raisins and other viticultural products of California, together with maps, photographs and other illustrative attractions for the general public.

(b) Sampling department, where an opportunity will be given to purchase and sample any of the products offered by producers and admitted in accordance with rules governing the same; exhibitors in this department to be credited with proceeds of products sold at their regular trade prices and profits of retailing same to defray expenses as far as practicable, and all surplus profits to be paid into the State Treasury. Visitors in this department to be guided only by their own tastes and desires, aided by the catalogue; all interference on the part of the management and service in guiding taste or selection to be strictly prohibited. The management not to be responsible for unsold sample, excepting reasonable care of same, which shall be subject at any time to withdrawal by the exhibitor after paying any necessary expenses incurred specially with respect to them; such exhibits shall be subject also to be returned to the exhibitors at any time in accordance with the rules of this department. Sampling also provided for in this department of such experimental stocks which are the property of the State from the experimental cellar as may from time to time be determined.

Prices for retailing samples to be as fair as practicable, but so fixed as not to come into unfair competition with the ordinary retail trade. All attempts to use this department for the purpose of undercutting fair trade prices to be discouraged by strict rules, but every encouragement in favor of good prices for superior goods to be afforded in order to stimulate the production and care of fine products.

(c) Viticultural Trade Exchange, wherein facilities for producers, brokers, tradesmen, and wholesale merchants to meet and examine products by sample will be afforded subject to special rules.

(d) Cellar for storage and experimental work.

Third—Management: The permanent exhibit and sampling to be under general direction of a special committee, and managed by an officer of the board, with such assistance as may be found necessary. In case this work is added to the work of the secretary, an additional compensation to be allowed for the same.

Fourth—The Exchange Department, to be organized by the Executive Committee of this board, with power to associate with them an advisory board of control from outside the Commission whose rules shall first be reported to the Commission for approval.

A Permanent Exhibition.

After considerable discussion on the above plan, the following resolution was offered by Mr. Doyle and unanimously carried:

Resolved, That a permanent exhibition of viticultural products of the State be established in connection with the offices of the Commission in the city of San Francisco; that the plans outlined by the Special Committee just reported, be approved, and that it be referred to the Executive Committee to prepare and adopt the details of such plan, and to carry the same out; that the premises under the Mechanics' Institute building on Post street are deemed suitable for the purpose, and the committee is authorized to rent the same unless more desirable ones be found, and fit the same up for the offices of this Commission, the permanent exhibition of products aforesaid

and with a view to the establishment of a Viticultural Trade Exchange on the same premises.

Committees to Act.

The President then appointed the following committees: Executive Committee, De Turk, West and Manlove; Auditing Committee, Manlove; Finance Committee, Doyle, Rose and Shorb; Vine Pests and Diseases of the Vine, De Turk, West and Manlove; to Confer with Board of Regents, Doyle, West and Krug; Distillation, Counterfeits, and Adulteration, Shorb, West and Krug; Evils Resulting from the Introduction of Foreign Fruit Juices as at Present Allowed, Doyle, West and De Turk; Raisin and Table Grapes, West, Rose and Manlove; Experimental Wine Cellar, Wetmore, De Turk and Krug. Mr. Shorb then moved that a committee of three, of which the President should be chairman should be appointed to wait upon Miss Kate Field, and see if she would accept the office of lecturer for the Eastern States on subjects pertaining to the wine industry, and if she would accept to see if satisfactory arrangements could be made. The following committee was appointed: Wetmore, Shorb, and Doyle.

On the motion of Mr. Shorb the Executive Committee was instructed to draft a set of resolutions showing the appreciation of this Commission for the work done in the past for the viticultural industry of the State by Mr. Arpad Haraszthy, late president of this Commission.

Hoopa Indians' Fair.

We learn from the Eureka Standard that Capt. Dougherty, Indian agent at Hoopa valley, Humboldt county, has sent out a poster, of which the following is a copy:

First Annual Fair, Hoopa Valley, Humboldt County, California.

An exhibition of the agricultural and other industrial products of the Hoopa Indians will take place at Hoopa on September 14 and 15, 1888. All entries will be free, and limited to the Hoopa Indians living on the reservation.

First Day.

Awards will be made as follows: 1st—For the best cultivated farm and garden, a silver medal of the President, sent by the Commissioner of Indian Affairs; 1 wagon, 1 set double harness, 1 plow and 1 harrow. 2d—For the second-best cultivated farm and garden, a bronze medal of the President, sent by the Commissioner of Indian Affairs; 1 wagon, 1 set double harness, 1 plow and 1 harrow. 3d—For the best exhibit of hay, properly cured and stacked, 1 cow and calf. 4th—For the best exhibit of potatoes raised in the valley, \$5. 5th—For the best exhibit of corn raised in the valley, \$5. 6th—For the neatest and best regulated household and premises, 1 set household furniture, consisting of 1 cook-stove and furniture, 1 bedstead and springs, 1 table, 1 dinner set (half dozen), 1 wash-stand, 1 bowl and pitcher, 1 looking-glass, 2 water buckets, 1 lamp, 1 set tinware. 7th—For second neatest and best regulated household premises, the same, of second grade. 8th—For the best matched team of work-horses or mules, broken to harness and owned by the exhibitor, one light wagon. 9th—For the best matched pair of three-year-old horses, broken to harness and owned by the exhibitor, \$10. 10th—For the best matched pair of two-year-old colts, owned by the exhibitor, \$5. Pony races—Horses to be 4 years old or over, half-mile dash; three heats, \$5 each.

Second Day.

Awards will be made as follows: 1st—For the best milk cow, owned in the valley, \$5. 2d—For the best two-year-old heifer, raised in the valley, \$2.50. 3d—For the best exhibit of butter made in the valley, 1 churn, 1 milk-pail, 12 milk pans and \$5. 4th—For the best bread, baked on the day of exhibit, 1 cooking stove and fixtures and \$5. 5th—For the best exhibit of women's and children's clothing, hand-made, 1 sewing machine. 6th—For the second best, 50 yards of gingham, 1 dozen spools of thread, etc. 7th—For the best exhibit of new basket-work, of all kinds, one woman's outfit of clothing, worth \$15. 8th—For the second best exhibit of new basket-work, 50 yards print, 1 fine shawl, etc. 9th—For the best exhibit of lace and crochet work, 1 sewing machine, 10th—Pony races—Horses to be 4 years old or over, half-mile dash; three heats, \$5 each. 11th—Slow mule race, bareback; half-mile, \$5. 12th—Wheelbarrow race, blindfolded, \$2.50. 13th—Sack race, \$2.50.

COL. STEPHEN G. WHIPPLE,
MAJOR FRANK M. COXE,
T. M. BROWN,
Committee on Awards.

WM. E. DOUGHERTY, Agent.

The result of this new departure in the conduct of Indian affairs will be looked for with a good deal of interest.

COMBINATION LIVE STOCK SALE—The plan of combination sales as conducted by Killip & Co. of this city, is of advantage both to purchasers and sellers. It enables several owners who have not stock enough to hold a special sale to get the advantage of a collection of buyers, and it saves buyers time in bringing a long string of animals before them at a single standing. The next sale is advertised in the RURAL this week, and consists of a good collection of track and road horses, trotting colts and fillies, stallions and brood mares, including the well known trotting horse Conde with a record of 2:20. Bay District Track, Wednesday June 27th, is the occasion. Catalogues can now be had of Killip & Co., 22 Montgomery street. Part of the stock can be seen now, and the balance on June 24th.

THE Standard and Morning Post advise the farmers of Ontario, Canada, to abandon wheat-growing and raise cattle. The text for this advice is reports of bad crops.

Chautauqua Assembly.

The Pacific Coast branch of the C. L. S. C. will hold its tenth annual summer assembly at Pacific Grove, Monterey, July 5 to 14, 1888.

Special facilities are to be afforded this year for the pursuit of natural history. The class work in general botany will be directed by Mrs. Jennie N. Hughes, of Auburn, who was a pupil of Prof. Asa Gray for four years at Harvard University; while those who wish to study the flora of the sea will find a "guide, philosopher and friend" in Dr. C. L. Anderson, of Santa Cruz. Prof. Josiah Keep, of Mills' College, is admirably fitted to teach conchology, and will lead the learners about shells.

The S. S. Normal department is in charge of Rev. H. H. Rice, of Oakland, and Misses M. C. Hudson and L. M. Washburn, of San Jose.

Prof. F. Loui King, of San Jose, and H. B. Pasmore, of San Francisco, have direction of the music, and will arrange two grand concerts for the Saturday evenings of the assembly; and Miss Emma Wetherell, of Oakland, an accomplished elocutionist, will give readings daily.

Besides those already named, addresses are expected from Rev. Dr. Stratton and Miss J. Tolman of Mills' College, Prof. M. H. Alexander of San Jose, Rev. S. W. Brown of Santa Barbara, Rev. H. C. Minton of San Jose, Rev. W. C. Merrill of Sacramento, Prof. and Mrs. J. G. Lemmon, Dr. W. C. Bartlett of S. F., Rev. M. Willets of Santa Cruz, Revs. G. W. James and C. W. Wendte of Oakland, Dr. Schaeffer of Penn., J. V. Cheney, Judge Myrick and Rev. Dr. Izer of S. F., and Drs. Bentley and Wythe of Oakland, and Gen. Howard is to give his famous lecture, "Gettysburg."

All who wish for programs and further information respecting this "Summer School of Science" should apply to the secretary, Mrs. M. H. Field, San Jose, to whom we are indebted for the tasteful pamphlet of announcements.

Postage on Seeds and Plants.

The high rate of postage on seeds, cions, etc., sent from point to point in the United States, has been complained of ever since, a dozen years ago, our Government fixed it at a cent an ounce. This has been felt to be all the more oppressive under the later postal convention with Canada, whereby matter of that sort can be mailed from post-offices in the Dominion to those within our borders at the rate of four cents per pound, or one-quarter the amount that would be charged on the same packages if posted in the United States.

It is argued that while the Government is laying out thousands and thousands of dollars a year, in the free distribution of seeds, etc., through the mails, with the aim of encouraging agricultural interests and introducing new and choice varieties, the seedsmen—with their united means and experience—are accomplishing this good work a great deal better; and that the lower the postage, the less the farmer will have to pay for his seeds, since it is he and not the seedsman who bears that expense.

We referred to this subject several times during the past spring, making mention of the trouble in N. Y. State, occasioned by throwing business across the Canada line, of the strong and spreading conviction that legislative relief should be afforded, and of the demands for reduction which had been made upon Congress by the National and various State Granges, Boards of Agriculture and other organizations. We are pleased to note the passage by the U. S. Senate of a bill reducing the postage on seeds, bulbs, plants and cions, and we sincerely hope that this much-needed measure will pass the House of Representatives, also, before the close of the session.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING JUNE 5, 1888.

384,119.—BOILER-FEEDER—A. Blatchley, S. F.
384,124.—ELEVATED CABLE AND CAR PROPPELLER—H. Casebolt, S. F.
384,136.—GATE—John Donnelly, San Mateo, Cal.
384,050.—HYDRAULIC PUMP—J. H. Martin, Oroville, Cal.
384,171.—EASEL—E. R. Morris, S. F.
383,976.—ROTARY VALVE—Jas. O'Donnell, S. F.
383,977.—GRINDSTONE HANGER—D. O'Leary, San Bernardino, Cal.
383,993.—NECKTIE FASTENER—W. R. Sargent, S. F.
383,996.—ROTARY PUMP—O. Seifert, S. F.
384,089.—CARTRIDGE-LOADING MACHINE—Prentiss Selby, Oakland, Cal.
383,997.—SIDE-HILL PLOW—A. K. Snodgrass, Ellensburg, Ogn.
384,179.—CLOTHES DRIER—E. S. Sutton, Snohomish, W. T.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

A VERY heavy and prolonged rain has fallen in the Puget sound section of Washington Territory.

News in Brief.

THE White Star cannery at Astoria was destroyed by fire on Tuesday last.

OVER two-thirds of the saloons in Philadelphia are closed by the Brooks law.

THE spring rodeos having ended, cowboy tournaments are taking place in Arizona.

THE murderers of John Lowell, the wealthy Sacramento farmer, have been captured.

THE records of the Patent Office show that women have obtained patents on 1900 inventions.

A FIRE entailing a loss of \$90,000 occurred in a business block on Broadway, Oakland, on Monday evening.

WOMEN are the State Librarians of Indiana, Iowa, Kentucky, Michigan, Louisiana, Mississippi and Tennessee.

THE price of diamonds has fallen. It was over 22 shillings per carat in October, 1887, and it is now less than 18 shillings.

THE payroll of the Comstock mines for May aggregate \$238,575, of which amount, the Enterprise says, \$30,000 was paid in silver.

THE Fresno Free Library trustees advertise for plans and specifications for a two-story brick library building 50x80 in size.

THE Santa Paula Chronicle reports the shipment of 184 tank-cars of oil from that place during the month of May, the largest shipment ever made in one month.

A LETTER has been received by the Immigration Bureau at Mayville that a wagon train is being made up in Hickory county, Mo., consisting of 18 families, to cross the plains to Yuba county.

A CANAL has been projected along the foothills from a point near Firebaugh's, Fresno county, to Tracy, San Joaquin county, taking water out of the San Joaquin river at the first-named place.

NEWS has been received by J. D. Redding, Deputy U. S. Fish Commissioner on this coast, that a carload of selected lobsters for breeding purposes will leave the East for this city some time during the present month.

TWELVE artesian wells are to be bored to furnish water for the Watsonville beet-sugar factory, which will use 2,000,000 gallons daily. While boring one of these wells a day or two ago a piece of a redwood tree was encountered at a depth of 140 feet.

CLAUDE SPRECKLES reiterates the statement that his sugar refinery at Philadelphia will be going within a year, with a daily capacity of 1000 tons, which will be a much larger capacity than any other refinery in the country. The work will be rapidly pushed.

THE valuation placed on the assets of Wm. T. Coleman & Co. by the assignees is very much less than the original estimate. It is said the difference in these estimates will wipe out entirely the surplus that at one time it was thought would remain after liquidating.

Inducements to Subscribers.

To favor subscribers to this paper, and to induce new patrons to try our publication, we will furnish, to those who pay fully one year in advance of date, IF REQUESTED the following articles (while this notice continues), at the very greatly reduced figures named at the right:

- 1.—The Agricultural Features of California, by Prof. Hilgard, 138 large pages, illustrated, cloth, with colored maps (full price \$1).....\$0.25
- 2.—World's Cyclopaedia, 794 pages, 1250 illustrations; (exceedingly valuable).....50
- 3.—Dewey's Patent Elastic Binder (cloth cover), name of this paper stamped in gilt.....50
- 4.—Niles' Stock and Poultry Book for Pacific Coast, pamphlet, 120 pages, illustrated.....25
- 5.—Kendall's Treatise on the Horse and Diseases, 89 pages, instructive illustrations.....05
- 6.—To NEW Subscribers, 12 select back Nos. of the RURAL PRESS, "good as new".....Free
- 7.—Any of Harper's, Frank Leslie's and most other first-class U. S. periodicals, 15 per ct. off regular rates.
- 8.—Pacific Coast and Eastern Dailies, Books and Periodicals, except special publications, we can usually give 10 to 15 per cent off advertised retail rates.
- 10.—March of Empire, by Mallie Stafford.....25
- 11.—Life Among the Apaches, 322 pages, stiff cloth.....25
- 12.—\$1 worth of choice seeds, to be selected from a list of 107 flower and 82 garden seeds, as previously published, or which list we will send on application.....25
- 14.—Dewey's Pat. Newspaper Fileholder (18 to 36 in.).....25
- 15.—European Vines Described, 63 pages.....05
- 19.—Webster's Dictionary, 634 pages, with 1500 illustrations; very handy and reliable.....50
- 23.—Architecture Simplified, 60 pages.....05
- 24.—Mother Bickerdyke's Life with the Army; patriotic and ably written; 166 pp., cloth, \$1.00.....50
- 25.—Hop's Easy Calculator, cloth, 80 pp.....25
- 26.—How to Tell the Age of a Horse.....05
- 27.—Percheron Stud Book—French-bred and leather, 192 pages (full price, \$3).....1.00
- 28.—What Every One Should Know; a cyclopaedia of valuable information; 610 pp.; cloth; (full price \$1).....50
- 29.—Knitting and Crochet, by Jennie June; 144 pp., 200 illustrations.....25
- 30.—Needle Work, by Jennie June; 120 pp., 25 illustrations.....25
- 31.—Ladies' Fancy Work, by Jennie June; 152 pp., 700 illustrations.....25
- 32.—The Way to do Magic; illustrated, 60 pp.....10
- 33.—The Taxidermist's Manual; illustrated, 64 pp.....10
- Beautiful Poetic Review, entertaining and instructive; 35 pages (a handsome and pleasing present).....25

NOTE.—The cash must accompany all orders. Address this office, No. 252 Market St., S. F. Inform your neighbors about our offers and paper. In writing correspondence, items of information, or on other business, please use a separate sheet. Sample copies of this paper mailed free to persons thought likely to subscribe.

Send for free circular describing most of these premiums, and any further information desired.

PICKING BASKET.—We understand that the Pacific Splint Basket Co., the establishment at 211 Mission street, S. F., which we recently mentioned in the RURAL, is manufacturing a new fruit-picking basket which is claimed to have good points, as compared with old styles.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Gen. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands, Angles and Case Strains. Pouch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

SETH COOK, Danville, "Cook Farm," Contra Costa Co., breeder of Aberdeen Angus, Galloways and Devons (Registered). Young stock for sale.

PETER Saxe & Son, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

EL ROBLAS RANCHO, Los Angeles, Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Lickford Cattle. Information by mail. C. F. Swan, manager.

VALPARAISO PARK, Thoroughbred Polled Angus and Durham Cattle. Thoroughbred Berkshire Swine. Address F. D. Atherton, Menlo Park.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

POULTRY.

PIEDMONT POULTRY YARDS, cor. Piedmont Ave. & Booth St., Oakland. Wyandottes, L. Brahmas, P. Rocks, Langshans, B. Leghorns, B. B. R. G. Bantams. Eggs \$2 for 13; circular free; Mrs. J. N. Lund, Box 116.

W. C. DAMON, Napa, \$2 each for choice Wyandottes, Leghorns, L. Brahmas, Houdans. Eggs, \$2.

D. H. EVERETT, 1616 Larkin St., S. F., importer and breeder of Thoroughbred Langshans and Wyandottes.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

O. J. ALBEE, Lawrence, Cal., breeder and importer.

SHEEP AND GOATS.

V. G. STONESIFER, Breeder of pure-blood French Merino Sheep. Hill's Ferry, Stanislaus Co., Cal.

A. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

B. BULLARD, Woodland, Cal., importer and breeder of Spanish Merino Sheep. Premium band of the State. Choice bucks and ewes for sale.

J. B. HOYT, Bird's Landing, Cal., importer and breeder of Shropshire Sheep; also breeds cross-bred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep from Illinois and England for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine. High graded rams for sale.

ANDREW SMITH, Redwood City, Cal.; see adv't.

SWINE.

TYLER BEACH, San Jose, Cal., breeder of Thoroughbred Berkshire and Essex Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

I. L. DICKINSON, Central Point, Merced Co., Cal., breeder of thoroughbred Essex Hogs. Pigs now ready for sale. Prices reasonable.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

ANDREW SMITH, Redwood City, Cal.; see adv't.

LITTLE'S CHEMICAL FLUID

NON-POISONOUS

SHEEP DIP.

LITTLE'S PATENT POWDER DIP

(POISONOUS). Information by mail.

CATTON, BELL & CO., successors to FAIRNER, BELL & CO., 406 California St., S. F. Wool Agency Warehouse, Sixth and Townsend Streets.

APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

Farmers and Fruit-Growers, Attention!

To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

FERTILIZE! FERTILIZE! NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

DR. J. KOBRIE—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,

DR. E. A. SCHNEIDER.

University of California, College of Agriculture. Berkeley, Nov. 20, 1886.

DR. J. KOBRIE, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,

E. W. HILGARD.

The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

FOR SALE IN LOTS TO SUIT,

On board cars at Socranto, Station of the C. P. R. R., 20 miles north of San Francisco, at \$30 per ton, by the MEXICAN PHOSPHATE & SULPHUR CO., H. DUTARD, President, room 7, Safe Deposit Building, or

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.

REGISTERED SHROPSHIRE SHEEP AND BERKSHIRE PIGS.

IMPORTED FROM ENGLAND DIRECT.



Royal Duke of California.

Winners of all blue ribbons in their classes and sweepstakes prizes at State Fairs, Sacramento, 1886 and 1887. Importations made by me annually of the best blood obtainable in England, regarded as the best. Young stock, bred from these importations, male and female, from different families, for sale at reasonable prices, and every animal guaranteed.



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—IMPORTER AND BREEDER OF—

POLLED ANGUS CATTLE AND HIGHLY BRED TROTTER HORSES.

For information address or call on S. N. Straube as above. No trouble to show stock to intending purchasers.

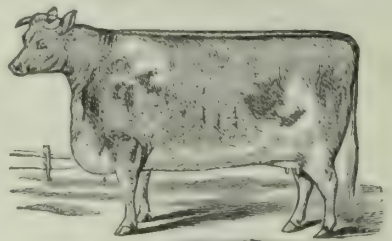
HEADQUARTERS FOR Holstein-Friesians & Jerseys

A choice lot of young Cattle of the above breeds for sale at very low figures. Their breeding is A No. 1 and from the BEST MILKING FAMILIES. Prices and QUALITY will suit. ELEVEN YEARS' experience on this Coast. Correspondence solicited.

Publisher of "Niles' Pacific Coast Poultry and Stock Book," a new book on subjects connected with successful Poultry and Stock raising on the Pacific Coast. Price, 50 cents, post-paid.

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Breeder of SHORTHORN CATTLE

Of the best families. A choice lot of young Bulls and Heifers for sale, 4 years old and under, from the celebrated Kirklington Oxford Count, 36/23.

BADEN FARM HERD Of Short Horn Cattle and Dairy Cows.

Catalogues and Prices on application to

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HORSE POWERS, WINDMILLS, TANKS and all kinds of Pumping Machinery built to order. Awarded Diploma for Windmills at Mechanics' Fair, 1885. Windmills from \$65. Horse Powers from \$50. F. W. KROGH & CO., 51 Beale Street, San Francisco.

POLLED ABERDEEN ANGUS Bulls and Heifers for Sale

AT SACRAMENTO, CAL. Thirty-four head of young bulls, fullbloods and grades, the latter from Shorthorn cows, for sale at \$75 to \$250 per head; also 15 head of fullblood heifers at \$20.00 per head. These cattle are all choice selections from my herd of Polled Angus Cattle on the Loupvalle Stock Ranch in Buffalo Co., Neb. Come and see the cattle or address DR. G. M. DIXON, 700 J St., Sacramento, Cal. Correspondence solicited.

FOR SALE.

Two Thoroughbred Red Mazurka Bulls, One 13 months, the other 15 months old.

—ALSO—

200 Full Blooded Angora Ewes.

M. WICK, Sundale, Butte County, Cal.

BEST TREE WASH.

"Greenbank" 93 degrees POWDERED CAUSTIC SODA (tests 99.3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

T. W. JACKSON & CO.,

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LARGEST STOCK OF

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Send order and try goods and prices.

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I will give my Double Cam HAY PRESS away if it will not fill the demand of my circulars. Send for Circulars and Price to the Manufacturer, JAS. KEMP, Kempton, Ill.

POULTRY, ETC.

OAKLAND POULTRY YARDS,

Cor. 17th & Castro Sts., Oakland, Cal.



Manufacture of the PACIFIC INCUBATOR and BROODER. Agency of the celebrated silver finish galvanized wire netting for Rabbit and Poultry-proof fences, the Wilson Bone and Shell Mill, the Pacific Egg Food, and Poultry appliances in great variety. Also every variety of land and water Fowl, which have won first prizes wherever exhibited. Eggs for hatching. The Pacific Coast Poultryers' Hand-Book and Guide, price, 40c. Send 2c. stamp for 60 page illustrated circular to the PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

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The Most Successful Machine Made.

3 Gold Medals, 1 Silver Medal, and 16 first Premiums. Hatches all kinds of Eggs. Made in all Sizes.

Write us for Large Illustrated Circular Free, describing Incubators, Brooder, Houses, How to Raise Chickens, etc. Address PETALUMA INCUBATOR CO., Petaluma, Cal.

The Halsted Incubator Co. 1312 Myrtle St., Oakland, - Cal.

Price from \$20 up. Model Brooder from \$5 up.

Thoroughbred Poultry and Eggs. Send for new Circulars containing much valuable information.



EGGS AND POULTRY.

For the balance of the season I will sell Eggs for hatching at \$2.00 for 13 from my best imported and home-bred L. Brahmas, P. Cochins, Langshans, P. Rocks, Wyandottes, Brown and White Leghorns and B. B. R. Game Bantams. I will also sell one pen of L. Brahmas (5 hens and a cock), and one pen of P. Cochins for \$18 each. One pen of Langshans, one pen of Brown and one pen of White Leghorns for \$15 each. I will sell my Axford Incubator, 100-egg capacity, for \$15, or will trade for two small out-door Brooders in good repair.

E. B. FREEMAN, Santa Clara, Cal.

JOHN McFARLING, Importer and Breeder of Langshans, Plymouth Rocks, Brown and White Leghorns, Fekin Bantams, Light Brahmas, Partridge Cochins, Buff Cochins, Black Minorcas, Registered Berkshire Pigs. Also one pen of Langshans direct from China.

706 TWELFTH ST., OAKLAND, CAL.

Large lot of young birds ready for sale; send for circulars.

WELLINGTON'S IMPROVED EGG FOOD.

STANDARD POULTRY preparation for TEN YEARS. Sold by every principal merchant; also at 425 WASHINGTON STREET, SAN FRANCISCO.

A FRUIT DRIER

Complete, which makes 20 pounds of Dried Fruit of superior quality in twelve hours, and at very little cost for

FIVE DOLLARS.

The perfection of simplicity. Rights to manufacture larger capacities sold at reasonable price

LEONARD COATES,

Proprietor Napa Valley Nurseries.

NAPA CITY, CAL.

10,000 VARIETIES

IN OUR STOCK OF

SADDLERY GOODS AND WHIPS.

SOME PRICES RULING IN

Our Retail Cash Department at 410 Market Street, Below Sansome (SEE HORSE ON BUILDING):

Some prices ruling in our Retail Cash Department at 410 Market St., below Sansome (see horse on building):

SINGLE BUGGY HARNESS, per set, \$10 to \$85, including an Embroidered Lap Duster or Neck and Hitch Strap.

SADDLES, Ladies' or Men's, \$8 to \$50, including a Brille or Saddle Cloth.

HORSE BLANKETS, \$1.25 to \$10; each includes a Surcingle.

BUGGY ROBES, \$3 to \$25; each includes a Whip or Halber.

FLOW HARNESS, double or set, \$15 to \$20.

2-WHEEL BUGGY OR CART HARNESS, \$4 to \$25, Whip included.

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OF CALIFORNIA,
SAN FRANCISCO, CAL.
INCORPORATED APRIL, 1874.

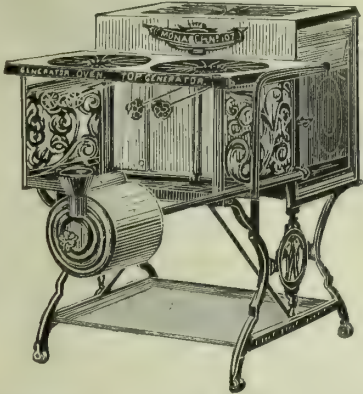


Authorized Capital.....\$1,000,000
Capital paid up in gold coin.....624,160
Reserved Fund.....40,000
Dividends paid to Stockholders..515,620

OFFICERS.

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I. C. STEELE.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver.
Bills of Exchange bought and sold. Loans on Wheat
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Jan. 1, 1888. A. MONTELLIER, Manager.

No. 107-\$25.00.

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ARE THE BEST.

Gasoline Stoves, \$5 to \$35. Gas Stoves, 75 cents to \$35.
Oil Stoves, 75 cents to \$30.

WOOD AND COAL RANGES.—Royal, No. 6,
\$16. No. 7, \$20. Pacific No. 6, \$18. No. 7, \$25.
Lamps, 20c. to \$10. Hanging Lamps, \$2 to \$20.
Agate Ware, Tin Ware, and Kitchen Ware at low prices

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ENTERPRISE
Self-Regulating
WINDMILL

Is recognized as the BEST.



Always gives satisfaction. SIMPLE,
STRONG and DURABLE in all parts.
Solid Wrought iron Crank Shaft
with DOUBLE BEARINGS for the Crank
to work in, all turned and run in ad-
justable babbitted boxes.

Positively Self-Regulating.

With no coil springs, or springs of any kind. No little
rods, joints, levers, or anything of the kind to get out of
order, as such things do. Mills in use 6 to 12 years in
good order now, that have never cost one cent for repairs.
All genuine Enterprise Mills for the Pacific Coast trade
come only through this agency, and none, whether of
the old or latest pattern, are genuine except those bear-
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Crockett, Contra Costa Co., Cal.

Stationary Engines and Boilers.

Portable Straw-Burning Boilers & Engines.

IRON AND BRASS CASTINGS.

Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,
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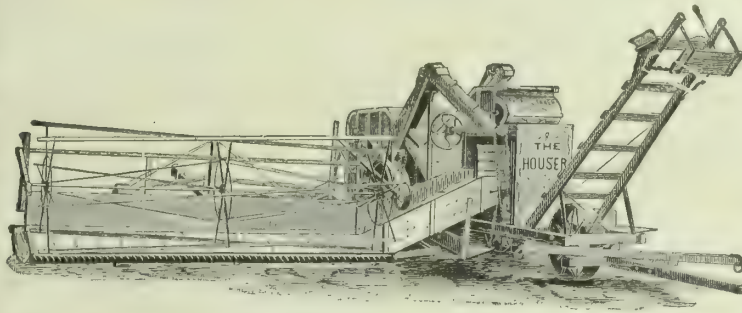
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Houser Combined Harvesters for 1888

LARGE AND SMALL.

Received First Premium, State Fair, September 24, 1887.

400 IN FIELD USE.



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No Failures. None Ever Returned. Beware of Experiments.
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They Have a Larger Sale than all Other Harvesters Combined.

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Is adapted for Small Farms—few animals; rolling or foothill land. In weight, one-half of the
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Which received the Premium over all competitors at both State and County Fairs and Field
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CAPACITY 30 TONS PER DAY,

First Premium at
State Fairs, 1884,
1885, 1886 & 1887.

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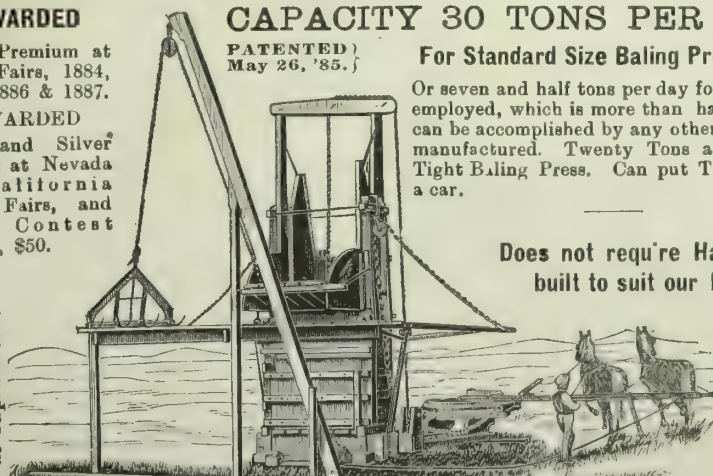
Gold and Silver
Medals at Nevada
and California
State Fairs, and
won Contest
Money, \$50.

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For Standard Size Baling Press,

Or seven and half tons per day for each man
employed, which is more than has been or
can be accomplished by any other Press yet
manufactured. Twenty Tons a day with
Tight Baling Press. Can put Ten Tons in
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Does not require Hay Stacks
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CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,
Grain, Wool, Hides, Beans and Potatoes.
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Consignments Solicited.

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Choice Alfalfa Seed always on hand in carload lots,
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Prompt Returns on ALL CONSIGNMENTS.

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Members of the San Francisco Produce Exchange
Personal attention given to Sales and Liberal Ad-
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California is a Paradise, but the people would object
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and can make a fine fitting, well-trimmed suit from \$15
upward.

Farmers will save money by calling on him, as he
makes suits to order for the same price as ready made.
Samples and prices by mail. Don't forget.

LEON LEMOS,

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S. H. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, June 13, 1888.

The weather the past week has been of the best for maturing grain. The kernel is filling out. Fruits along the coast want more sunshine. The market for all kinds of produce has been fairly active the past week, if we except grain, which has ruled dull. The Eastern and European markets have tended to lower figures. The following is to-day's cable.

LIVERPOOL, June 13.—Wheat—Good demand for red, while white is depressed. California spot lots, 6s 5d to 6s 8d; off coast 3s 9d@3s; just shipped, 3s 3d; nearly due, 3s; cargoes off coast, more demand at the decline; on passage, buyers hold off; Mark Lane wheat, quieter; wheat on passage to Continent, 577,000 qrs.; wheat and flour on passage to U. K., 2,378,000 qrs.

Foreign Review.

LONDON, June 11.—The *Mark Lane Express* in its weekly review of the British grain trade, says: Native wheats continue in free delivery in London, and the values are sixpence against sellers. The sales of English wheat during the past week were 37,939 qrs. at 31s 8d, against 39,613 qrs. at 35s 4d during the corresponding week of last year. The crop prospects are greatly improving under fine weather. Foreign wheat is slow. Russian and Indian is cheaper. Corn is rather scarce and values are irregular. Oats are sixpence lower. There were 20 arrivals of wheat cargoes. Three cargoes were withdrawn, five remain for orders and 13 are on sale. At to-day's market there was no demand for wheat. The finest English was sixpence lower.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Day.	Cash.	June.	July.	Aug.	Sept.
Thursday	92½	91½	92½	93½	92½
Friday	92½	91½	92½	93½	92½
Saturday	92½	91½	92½	93½	92½
Monday	94½	91½	91½	92½	92½
Tuesday	92	90½	91½	92½	92½

The closing prices for wheat have been as follows, at Chicago:

Day.	Cash.	June.	July.	Aug.	Sept.
Thursday	86	85½	85½	85½	84½
Friday	86½	85½	85½	85½	84½
Saturday	86½	85½	85½	85½	84½
Monday	86½	85½	85½	85½	84½
Tuesday	84½	84½	84½	84½	84½

CHICAGO, June 13.—Wheat—84½¢ for cash, 84½¢ for June, 84½¢ for July, 84½¢ for August and 84½¢ for Sept. Corn—53½¢@53½¢ for July.

NEW YORK, June 13.—Wheat—93½¢ for cash, 91½¢@91½¢ for July, 92½¢@92½¢ for August and 92½¢@92½¢ for Sept.

Crop Reports.

WASHINGTON, June 9.—Following is the crop report issued by the Department of Agriculture: There was some reduction in the winter wheat area in some States, though the average breadth of all was but slightly reduced. In the E. St. and South there was no material loss of area from freezing, but in some Western States it was considerable. The apparent reduction of the breadth of winter wheat as compared with that of last year is about 1,700,000 acres; percentage of reduction for the entire winter wheat region is placed at 72 per cent. It is 18 in Illinois, 14 in Ohio, 10 in Michigan and 9 in Indiana. This is in comparison with the reduced area harvested last year. There has been an increased area of spring wheat in Dakota and in the Territories further west, but a decrease in Iowa, Wisconsin and Minnesota, making an average decrease for the spring wheat region of 1 per cent. The area in wheat is apparently slightly below 36,000,000 acres. There is a slight local change in the condition of winter wheat. There is some improvement in New York and Pennsylvania and a marked decline in Missouri and minor changes of status elsewhere, making the average 75.3, against 73.1 in the May acreage. Barley is nearly the same as last year. New York and Wisconsin are credited with an increase of 1 per cent, Minnesota with 2, Dakota with 10; Iowa, Missouri and California report a slight reduction. The condition of barley averages 88. It is only 80 in California.

Fruits.

CHICAGO, June 8.—California made a fine display of fruit to-day. A Washington market dealer received 250 cases of black Oxheart and Goose Plum cherries, 250 cases apricots and 180 cases peaches. The white cherries were among the finest ever seen here.

Wool.

NEW YORK, June 11.—*Bradstreet's* says: The interest in wool centers chiefly in the country, where buyers for Eastern dealers and manufacturers are investing in the new clip very cautiously. Prices throughout the interior are, as usual at this season, above the seaboard level. This, however, does not prevent more or less buying for immediate use. Increasing activity appears at San Antonio and other points in Texas where considerable quantities of eight-months' wool have been sold at 16½¢@16½¢ cents per pound. A more liberal movement is under way in California with range prices from 11 to 17 cents per pound. In Utah something has been done at 12½¢@15 cents per pound. Shearing is in full progress in Ohio and is beginning in Michigan, Montana and Wyoming. Prices are not yet generally established in the States named. In the Northwest buyers are not operating. Prices at London are ½¢@1 cent per pound higher than at the last series of sales. At Philadelphia dullness and weakness are the conspicuous features of the wool trade. There is scarcely any demand from worsted spinners, and inquiry from other consuming interests is very light and unsatisfactory. Sales aggregate 348,000 pounds as against 260,000 pounds last week and 651,000 pounds for the corresponding week of last year.

BOSTON, June 8.—The principal feature in the market this week has been the commencement of operations on a more extensive scale in the new clip of wool in the West. Here the market has con-

tinued flat and unprofitable. The situation does not warrant prices that have been paid in Texas and California. It seems that buying has been confined to two or three dealers as far as Eastern interests are concerned. A majority of dealers here are indifferent to purchasing at prices that are asked. It is now the prevalent idea among the trade that Congress will not settle the tariff question this session, so the coming season, both in wool and woollen goods, promises to be as uncertain as has been the past, and unless dealers move with caution it will prove as unprofitable. The demand for wool here during the week has been confined to small lots. Sales were 1,479,500 lbs. foreign and domestic. Prices were: Ohio and Pennsylvania fleeces, XXX and XX and above, 28@30¢ per lb; Michigan fleeces, 26@27¢; No. 1 Michigan, 30¢; Virginia or Blood fleeces, 25¢; fleeces of various grades, private terms; combing and delaine fleeces, 28@29¢; unwashed combing, 23¢; Territory, 12@21¢; Texas, 10@23¢; Eastern Oregon, 13@16¢; California Spring, 16@18¢; do. Fall, 8@13¢; unwashed fleeces, 18@26¢; super and extra pulled, 20@32¢; scoured, 25@55¢; sundries, 12@15¢; Australia, 37@40¢; Cape, 26@27¢; Carpet, private terms.

California Products at Chicago.

CHICAGO, June 9.—Oranges are in light supply and rule firm with moderate demand as follows: California, bright fruit, ½ box, \$4.50@5; smutty fruit, \$3.50@3.75.

Apricots are only in limited demand. Those from California bring \$2.25@2.75 per 20-lb box.

Sales of peaches are rather slow because the fruit is poor; some, when very poor, has to be closed out at nominal prices. The first shipment of that fruit from California sells fairly well at \$2@2.25 per 20-lb crate.

No nice plums are noticed on sale. Those from California have moderate sale at \$2@2.25 per 20-lb crate when in order.

California dried fruits are rather steady, and they are selling fairly for everything but plums and prunes; these remain dull. We quote: Apricots, sundried, ½ lb, 8@9¢; bleached, prime, 14¢; do., choice, 15¢; do., fancy, 15½¢; evaporated, choice to fancy, 14½¢@16¢; peaches, sun-dried, ½ lb, 9@10½¢; do., evaporated, unpeeled, ½ lb, 14¢; do., evaporated, peeled, ½ lb, 16@20¢; plums, unpeeled, ½ lb, 6@7¢; pitted, 10@11¢; raisins, loose Muscat, 1-crown, ½ box, \$1.35@1.40; do., 3-crown, ½ box, \$1.45@1.50; do., London layers, ½ box, \$2.20@2.25; prunes, small, ½ lb, 6¢; do., fancy, large, 8½¢@9¢.

The weather is becoming somewhat warmer. This is favorable for trade in the hop market. Nothing of special importance is doing yet, but choice hops meet with a fair demand. Pacific Coast, choice, ½ lb, 12@13¢; do., common to prime, 9@11¢.

New California potatoes are slow at \$1.75@2.

Miscellaneous.

NEW YORK, June 11: Recent reports about the new crop of California honey are regarded as untimely.

Brewers are using rather more hops, though as a rule they are giving way in quality. In both State and Pacific the old range holds. There were 517 bales of fire-damaged Pacific sold by auction at from 2@2½¢.

During the week there were displayed nearly 2000 boxes of apricots, peaches, cherries and plums, quoted respectively at \$2.50@3, \$2@3, \$2 and \$2.50. The impression has obtained that Pacific Coast peaches will be abundant. There is plenty of room, if the prices can be made popular. It is a noted fact that the surplus of fresh fruit has stood the auction-room test uncommonly well.

All grades of raisins sell readily, the warm weather considered. Three-crown is quoted firm at \$2.05.

Local Markets.

The closing sales on the San Francisco Call Board were as follows:

Date.	WHEAT.	Buyer Season.	Buyer Year.
Thursday	\$1.57	\$1.49½
Friday	1.47½
Saturday	1.49½
Monday	1.49
Tuesday	1.49½

Date.	BARLEY.	Buyer Season.	Buyer Year.
Thursday	\$1.00½	\$.97½
Friday96
Saturday96½
Monday	1.30½	.94½
Tuesday94½

BAGS—The market ruled dull and in buyers favor throughout the week. The demand from Oregon is disappointing. Calcutta's are quoted at 7½¢@7½¢.

BARLEY—The market has been dull and heavy owing to the fear of heavy receipts soon. Holders of old are generally realizing which tends to demoralize the market. At present low prices, with the consumption very large and crop light it is thought that farmers will be slow sellers. Options have been dull. The following are the sales on to-day's Call.

Morning Session: Buyer 1888—400 tons, 95¢; 300, 94½¢ per cwt. Afternoon Session: Buyer season—100 tons, \$1.04. Buyer 1888—100 tons, 95½¢. Seller 1888, new—100 tons, 86¢; 100, 86½¢ per cwt.

BUTTER—Receipts of fancy are falling off, which causes a stronger market. Good to choice is in good supply. Packing is still continued. The consumption call is good.

CHEESE—The market is steadier with a firmer and stronger tone under lighter receipts and a good demand.

EGGS—The market shaded off some, but at the close it has a steadier and firmer tone.

FLOUR—The market is easier, notwithstanding the shutting down of one of Starr & Co.'s mills owing to disabled machinery.

WHEAT—Cool weather is doing no little in filling out the grain. It now looks as if the crop will be very nearly as large as it was last year—which was a short crop. The demand is slow with buyers bidding down. In options there is nothing new to report. Trading is light with more bears than bulls operating. The following are to-day's sales on Call.

Morning Session: Buyer 1888—1200 tons, \$1.46; 100, \$1.45½; 100, \$1.46½; 200, \$1.46½ per cwt. Afternoon Session: Buyer season—200 tons, \$1.46½ per cwt.

[COMMUNICATED.]
Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to June 11, '87.	July 1, '87 to June 9, '88.
Flour, qr. sks.	4,028,049	3,554,897
Wheat, cils.	12,563,149	8,254,323
Barley, cils.	2,216,345	2,263,849
Oats, cils.	133,674	155,584
Potatoes, sks.	822,084	1,089,817
Corn, sks.	118,133	233,446
Rye, sks.	27,574	18,010
Buckwheat, sks.	5,865	3,054
Beans, sks.	438,720	392,272
Bran, sks.	433,385	488,326
Hay, tons.	101,206	114,288
Salt, tons.	22,308	16,810
Wool, bils.	83,186	73,047
Hides, No.	106,804	102,991
Raisins, 20-lb boxes.	138,703	112,266
Quicksilver, flasks.	18,266	29,438
Hops, bils.	13,320	15,918

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1, '86 to June 11, '87.	July 1, '87 to June 9, '88.
Flour, sks.	245,242	421,942
Wheat, cils.	992,439	1,181,906
Barley, cils.	6,198	75
Oats, cils.	333,737	272,491
Corn, cils.	117,804	12,590
Wool, bales.	16,587	11,204
Bran, sks.	27,918	68,810
Hops, bales.	801	508
Hides, No.	35,537	31,514
Rye, cils.	.....	5,547
Potatoes, sks.	144,834	82,365

Cereals.

Bradstreet's, June 8, says: The winter-wheat States of Ohio, Indiana, Illinois and Michigan suffered severely from climatic influences, and prospects for a minimum crop are patent. That there has been some improvement in the condition of what escaped winter-killing there cannot be any doubt. The Illinois State report, from returns to May 1, made the average condition of wheat in that State to points above the average of the government report, from returns to April 25. The climatic condition since the beginning of May have been quite generally favorable in all the winter-wheat States. There has been an abundant rainfall, extending quite generally all over the Ohio valley and northward to the great lakes. The temperature has been rather lower most of the time, since the beginning of May, than could have been desired, but still vegetation has made good progress, considering the nature of the season. There has been ploughed up in these States considerable of the area sown to fall wheat. Spring grains take it place. There can be no doubt that this is a clear loss to the aggregate output of the wheat crop; neither can there be any doubt but that the damage to the winter-wheat crop has been greatly exaggerated by numerous reports, largely for speculative purposes. These four States had an output of 132,256,000 bu. in 1887, against 134,751,000 bu. in 1886, 89,196,000 bu. in 1885, and 137,077,000 bu. in 1884, being an average of 123,320,000 bu., or 137,077,000 bu. maximum and 89,196,000 bu. minimum. The output cannot now be forecast. It is not probable that it will go very much below the minimum of 89,200,000 bu., or 34,120,000 bu. below the average crop of the four States for four years, unless climatic conditions are more unfavorable than there is reason to expect. It is reported that Kentucky and Missouri will not have an average wheat crop.

In Hungary there were moderate offerings of wheat, with a good inquiry and a fair amount of business at a slight improvement. The wheat plant was reported weak and patchy. In Austria the condition of wheat had improved, but rye is unpromising. The spring-sown crops have a generally satisfactory appearance.

Australia is making free wheat shipments, and the quantity of wheat now on passage to the United Kingdom (May 18) was 4,456,000 bu. The crop of the four principal colonies is about as follows:

	1887 '88.	1886 '87.	1885 '86.
South Australia	19,012,500 bushels.	10,900,000 bushels.	5,161,666 bushels.
Victoria	13,338,756 bushels.	12,100,036 bushels.	9,170,538 bushels.
New Zealand	5,500,000 bushels.	6,297,638 bushels.	4,242,285 bushels.
New South Wales	4,894,646 bushels.	5,368,844 bushels.	2,768,330 bushels.
Totals	42,545,902 bushels.	35,166,518 bushels.	21,342,819 bushels.

There has been 135,000 tons of wheat exported from South Australia and Victoria from Jan. 1, 1888, to April 6, 1888, 5,040,000 bu.

Belgium's supply of home wheat was small. Buyers are still acting with reserve for both cash and future wheat.

The average price of home-grown English wheat March 24 was 30s. 6d.; April 7, 30s.; April 14, 30s. 3d.; April 21, 30s. 7d.; April 28, 30s. 9d.; May 5, 31s. 2d.; May 12, 31s. 5d.; May 19, 31s. 8d.; May 26, 31s. 6d. The advance from March 24 (30s. 6d.) to May 26 (31s. 6d.) is 1s. 0d., or 3c. per bu. The weather in England is getting warm and crops have good promise, and the price, with free shipments from abroad moving downward, was 2d. off from May 19 to 26.

In South Russia the spring-wheat seeding has been effected under favorable conditions, and is making good progress in its growth.

There are large exports of oats being made from north Russian Baltic ports, which will take the place of Indian corn. The new maize crop of the Argentine Republic is expected to be of good quality, condition generally sound.

On the continent the lateness of the season is causing some apprehension, but not sufficient to advance prices of breadstuffs.

The Indian wheat exports are always largest in June and were, week ended May 26, 1,440,000 bu.

In Germany wheat is firmly held at 38s. level, which is likely to attract Russian supplies. The duty at 10s. per quarter would still leave a price of 28s., and this would probably be sufficient, as England, much further off, only offers 30s. 6d. to 31s. 6d. for ordinary Russian wheat. The growing wheat in Germany is backward, but not so much so as in France. Prices of wheat in Russian markets

have the wide range of 20s. to 26s. per quarter. The price of sound ghika (spring wheat) is about 21s. per quarter in Russian ports of export.

Spanish official statistics for the year 1887 show an increase in the imports of wheat amounting to 165,000,000 pesetas, the total imports of wheat last year having been 314,000,000 kilos (309,360 tons), against 149,000,000 kilos (146,800 tons) in 1886. The imports of flour have also shown a similar increase, viz., 24,000,000 kilos (23,640 tons), against 11,000,000 kilos (10,840 tons) in 1886. These are the preliminary approximate returns.

From Algeria it is reported that the weather has been everything that could be desired for the crops, and that barley cutting will begin the first week of May.

In Morocco heavy rains had fallen, and the wheat crop had good promise.

Oregon advises do not warrant the expectation that the outturn this year in that State and Washington will be larger than in 1886, the severe dry spell having been against the crop. The quantity of old wheat in stock there is greatly reduced by foreign exporting and also free shipping to the port.

In this State the weather has continued favorable for the maturing crop. Although there will be plumper grain, yet there will be a much larger proportion of dark colored, which, of course, is against its shipping quality, and naturally will cause bright, plump wheat to fetch, relatively, better prices. The crop of the State will not equal last year by fully 70,000 tons for export, while Oregon and Washington Territory will fall short from 75,000 to 85,000 tons compared with last year. The large tonnage here and to arrive assures a low range of outward freight throughout the season of 1888-89.

The bears have been talking and bidding down wheat, but with, as yet, little success. The stock of choice old is light. Harvesting is reported to be under way in several of the more advanced counties.

The quantities of flour and wheat shipped from California in the first 11 months of the current cereal year have been as follows:

	Flour.	Wheat.
	Bbls.	Centsals.
July	35,162	920,085
August	41,426	1,638,176
September	67,662	781,888
October	114,379	1,122,921
November	71,587	556,486
December	77,283	882,191
January	71,304	714,057
February	71,527	975,354
March	98,399	900,050
April	52,042	633,465
May	36,049	399,446
Totals	736,770	8,514,119

Reducing flour to wheat, the first combined shipments of flour and wheat for the first 11 months of the cereal year compare as follows:

	Centsals.
1883-84	14,814,700
1884-85	19,354,700
1885-86	13,539,800
1886-87	14,158,100
1887-88	10,724,400

The shipments for May were equivalent to 25,374 tons, and for the first 11 months of the year, 536,221 tons, against 707,906 in the first 11 months of 1886-87.

The harvesting of barley is quite general. The quality is said not to come up to expectations in nearly all sections where harvesting is under way. Receipts the past week were light, but the fear of heavy offerings of new caused dealers to bid down, and even at concessions they bought sparingly. The consumption of feed is very large, but of brewing grades it is light owing to cool weather.

Oats have moved fairly free throughout the week. Heavy receipts on one or two days necessitated some shading in prices to effect quick sales. The crop on the coast will be light.

Corn ruled weak and in buyers' favor throughout the week under more liberal selling offers. Crop advances in this State are uniformly good. At Western centers planting was late but then a larger acreage has been planted.

Feedstuff.

Bran and middlings are strong at a slight advance. The breaking of the machinery in one of Starr & Co.'s mills at Vallejo has curtailed the production. The mill will not be ready for work under eight weeks. The consumption of all kinds of ground feed continues large. The market for ground barley and feed meal is easier.

There is no question but the crop of hay this year will be all of 50 per cent more than in 1887, but this large increase will be offset by the small stock of old and the large and steady increase in the consumption. The consumption this year will be fully 25 per cent more, and may go much higher, than in the season of 1887-88. The fields of wheat, barley and oats that have been cut for hay is unprecedentedly large. Dealers continue to buy sparingly under the impression that farmers will market very freely and cause a break in the market by forced sales.

Fruits.

In reply to J. A. McCune of Watsonville, and several others, the writer will state that the coming fruit crop at the East is off in some spots, but the average will be good. In peaches, will have a big crop; Georgia, Mississippi and Alabama will have no crop, North Carolina about one-half a crop, Maryland and Delaware one of the largest crops ever known. Dealers look for cheap canned peaches and also cheap evaporated, but there will be a scarcity of cheap southern sun-dried. In apples, New York, Michigan, Ohio and Arkansas will have large crops, Indiana and Missouri good crops, North Carolina and Tennessee about half a crop each. My advice do not mean that it is absolutely sure that these States will have these crops. This is the way they promise now, and if they escape tornadoes, dry murrain, earthquakes and foot-rot, drouth, hail storms and summer cholera, they will probably have just this kind of crop.

The receipts of cherries show that the supply is gradually lessening, and they also confirm the advances of a short crop of canning varieties and only a fair average of other kinds. The new bearing trees did not increase the quantity over last year, or, as for that, did not even bring it up to last year. Cherries are generally sold in 8-lb boxes and the quotations given are for 8-lb boxes. Many retail dealers who sell by the pound prefer 10 and 12-lb boxes,

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FIG. 2.

FIG. 1.

Referring to the accompanying cuts, Fig. 1 represents a longitudinal sketch of largest sized Drier of this kind, having a capacity of 50 tons of grapes. It has 2500 trays placed on 14 cars, occupying a drying chamber 100 feet in length. In this size an exhaust wheel draft is used. It is capable of being reduced in a few minutes to any desirable smaller size, and is therefore adaptable to any emergency as to capacity and use of fuel. When reduced one-half, or less than the normal size, a natural draft is used. The draft is reversible or respirating, passing a part of the time in one direction and a part of the time in the opposite direction, at the will of the operator, as occasion may require. By this operation every individual piece of the fruit or material to be dried, and every side of such piece is exposed to the direct action of the hot air current, and the process of curing, as the term applies, to hay, hops, raisins, tobacco, fish, meats, etc., by this operation, may be readily accomplished. As only a brief description can be given here in connection with Figs. 1 and 2, it may be simply stated that the heating apparatus of the drier is situated underneath the drying chamber, separated by a sheet-iron floor, the walls of the heating chamber being constructed so as to reflect the heat upward, and do not in any perceptible degree absorb heat. The sheet-iron floor radiates whatever heat it receives directly into the drying chamber, but the hot-air current passing swiftly over the heaters and along the flues, carries with it practically all the heat generated by the heaters. The radiators in the drying chamber are closely connected with the heaters, and are so arranged as to make the heaters or the radiators radiate more or less heat, as may be required. The heaters, it will be seen, also have a reversible draft, which is made to correspond with the direction of the flow of the air current in the drying chamber.

In Fig. 1, on line A A, is the drying chamber, divided into spaces for the cars. Two of these spaces show the position of the cars loaded with trays standing within the drying chamber. This is a rear view of the chamber. The cars are moved in and out through apertures on the opposite side (as shown in Fig. 2). On line B B is the heating chamber. The space on line C C shows the exhaust passages connecting with the exhaust chamber at M, where the exhaust is made artificially through the wheel or naturally through the tower E, as may be required. The smoke-return flues, F, F, also terminate in a common upright flue or smokestack, G. In the tower within the smokestack is an exhaust steam pipe, H, used to accelerate the draft in the smokestack and tower when a natural draft only is employed.

On line I, I, is the sheet-iron floor before mentioned. The top of the tower, J, is so constructed that a slight breeze assists the natural draft, and in any case prevents the wind from blowing downward into the smokestack or tower. The radiators are located at K, K, in spaces between the cars at required intervals, and are used to reinforce the hot-air current as fast as it tends to decline. Two of these only are used at a time, the middle one and the one nearest the incoming draft, while the one nearest the outgoing draft is disused. It is not desirable, for obvious reasons, to add heat to the current after it passes the middle of the chamber. Compensation to that part of the chamber is rendered by reversing the draft. The gates for changing the draft are not here referred to by letter, as it will be readily seen that when the draft is

changed, the gates now open will be closed, and those now closed will then be open. The position of the dampers in the connecting flues will also be changed accordingly. The arrows show which way the draft is going at this instant; when the draft is reversed the arrows will all point in the opposite direction.

The heaters, L, L, L, are arranged in pairs, and are from 6 to 10 feet in length by 2 feet in diameter. They are provided with adjustable partitions, so as to cause a greater or less amount of heat to radiate directly or to pass into the radiators. Perfect control of heat is secured in this manner. The engine boiler is placed in the heating chamber beside the heaters, and the boiler flue is connected directly with the middle radiator. Thus it will be seen that every particle of heat generated is utilized.

Fig. 2 shows a sketch of the cross section of the building and its parts. In this figure A represents a side view of the radiator extending across the chamber; B a tray-laden car, drawn out to show position of radiator; C shows a side view of one of the heaters or of the boiler in the heating chamber and its connection with the radiator; M shows rim view of exhaust wheel; N the engine standing on the ground under the fuel shed, which extends the whole length of the building. The belt pulley and shaft of wheel is also shown overhead. The lines P and Q represent the doors regulating the draft artificially through the wheel or naturally through the tower. Their manipulation will be easily understood. O is the receiving room for fruit, extending the whole length of the building. On the floor is a track running lengthwise of the building, on which are run supply cars to supply and relieve the cars in the drier. There are no doors to the openings in the drying chamber, the cars being provided with the ends boarded up, forming shutters at each end, so that when the car stands within or without the chamber the aperture is always closed. The top, bottom and sides of the car are also enclosed by a simple apparatus, so that no matter in what position the car stands, cold air cannot be drawn into the chamber while the car is passing in or out. The cars, no matter how heavily laden, are moved either way readily by one person.

Modifications of the drier, as here represented, will be constructed, ranging from a capacity of 300 to 2500 trays, and costing for the apparatus from \$400 to \$4500, according to size and the quality of trays used. With the best galvanized wire screen trays 3 feet square, engine, wheel, boiler, cars, heater, radiators, flues, and all other apparatus, exclusive of building and labor, putting in apparatus, but including superintendence, a drier of the above description would cost about the latter sum, or with wooden trays about \$2800. The main requirements of the building are a good foundation, good floor and roof. Notwithstanding the fact that this drier, or most of its important improvements, have been and are being patented, the cost of the same is not materially enhanced thereby. Another fact should be well considered, the purchaser not being subject to the cost of experimenting and probable loss by so doing, is perfectly safe in contracting for the purchase of one of these driers, as the proprietor guarantees its proper working, and is responsible for all he contracts to do. AGENTS WANTED. For further particulars apply to

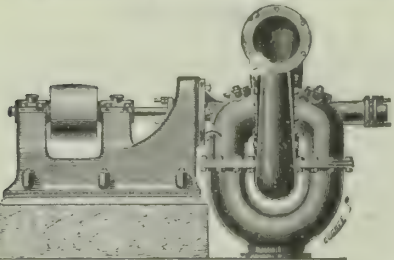
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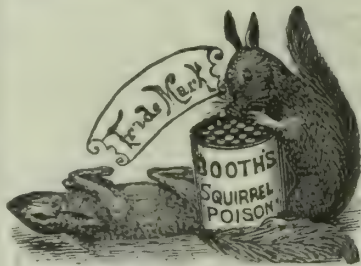
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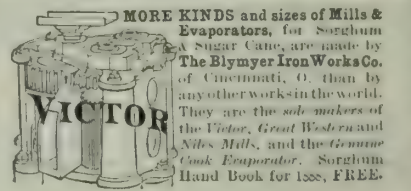
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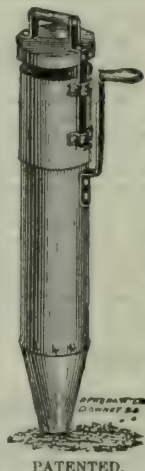
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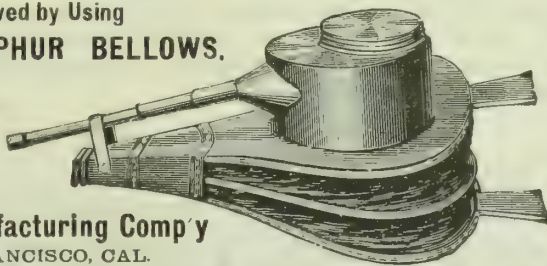
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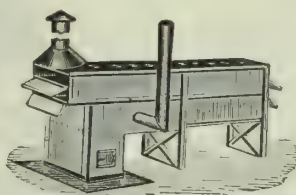
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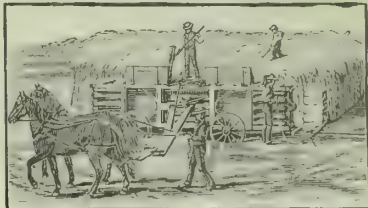
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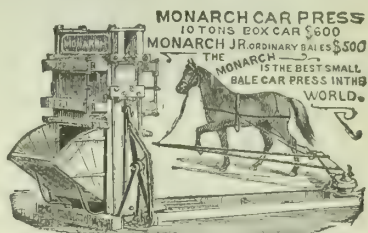
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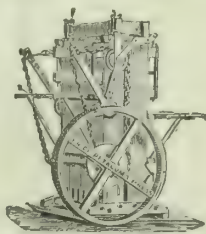
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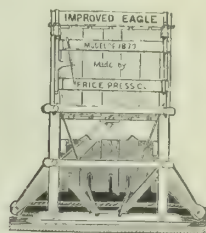
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Size of Bale, 18x22, any Length.

With Bale-Weighing
Attachment.

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BELL RINGS WHEN TO DROP IN
THE PARTITION.

Has a Break-Pin to avoid Breaking of Machine, Steel Pinions on Shaft, Flexible Spring Steel Top Beater; also Automatic Signal Bell, which rings when to drop in Partition block, thereby insuring Bales of uniform length, with the Beater under full control of the operator, who starts and stops it at will, stopping Beater to drop in the blocks, avoiding smashing them to pieces, etc., and the quickly adjusted Continuous Bale Chamber, with self-adjusting Tension Springs, for Hay, Straw, Moss, Cotton, Wool, Excelsior, Paper, etc.

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Those who are wanting a Belt Power Press, we take great pleasure in calling their attention to our CHAMPION Belt Power Quick Relief Baling Press, of which the accompanying cut is a fair representation.

In constructing and perfecting this Belt Press, we have earnestly endeavored to and have succeeded in overcoming all the objectionable features and defects, and to construct a Belt Power Press that would meet all the requirements of those who were wanting a Baling Press of large capacity that could be run with small power engine and be strictly portable.

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set with such relation to one another that it requires two-thirds of the revolution of the large driving gear to push beater in, while the remaining one-third of the revolution pulls beater out; or, in other words, the beater travels twice as fast when being pulled out that it does when pressing a charge, or going in. By using two-thirds of the revolution of the driving gear to push the beater in (or press a charge) causes the beater to travel fast while material is loose, but as the density of the material increases the speed of the beater diminishes, hence power increases. This exerts great force on the material being pressed, which is a very essential point and one well worth considering. Using, as said, only one-third of the revolution of the driving gear to pull the beater out, withdraws the beater so quickly after the charge is pressed that it entirely escapes the rebounding of the material pressed. Thus the danger of the gear being broken by the "back lash," caused by the "rebound force" of the pressed material is entirely overcome.

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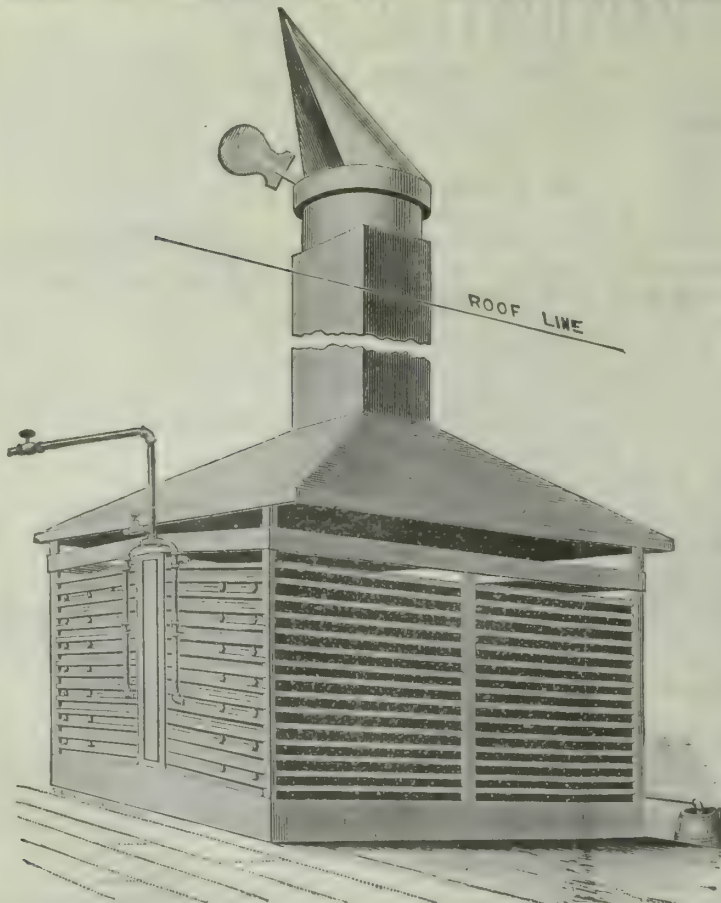
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TWENTY-PAGE EDITION.

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Handsome Yearlings.

If there is anything that pleases the fancy and wins the affection of the stockman it is the handsome youngsters of his herd. Young animals, not excluding the blessed babies of our households, are usually more handsome in their early days than ever afterward, and all mankind has liking and sympathy for nature in its springtime. To the stock-breeder, however, there is in the young animal something more than merely the beauty and playfulness which commend it to the common observer. He sees the promise of development of points which he is endeavoring to develop or perpetuate in form or other characteristics of the animal. He scans the youngster to see how rapidly he is advancing toward his ideal, and he perhaps looks forward to the distribution of desirable points throughout his herd. Naturally the young stock receives his best care and attention both for their present characteristics and for the future which may be wrapped up in them.

In some such way we imagine Mr. Martin Flynn of Des Moines, Iowa, looks upon the group of yearling Shorthorns of which we give a picture on this page. He has a Bates herd of over a hundred, which he proposes to make one of the best in his State. His animals are representatives of several of the best-known and most popular families, such as Kirklevington, Barrington, Wild Eyes, Fennell Dutchess, Rose of Sharon, etc. At the head of the herd is the 33d Duke of Airdrie 50833, whose calves prove him to be a superior sire. Mr. Flynn is very much pleased by the uniform excellence of the get of this bull, and is fully satisfied that his purchase of him at a high price was a very good investment. On this page we have pictures of three highly bred yearlings in the "Walnut Hill Herd," 2d Duke of Walnut Hill, Lady Wild Eyes and 2d Duchess of Walnut Hill. They are handsome specimens, and Mr. Flynn is quite proud of them.

The cruiser Charleston will not be ready for launching on July 4th, as it was intended she should be.

SERICULTURE.—Affairs at the State Board of Silk Culture seem to be in a highly satisfactory condition. Their two large rooms in the Flood building are tenanted by over 50,000 worms, at various stages of development, a great number of which are spinning busily. Large quantities of cocoons are sent in from time to time for reeling by persons—mostly women—who have engaged in raising worms in various parts of the State, and letters are received, almost

SUN-DRYING AT MARYSVILLE.—The *Appeal* says that the fruit-drying department of the Marysville cannery, which is the enterprise of G. A. Fleming & Co., employs at present about 50 boys, and the management are desirous of securing a number of girls. This is all piece-work, and up to the present all have made pretty fair wages. Many boys go out after school hours and earn from 25 to 50 cents each. The drying is all by the sun, and though they

Fruit Shipping.

The Eastern shipment of fruit has proceeded with unusual vigor, and far more fruit has gone forward early in the season than ever before. It really looks as though the Eastern people were getting educated to the desirability of the apricot faster than has been thought possible, and between the Eastern demand and the surety of a good return from drying, the canners have to bid pretty good prices for what they need. This is as it should be all around. Brisk competition between the different outlets for the fruit will reward the growers and help on the fruit interest of the State generally.

The California Fruit Union has sent East something like 40 cars so far this year. Mr. Hatch, who has just returned from a flying Eastern trip, is reported to have said at the meeting of the State Board of Trade on Tuesday that there is most excellent outlook for sales of fruit East. The first two cars sold for \$2350 apiece. The first sale of fruit at auction in Chicago was set for June 21st. The demand for California fruit is very promising. Mr. Hatch visited many towns of 5000 and 10,000 inhabitants where California fruit had

never been heard of. Shipments East thus far have been nearly twice as much as any season in the same period, and the sales have aggregated larger amounts. This is a very encouraging group of facts. By next week the arrangements for the season's work will be more definitely known.

HORTICULTURAL ORGANIZATION IN SOUTHERN CALIFORNIA.—It was telegraphed from Pomona, Los Angeles county, on Wednesday of this week, that many representative citizens had arrived to attend the convention to effect an organization to be known as the Southern California Board of Horticulture, which was called to meet in Pomona, Thursday. The organization comprises the counties of Santa Barbara, San Bernardino and Los Angeles. It was announced that money necessary to the extent of \$20,000 had already been advanced to aid the association. We go to press too early to get further information about the movement.



YEARLING SHORTHORNS—2D DUKE OF WALNUT HILL, LADY WILD EYES AND 2D DUCHESS OF WALNUT HILL.

every day, from those desirous of learning how to start in the business. All applicants may obtain printed instructions, as well as silkworm eggs, mulberry leaves and cuttings. The supply of trees at the board's disposal is exhausted, but the applications held over will be filled from the large stock of trees to be procured for next season.

THE FRUIT CONTRACTS.—We understand that A. Lusk & Co. took two of the fruit contracts made by the J. Lusk Canning Company, and the other contracts have been distributed among other canners. In a few cases we believe changes were made in the contracts, with consent of the fruit-growers, but as a general thing the contracts are assumed about as they were originally drawn.

CATTLE in the mountains, says the *Sonora Independent*, are doing famously this year, and all the stockman has to do is to smile and watch the dollars pile up under their hides,

have been working but three days, they have about 15 tons out on the trays in the yard. "It is very noticeable," said one of the men who is employed there, "that the boys who do not play make very good wages, while those who do are dissatisfied."

ANOTHER FRUIT ASSOCIATION.—Announcement is made of the formation of an association at Sacramento to be known as "The Growers' and Shippers' Association." The association is composed of the Earl Fruit Co., Sacramento; Wood & Co., Sacramento; C. W. Reed, Sacramento; Geo. D. Kellogg, Newcastle. The association is organized upon a mutual contract for the purpose of shipping trainloads of fruit when fruit is abundant, so as to get transportation to market on the most favorable terms. C. W. Reed is to be the Eastern agent.

RIPE TOKAY and Muscatel grapes were reported in the Yuma markets June 13th.

ARBORICULTURE.

Osage Orange Hedge.

EDITORS PRESS:—Permit one who has had 40 years of experience with the Osage Orange as a hedge and fence plant, and who, during that length of time has had many miles of it under his care continuously in North Central Illinois, to give his unprejudiced opinion on it as a farm hedge, or fence or wind break in this State. I will preface my remarks by saying that in Illinois the general and mature judgment of good farmers is against it as a cheap, reliable, and efficient hedge plant.

This is not for the reason that a good fence, or a most beautiful and perfect hedge cannot there be formed from it, but simply for the reason that it requires too much labor to care for it, and because such labor must be performed at the busiest and most disagreeable times of year, namely in winter and midsummer.

The plant is a tree. In the rich soil and moist climate of the prairie States it grows with great vigor, therefore requires much labor to keep it cut back, and if not kept trimmed within bounds it soon becomes a great nuisance.

Besides the tree is an enormous feeder, having wide spreading surface-feeding roots, therefore requiring a wide fence row, for crops are starved if near it. But if it is closely kept in hedge form, sheared back twice or thrice during summer, it does not require so much room and makes one of the most perfect and handsome hedges of any deciduous plant, and also a very cheap and permanent one. It is not being planted very largely of late years in the prairie States, where it has been the most experimented with.

But many of the objections against it in the prairie States will not apply here in California. For here its rate of growth can be in a great measure controlled by the supply of water. There is more leisure and more agreeable weather in winter to trim and shear it.

The tree is indigenous in Southern Arkansas, Louisiana, and Western Texas. Its foliage and thorns resemble those of the common orange quite closely, except the thorns are shorter, stouter and sharper. The tree belongs to the bread fruit family, and is a distant relative of the mulberry. The tree, when grown singly, is round top and spreading. When grown closely in groves, quite upright and straight.

Its wood is dark yellow or reddish brown, very hard, exceedingly elastic, hence its French name in Louisiana, *Bois de Arc*—bow wood—it being used above all other woods by the Indians for their bows. The wood is very hard, fine grained, taking a high polish, of great strength. One of the most lasting of woods; it may be said that like red cedar it never decays, nor does the wood shrink, swell or bruise; when used for the felloes of wagons, the tires seldom need setting. In fact it is the most valuable tree for its wood alone, especially for all the uses of the farm that a hard wood is needed for, that can be grown on the continent. As a wood for fuel, green or dry, so far as I know, it is unequalled by any wood. The tree grows very fast on a deep rich soil with plenty of moisture.

How to Plant for a Hedge.

As a hedge plant, as said before, it has its faults. To make a hedge of it, after 35 years experience and observation, I would say, procure the best obtainable plants, one year old. They can be had East by the carload packed for \$1 per thousand. Prepare the hedge row by plowing it very deeply six to eight feet wide; plant the plants in a straight line six to eight inches apart.

In this climate, at any time during winter, but where there is danger of freezing not until early spring, the plants should be planted in and the soil packed very firmly to them, one to two inches deeper than they grew; cultivate thoroughly and give them plenty of water. The first spring the plants should be cut to within four inches of the ground, and some plants should have been planted the spring before, to be now taken up to fill in any vacancies. The hedge row should be well cultivated the second and third summer, the second spring cut back to 16 inches in height and the third to two feet. After the third season it will need no further cultivation.

By the fall after the third spring one should have a hedge that will turn any kind of stock, and be very unpleasant for fruit thieves to get over or through. The fourth spring it should be cut back to 3½ to 4 feet and cut back to four feet in height every winter thereafter. This yearly cutting is all that is necessary for a lasting perfect hedge, but one may shear it during summer to any desired form or shape, just as the Monterey cypress is here done. A good hedge or fence can be made from this tree in a hundred other ways. But the above is the plan I should follow did I want a good hedge of it here. The plants may be planted one, two, three or even four feet apart, and a good hedge or fence be formed from them. But close planting seems, all things considered, the best. The main objects to be gained by close planting are not to rank a growth and not too great a space being left by the failure of a plant.

If an Osage hedge is left without continuous yearly cutting back, the more vigorous plants will over-shoot the weaker and kill them out. There is nothing gained by wide planting and plashing, as bending down is termed, the whole

hedge row, the plants, costing but little. But a gap in a line of hedge can be filled up in that way better than by planting anew in the gap. This may be done in many different ways, by bending down the trees next the gap and layering in their branches, or bending them flat to the ground and fastening them there, etc.

The Osage orange is one of the most valuable timber trees that can be planted in California. It is true it has many thorns and very sharp ones, but it has so many uses, especially here where hard, tough, elastic woods are so scarce. For tool handles, pins, wedges, and nearly every use a hard wood is put to, it is unsurpassed.

D. B. WIER.

415 Montgomery street, S. F. Cal.

[Wood of the Osage orange has already been used in this State for buggy hubs, etc.—Eds. PRESS.]

THE DAIRY.

A Tulare Cheese Dairy.

The *Traver Advocate* gives the following description of a new undertaking in the dairy line in Tulare county:

The Excelsior stock farm, seven miles southwest of Traver, D. C. Hayward proprietor, is about to become the scene of cheese-making operations. Last Monday afternoon the editor of this paper made a visit to the farm to witness the preparations. The 800 acres of land which Mr. Hayward owns is all under the People's ditch, which flows directly through his main ranch, its broad stream of water, 26 feet wide at the ranch, bidding defiance to dry years and drouth. Most of the farm is devoted to alfalfa, on which browse hundreds of cattle and horses, while a part of the ground is reserved for hay and one-quarter section for grain. The grain, which lies detached from the main farm and nearly adjoining the Excelsior school-house, is as fine as could be produced anywhere in any season. But all the crops in that vicinity are first-class, the ground being seepy and the innumerable ditches which meander through it furnishing an abundance of water all the year round. Mr. H. states that if he turns the water into a low place on his farm, it will rise to near the surface in other parts of it.

The Excelsior stock farm is tightly fenced and cross-fenced. A beautiful cottage, built on a natural knoll, commands a view of the surrounding country and is a delightful home. To the left of the house are numerous corrals, stables, a creamery, etc., while in the rear a young orchard spreads its green leaves and sends out its handsome fruit to ripen in the sun.

The cheesehouse, which has just been erected near the residence, is evidently built with a view to permanency, cleanliness and our climatic conditions. It is 18x30 feet in size. The walls are double and filled with sawdust. A cement floor has been laid, over an inch in thickness, with a slant toward one side, so that all fluids which may fall upon it will drain off. The house is supplied with windows, which furnish an abundance of light, while screens keep out all insects. It is but 20 yards from the cheesehouse to the new stable which is being built for milking purposes.

This building is 24x46 feet in size, with stalls for 25 cattle. It is built for cleanliness in milking. Any person who has ever milked cows in a corral will see the advantages of Mr. Hayward's stall method. The building is floored, with mangers on each side of the building. There is a walk through between the rows of stalls, with a gutter on each side, having a decided slant, which carries off all manure, etc. The cows are driven, 25 at a time, into the building, and immediately commence eating. To reach the feed they must put their heads through between a movable bar and a fixed bar. The milker passes along and throws the movable bar toward the fixed bar, securing it with a wooden clamp, and the cow is there for good until the milker releases her. The cattle stand up and eat, and there is no confusion, although they are in a small space, handy for the milker. After the first 25 cattle are milked, they are run out into the field through a corral on the opposite side from where they entered, and another lot is let in.

Mr. Hayward is going into the cheese business on an extensive scale when all arrangements are completed. He will milk 100 cows, making cheese in summer and butter in winter. He is paying attention to raising good milk cows, and has a fine imported Holstein bull, Electioneer, three years old in July, to which he is breeding. Electioneer comes from some of the best stock of milk cows in the world. Mr. Hayward believes that the Holsteins are preferable in his district for milk cows to the Jerseys. Where feed is scarce the Jerseys will keep in better condition and give more milk than any other breed of cattle; but where there is an abundance of feed, as there is on his farm, the Holsteins are the best and will give the most milk.

Mr. Hayward already has a quantity of cheese made up, the heads varying in size from 5 to 45 pounds. We examined them as they lay in the cellar and their appearance would make the mouth of a cheese-loving Dutchman water. One of them, about a month old, we sampled and think it excellent for its age. None of the cheese, however, is at present aged enough to put upon the market, but Mr. H. states that in

a few weeks he will have some sufficiently aged.

With the facilities which the Excelsior stock farm has and is acquiring for cheese-making, and with the pains-taking care which Mr. Hayward takes with his dairying business, we feel satisfied that the farm will soon be turning out as good cheese as is made in California and that another important industry will be added to those already in operation in Tulare county.

THE FIELD.

Sugar vs. Wheat.

From a paper read before Albion Grange No. 23, P. of H., by George Sprague, ex-Secretary of the N. Y. State Grange, we take the following:

There were raised in the United States in the year 1887, in round numbers, 456,000,000 bushels of wheat. There were required for home consumption, say for food, seed and manufacture, 345,000,000 bushels, leaving a surplus available for export of 111,000,000 bushels. We are compelled to find a market for the most of this surplus in Europe, where we are obliged to come into competition with wheat raised by the cheap labor of Russia and India, and upon the cheap lands of Australia. The price that we obtain for this surplus establishes the price for the whole crop, for we have no facilities by which the sale of the crop can be manipulated and marketed, so as to sell the surplus at such prices as can be obtained in foreign markets and at the same time secure for that which is required for home consumption a price that would be profitable to the producer. The whole must be sold indiscriminately at the same prices, and the price at home is fixed by the price abroad.

During the past year the average price of No. 2 red wheat in New York, as given by Bradstreet was 88 1-5 cents per bushel. This is below the cost of production, inclusive of land rent. I observe in one of the statistical reports of the agricultural department that a writer in the *Russian Financial Messenger* estimates the cost of wheat production in the favored black earth regions of Russia at from 45 to 60 copecks per poed, inclusive of land rent. Exclusive of this the estimate is given at from 34 to 50 copecks. Reckoning by the Russian poed of 36 pounds English, the same writer gives the price of production in Germany at 86 copecks; in Hungary, Italy and Rumania, at a little over a rouble; in France at one rouble 46 copecks; in England at 1 rouble 36 copecks; in America at 75 copecks, and in India at 55 copecks per poed. Estimated in United States currency and Winchester bushels, and taking the highest price, viz., 60 copecks per poed for the cost of Russian production, this would give approximately the cost of wheat production in Russia at 75 cents per bushel; in Germany at \$1.08; in Hungary, Italy and Rumania at \$1.25; in France at \$1.82; in England at \$1.70; in America at 93; and in India at 68 cents per bushel. Now, if we deduct from the average price at New York the cost of transportation and commissions, we shall find the average price of wheat at any point throughout the country. In Orleans county the average price for the past year would appear to be about 83 cents per bushel, or about 11 cents per bushel below the estimated average cost of production in America. The average price of cash wheat in Chicago for the past year was very nearly 75 cents per bushel, or about 19 cents per bushel below the average cost of production. Assuming that the average price of wheat in Chicago is a fair average of the prices paid the farmers of the United States for their wheat, and I believe that upon a thorough examination that the average price would be found to be less even than this, we find that the wheat crop of 1887 has actually been sold for \$87,140,000 less than the cost of production. I think I may safely assert that with little or no surplus of wheat for export, the average price of wheat in Chicago for any year would be at least \$1 per bushel. I believe it would be higher, but that or any fair price above the actual cost of production is sufficient for illustration. Now, 345,000,000 bushels of wheat, the amount required for home consumption, would have sold last year if we had raised no surplus for export, for \$345,000,000, while the whole crop of wheat has actually been sold at the average price of 75 cents per bushel, or \$342,000,000, showing a loss upon the crop of \$3,000,000, besides the expense of producing this 111,000,000 bushels surplus—a surplus upon which we have been accustomed to look with so much pride and satisfaction, which, instead of being a blessing, has been to the farmer an injury in disguise, entailing upon his industry an annual loss of over \$100,000,000.

In view of these facts can the American farmer afford to raise surplus wheat for export? Can the American farmer afford to raise wheat with high-priced labor and upon high-priced lands in America, and suffer the price of his whole crop to be fixed in Liverpool at the price of the cheaply raised wheat of Russia, India and Australia? I believe that every intelligent farmer in America will unhesitatingly answer, no. To successfully compete in the foreign markets we must have cheaper labor and cheaper land. Can these be secured? Would it be wise to attempt to secure them? The whole trend of public sentiment in this country is rightly toward a higher plane, and better wages for our laboring population. And this

cannot be changed so long as the laboring people have a free ballot and use it intelligently. Then the all important question arises, how shall this surplus wheat be eliminated from the production of American farmers? Is there any feasible method of curtailing the production of wheat to the demands of home consumption? Can this constantly increasing wheat surplus, which is more dangerous and threatening to the business prosperity of the American farmer than the large and constantly increasing surplus in the United States Treasury is to the business prosperity of the country, be eliminated?

Do I hear some one say that the problem is difficult? I answer, yes. It is more difficult, perhaps, than it would be to dispose of the surplus in the treasury without injuriously disturbing business interests. It is as difficult, perhaps, as is the problem of prohibiting the sales of intoxicating liquors as a beverage. It would not seem to be feasible to attempt to prohibit by law the production of surplus wheat? It would only be another case where prohibition would not prohibit. But, cannot farmers agree among themselves to limit the production of wheat? This could be done if the production of wheat, like iron or coal, was controlled by a few men. But the production of wheat is in the hands of millions of people, and any attempt to control its production by agreement among producers would be entirely impracticable. I can conceive of only one feasible plan by which this imminently dangerous factor in American farm production can be removed. Perhaps others may discover a better solution of the problem than I can. I do not claim or aspire to infallibility. Do you ask for my solution of the problem? I answer, by diverting in a measure the attention and operations of American farmers from wheat-raising to the raising of something that will render a profit upon the cost of production.

The consumption of sugar in the United States for 1887 is placed in round numbers at 1,400,000 tons. The home production is placed at about 200,000 tons, and the amount imported at 1,200,000 tons. This imported sugar at 4½ cents per pound amounts to over \$100,000,000, which the people of the United States send abroad annually for sweetening—an amount just about equal to the loss annually sustained by American farmers by reason of this enormous over-production of wheat. But why cannot our sugar supply be produced at home? By experiments which have been carefully conducted in this country during the past few years, it has been fully demonstrated that by the process of diffusion, the best quality of sugar can be profitably produced from sorghum or amber cane, throughout a very large section of the United States. The most favorable locality for the growth of this cane embraces the great wheat-producing States of Kansas, Missouri, Illinois, Indiana and Ohio, and the States and Territories lying south of them, yet it can be profitably grown in nearly every State in the Union. By a proper encouragement of the sugar industry millions of acres of land that now produce annually over 100,000,000 bushels of wheat, could be diverted into the more profitable avocation of sugar production. This of itself would afford relief ample and complete to the great wheat-growing business of our farmers which is now so ruinously depressed by an uncontrollable, increasing surplus of wheat.

We are accumulating in the United States Treasury a great and bewildering surplus of money, a surplus the disposal of which, without affecting injuriously the great manufacturing and labor interests of the people, is now puzzling the heads of our greatest statesmen—a surplus so large that it is said to be endangering the business prosperity of the country, because it withdraws such a large amount of currency from circulation among the people. From this surplus I would pay annually a bounty of two cents per pound upon all sugar produced in the United States for the next six years—one-half to the farmers who raise the cane and one-half to the manufacturers who make the sugar. After six years I would decrease the bounty, if thought advisable, one-half cent per pound each year, so that the bounty would entirely cease at the end of 10 years. The present tariff on sugar should remain undisturbed. By this plan I would relieve the treasury of its surplus and distribute it where it would afford the greatest benefit to the people. Give the sugar industry this encouragement and you would behold wheat-fields turned into cane-fields, and sugar-mills would spring up as thick as grist mills all over a very large section of this country.

Can encouragement of this kind be secured for the sugar industry? I answer, that that depends mainly upon ourselves. It depends upon whether we will forgo the pleasure of looking after other people's business long enough to take care of our own. So long as we are willing to allow our own chestnuts to remain smoking among the embers, and suffer ourselves to be used in raking other people's chestnuts out from the fire, and act accordingly, I cannot give encouragement that anything will be accomplished for us. "A house divided against itself cannot stand." Before we can accomplish much we must be able to cut ourselves loose from a blind partisan idolatry and become thoroughly united together in mind and purpose and unitedly resolve and unswervingly stand by our resolution; that we will support no man for office who is not in harmony with our interests and purposes, and that we will unitedly endeavor to defeat the nomination and election of every one who is opposed to our interests and purposes, regardless of party politics.

THE VETERINARIAN.

Abortion: Anthrax: Poll Evil.

EDITORS PRESS:—Abortion occurs very frequently in cows. It is a very disagreeable event, as besides the loss of the calf it sometimes occasions the loss of the mother; and the latter if she survives often remains barren, or at least subject to new abortions. Abortion commonly occurs through want of care, by unsuitable food. Bad air in particular seems to exercise great influence in this respect, for abortion is much more common in low and marshy grounds than elsewhere. It is also liable to be brought about by too frequent sexual intercourse (in this case the generative organ becomes exhausted), also by various injuries, by injudicious use of cathartics, by drinking impure water, by violent coughing, or by the presence of fungi, such as ergot or *ustilago* (rust) on the food; also, by cows mounting each other; it also results from debility, and from nervous influence. When abortion partakes of an enzootic character, it is usually due to the animals being affected with blood disease, especially tuberculosis affecting the genital organs.

Prof. Williams, M. R. C. V. S., refuses to accept the theory of abortion being due to the entrance of a micro-organism into the vagina of a pregnant animal; he considers the spread of abortion a result of influence upon the imagination or upon the blood through the sense of smell.

It has been well established that enzootics of abortion occur more frequently in seasons favorable to the development of fungi.

Abortion seldom takes place suddenly; it is generally announced by several symptoms, among which may be noticed great disturbance, anxiety, sudden diminution of her milk, and the escape from the vagina of a mucous fluid.

If these precursors are noticed we must hasten to prevent it, and there is nothing better than the preparations of aconite. If abortion has taken place, and if the placenta delays in coming away from six to eight hours, it is necessary to use means to aid its removal; give preparations of ergot; we should have recourse to manual interference only in case the ergot fails.

After abortion the animal should be well cared for. It is often necessary to give stimulants and tonics. It is very necessary that the affected animal should be isolated from the other cows. It is also advisable to disinfect the places where abortion occurs. I will conclude by stating that causes which seriously change the constitutional conditions of an animal, when pregnant, may bring about abortion.

Is Anthrax Infectious?

In answer to a subscriber, I can positively state from experience that anthrax is not infectious, that is to say, animals in contact with others which are diseased do not suffer unless some of the blood or tissues of the diseased animals enters their blood. Even eating food containing the germs of the *bacillus anthracis* appears to be insufficient to induce disease unless there are abrasions in the mucous membranes of the digestive organs through which the spores can enter the blood.

What is known as "wool sorters' disease" is said to be really anthrax, and while bales of wool are mainly made up of wool clipped from living sheep in the usual manner, they sometimes contain wool clipped from dead sheep, some of which may have died of anthrax. It only requires a little blood on the wool from a sheep dead of anthrax and a scratch on the finger of the wool-sorter for him to be infected with anthrax. Anthrax cannot be stamped out. Diseased animals die so quickly that nothing would be gained by slaughter, and those in contact with them frequently escape the disease. There is never any real reason for making post mortem examinations in cases of anthrax, because a few drops of blood under the microscope will enable the expert to detect the bacillus. Sometimes an outbreak of anthrax is first discovered by finding an animal dead, but if one of a flock be attacked, it will be found separate from the rest.

Poll Evil.

In answer to a subscriber, poll evil is a term applied to a very painful tumour immediately behind the ears of a horse, at the junction of the head with the neck. It is caused from external violence. This disease is always of a serious character, as not only do the tumours frequently degenerate into ulcers, which are always of a bad character, but also because it frequently happens that the affection involves the muscles, ligaments and bones.

Treatment.—At first the treatment must be antiphlogistic—that is, employ agents which counteract inflammation. When this fails, we must have recourse to counter-irritants—that is, apply agents which stimulate and irritate the skin. If this fails, and the disease has existed for any length of time, and sinuses have formed, so that it is impossible for the pus to gain an exit, but continues to destroy the living parts, it will be necessary to call in the services of a qualified veterinary surgeon, and for him to use the knife freely, so as to cut down in to the diseased parts and to form a depending orifice for the complete evacuation of the matter, without which medical means will be of no avail. DR. A. E. BUZARD, M. R. C. V. S. L.

No. 11 Seventh St. S. F.

HORTICULTURE.

Planting and Pruning the Orange.

From Mr. Lelong's treatise on citrus culture, to which reference was made last week, we take the following on planting and pruning of orange trees.

It is a common practice among growers to place the tree in the hole, fill it up with soil, and then tramp it. As the roots are covered with thick mud they will stick together, and



Fig. 1.—Spreading the Roots.

if the tree grows it will not do as well as when the roots are extended with care. This is very simple. The hole is half-filled with earth, so as to form a mound in the hole, the shovel handle is driven down in the center of the mound, and on being withdrawn a deep hole is left, sufficiently large and deep enough to admit the taproot of the tree; then the roots are spread over the mound (Fig. 1), the soil is lightly pressed. Heavy tramping is not necessary, as the water settles the dirt and keeps the roots in place. Soon after the trees have been watered, and as soon as the water in the basin has



Fig. 2.—An Over-Trimmed Tree.

disappeared, the basin is covered with loose soil; this will protect the tree from getting dry, and also from leaning over. Trees planted with these precautions make the best growth and become the thriftiest.

Pruning.

When trees have been allowed to grow at will for several years before they are pruned, most of the inside brush will be found to be dead, and to remove it requires considerable work and skill, for in removing a branch a



Fig. 3.—High-Trimmed Tree.

hole is made that will allow the hot sun to enter, it will scorch the bark; the fine brush will also die, and diseased trees are sure to be the result. I have often read articles wherein the writers advocate "that the trees be opened so as to allow plenty of air and sun-heat to enter." This advice comes from men having no practical knowledge; men who are ever willing to tell, but who cannot do it themselves. I am sure that no one having an orchard, depending upon that alone for a livelihood, would ever follow or give such advice. It is not practical and should be disregarded.

Fig. 2 is a good illustration of how a tree is

left, or what remains of it, after the brush that protects the trunk and branches is removed. The trunk and inside growth is left exposed to the sun's heat.

I have often seen trees where the bark had been scorched and had dried on the south side of the tree, being the result of removing the brush that protected it.

Fig. 3 illustrates a high trained tree of the same age. In it the lower limbs have been removed, leaving a clear stock, so as to allow the horse in cultivating to pass under its branches, and the cultivator to work the ground close to the trunk.

Fig. 4 illustrates a low trained tree of the same age as Figs. 2 and 3. In this the lower limbs have been allowed to remain to protect its trunk and inner growth. The inside of the tree is kept clear of all dead wood, and no limbs



Fig. 4.—Low-Trimmed Tree.

have been allowed to cross each other, as when two limbs cross each other, if one of them is not removed, both limbs will be cut in two by the friction caused by the wind.

Advantage of Low Trained Trees.

There are several points that should be taken into consideration, i. e.: In summer the trees must be irrigated. If trained high, the sun heat will bake the ground under the trees before it can be worked; as the cultivator cannot run close to the trunk, it must therefore be worked by hand. When trees are trained low, the shade of the branches keeps the ground moist, and in case of the excessive heat, or scarcity of water through the summer, the trees will not suffer; whereas the heat causes the leaves of high trained trees to curl, and if not watered at the proper time, the growth of the fruit is checked. Low trained trees become better balanced, vigorous, healthy, and more productive than when trained high, also become straighter, and the fruit is much more easily and cheaply gathered.

Seedling Fruits.

EDITORS PRESS:—During the present season's growth we have made observations and arrived at conclusions that may be of interest to the readers of the PRESS. We have noticed that some trees were very late in coming into leaf and blossom. Some varieties of apple trees did not put forth their leaves and blossoms until from May 1st, to the 15th. The same was likewise the case with the black walnut, while the white or English walnuts were very early in putting on their garments of leaves and blossoms. The conclusion arrived at is this: That northern varieties of fruit and nut trees, like the apple and black walnut, do not put forth leaf and blossom when transplanted to southern climes any earlier than they do in their northern latitude. This ought to be conclusive evidence that those fruits, nuts and flowers succeed best that originate on the same parallels of latitude, the conditions being equal. During Jefferson's administration the Government furnished the Cherokee Indians—then living in Georgia—with a large amount of apple seeds, and from those apple seeds planted by the Cherokees originated some of the best varieties of apples in the Southern States. This should be an example for California horticulturists, and I notice that some California nurserymen like Leonard Coates of Napa City and O. M. Silva & Son of Newcastle (and many others.—EDS. PRESS) are acting upon the idea and are producing new varieties of fruits from seeds. By planting seeds of the various kinds of fruits that succeed best in California, new varieties will be originated that will be adapted to the soil and climate. In the same way all of the different kinds of fruits that we bud and graft from were produced. Many of the northern fruits are unsuited to the climatic conditions of this State, and the only method to pursue to overcome the defects of existing varieties is to produce varieties from seeds. By following up this line of operation the future of California will show marvels of excellence and beauty in its fruits.

O. F. SHAW.

San Buena Ventura.

THE President has approved the bill introduced in the House by Representative McKenna, appropriating \$150,000 for the building of a public building at Sacramento.

THE APIARY.

Extermination of the Bee Moth.

EDITORS PRESS:—In reply to Mr. Ashley's inquiry, would say that my experience as well that of the leading apiarists demonstrates beyond a question of doubt that Italian and Cyprian bees will protect themselves from depredations of this pest.

In my apiary of 170 colonies there is scarcely a trace of moth to be found in either weak or strong swarm. To those who have common bees I would suggest hybridising as the cheapest and only effectual remedy. By this means you accomplish two results, viz., improve the value of the swarm as honey gatherers, etc., and kill the moth.

For the benefit of the novice will give a few directions how to accomplish this end. To those who have but little time and plenty of money, I would suggest the purchase of thoroughbred queens, introducing them into your colonies after removing the natural queen. It is better to allow the hive to remain queenless several days, say two or three, then introduce the new queen in a cage and let her remain two or three days until the bees come to acknowledge her right of ruling. Be careful to remove all queen cells that may have been started since the removal of the original queen. If you have bought tested queens your bees become thoroughbred at once.

To any one who may wish to pursue a more economical method the process is somewhat complicated, and especially so if you aim to obtain thoroughbred stock all through; and it will require at least two seasons to accomplish the desired result, if the apiary is extensive. Any who undertake the task may, however, rest assured it will amply repay for the work involved.

I will try to briefly outline a plan which has proved successful with many. As a starting point purchase a pure tested queen, a nucleus, or full swarm. Before introducing the queen it is better to remove the bees that have attended her on the journey and provide an ample supply of bee candy or other food else she may starve before being released.

The best method I believe to be starting with a full colony of thoroughbreds, which should be in a hive provided with movable frames. Now, if you have other hives with frames which are interchangeable, take a frame of brood from the new hive and place it in a colony which you have made queenless. The bees will build queen cells upon it. When these cells are ready to hatch, carefully remove all but two, and place them in other queenless colonies to hatch, taking care, of course, that none of the cells built upon the brood of the original queen hatch. Now, these hives that are rearing queens must be provided with uncapped broods or eggs (common brood will do) until the young queen begins to lay. This queen is pure, but her progeny will be as follows: Drones, pure; workers, hybrids. When you have made the round of the apiary, repeat the process and you have thoroughbreds. Some may ask why the drones are pure and workers not. The drone hatches from an egg that has not been fertilized, as the queen lays fertile eggs or otherwise at her pleasure. This young queen having been met in her wedding flight by the common drones, her fertilized eggs produce a cross of the breeds.

In attempting to carry out the suggestions offered, an amateur will doubtless meet with difficulties. As a final suggestion, I would recommend the purchase of a reliable work on bee culture. There are several now offered to the public which will enable almost any one to succeed.

It would be almost impossible in an article, briefly written, to cover all points. We trust this may throw a ray of light to some.

Bakersfield, Cal.

W. A. WEBSTER.

VOLCANIC SYMPTOMS.—A correspondent at Shingletown remarks that a number of small lakes lying around Lassen's peak are reported to have gone dry, as also Honey lake. The latter, however, has been decreasing for years, and went nearly dry last year. An extensive bed of ashes on the side of Lassen has lately become so hot that it is impossible to walk over it. Several witnesses claim that they, some years ago, saw flames near the top of the peak.

BERKSHIRE SALES.—Phil M. Springer, secretary of the American Berkshire Association, sends us account of transfers by Andrew Smith of Redwood City of Redwood Maid 15764; Redwood Sallie IV 17702, and Redwood Susie 17704 to F. W. Atherton, Menlo Park, Cal., and of Carlos 19166 to H. H. Kent, Little River, Cal.

LARGE quantities of potatoes are being shipped to New York from Europe, practically as ballast, the freight paid being very low. The receipts of potatoes from Great Britain and the Continent since October 1st up to Saturday, June 21, were 3,652 089 bushels, against 125,619 bushels for the same period a year ago.

CUT WORMS are reported by Professor Forbes, State Entomologist, to be more numerous in Illinois this year than for many years, and he reports the root-web worm to be doing an immense amount of damage in certain sections of the State.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Temescal Grange.

Last Saturday a rather quiet but exceedingly interesting meeting was held. The Picnic Committee favored the invitation of Bro. A. T. Perkins to hold the Fourth of July picnic in a delightful canyon on the grounds of Mr. H. G. Pratt, Grand Recorder of the A. O. U. W., about a mile and a half above the Hermitage at the end of the Fruitvale railroad from East Oakland. It is a charming place, with deep shade and a pearly stream of water. Those without teams should take the train which leaves Oakland at 9:35 for East Oakland, then street cars to the Hermitage, from whence Bro. Perkins will convey with teams all the ladies and children, if not all of the brethren, to the grounds, which are some distance further up the foothills than Bro. Perkins' fruit farm. Without being any set affair, we have no doubt the occasion will be a very pleasant one. The residence of Joaquin Miller, the "Poet of the Sierras," is near by ex-Patron Pratt's home.

Sister Kinney, formerly resident manager of the Girls' Union, of San Francisco, made some very interesting remarks during the meeting, which were well supported in discussion by other members. Sister Kinney intends going East in a few days, and will visit the interstate picnic in Pennsylvania. We trust she will correspond for the PRESS, as we have no doubt her report of travels and observations will be interesting, encouraging and instructive to our readers. She is an able writer as well as good worker.

San Jose Grange.

On the 9th inst. San Jose Grange again discussed the question of co-operation. Mr. Cressy led the remarks of the members, and maintained his position that it was not so much capital that was needed as unity among the farmers. In support of his statements he cited his experience in establishing the Grangers' banks in Modesto and San Francisco, which had proven to be successful, the stock of the former being now worth 100 per cent premium on the par value.

Messrs. Wingate and Coates followed, stating that the issue rested mainly on capital when a co-operative store was being formed; also that such institutions in the past had not been as successful as was expected.

Mr. Hamilton agreed with Mr. Cressy that the great need was unity, and that if they hoped for any success in the future they must combine.

Messrs. Sanders and Dunn thought that the Grange store would prove of doubtful value, whereas a system of co-operative selling, by which they might unite their efforts in the disposal of their products, would be both of immediate value and of undoubted success. What the farmers need is to combine in a selling enterprise, not a buying one, as the commodities which they produced were much more valuable than what they consumed.

The sentiment of the majority of the Grange seemed to be that the Grange store was not what they wanted, but that the same principle which it was proposed to embody in it could more advantageously be applied to an enterprise for the selling of their fruit, and it is probable that something may be done in that direction.

The Farmers' Congress in Oregon.

A large number of farmers met in the Opera-house at Salem, Oregon, Tuesday, June 12th, in response to a call issued by John Osborn, Vice-President of the National Farmers' Congress, and other citizens, for the purpose of organizing a State Farmers' Congress. Mr. Osborn, having briefly explained the objects of the call, was made temporary chairman and John Minto, temporary secretary.

As stated in the Portland Farmer, the aim is to secure for the farmers, by their thorough organization all over the State, that influence in and over legislative proceedings which is now exercised by other classes and interests through paid lobbyists. In other words, they propose to organize a voting power to demand justice from lawmakers, and put that power against the unlawful agencies which now manage to control legislation against the rights and interests of producers. It is an organization to secure to farmers, irrespective of party, such legislation as the interests of all producers demand. Neither is it a rival nor opponent of the Grange, but as an open organization, all farmers, whether members of the Grange or not, can meet without the restriction of closed doors to discuss their needs and interests.

A permanent organization was effected by

electing the following officers: M. Wilkins of Lane county, president; John Osborn, of Marion county, vice-president; Joseph Gaston of Multnomah county, secretary and treasurer.

Charles Miller, John Minto and John Ferguson were appointed a committee to draft constitution and by-laws and report at the next regular meeting, which was set for Wednesday evening, Sept. 19th, at directors' room, State Fair grounds.

Many had left the hall when a call for membership was made, but the following gentlemen present handed in their names: Lane county—M. Wilkins; Benton—John M. Osborn; Linn—W. R. Kirk, J. J. Graham; Marion—John Osborn, John Minto, Charles Miller, F. M. Rice, J. B. Henninger, W. H. Smith, R. W. Carey, Oliver Jory, J. C. Howd, R. Lee, J. W. Pate, D. M. Morris, S. A. Clarke, Wm. Syphert; Polk—A. W. Lucas, G. T. Waite, John Ferguson, Ben. Windsor, C. Glenn, Cass Riggs, J. B. Stump, James K. Sears; Yamhill—M. Underwood; Clackamas—J. T. Apperson; Multnomah—Joseph Gaston.

If the P. of H. were not already in the field, and in such favor with the agriculturists this new organization might have a better chance for life and usefulness.

OLEOMARGARINE IN MASSACHUSETTS.—Massachusetts farmers demand that oleomargarine shall not be colored like butter. They are willing that oleo should be manufactured and sold for what it is, provided it is not colored yellow, so that it cannot be sold as butter. The lower branch of the Legislature enacted a bill to this effect by an overwhelming vote, but after a prolonged contest it was finally defeated in the Senate by a tie vote. The farmers propose to "knife" at the polls every one of the twenty Senators who went back on them. It is believed that none of these politicians will ever receive a single farmer's vote in future for any office whatsoever. Included in the recreants are both prominent republicans and prominent democrats. This proves what we have so often stated, that both parties cater to farmers merely to get their votes, and after securing them let the farmers' interests suffer. But the farmers are getting their eyes teeth cut, and are learning that, like other people and classes, they must vote for their own interests and not simply for party. This is absolutely the only effectual way for farmers to secure their just deserts. It is politics, but it is genuine politics, not partisan hypocrisy. It is the kind of politics that farmers must go into throughout the country. This broad principle applies to farmers everywhere.—*Farm and Home.*

THE FIGHT AGAINST SLICKENS.—On the 12th inst. an injunction was granted by Judge Keyser, in the Superior Court, against the Butte Creek Mining Company *et al.* The plaintiff is the Leland Stanford, Jr., University, and the complaint alleges that Butte creek has been so filled up by mining debris that the lands of the plaintiff are overflowed and damaged. That to protect the land levees were constructed and channels dug at a cost of \$80,000; that 4500 acres of the lands were converted into valueless willow, cotton and tule swamps, and yielding no income at all. This has now been reclaimed and is under cultivation, but if mining is allowed to continue it will again be rendered worthless. Plaintiff alleges that 700 inches of water is used in washing down the banks and that fully 45 per cent of the earth so washed is carried into the valley by Butte Creek.—*Oroville Register.*

ALHAMBRA GRANGE HARVEST FEAST.—The Harvest Feast at Martinez on the 16th inst. was largely attended. Worthy Master Overhiser was one of the guests. The people of that vicinity are generally much interested in these events and an invitation to be present is always appreciated by the recipient. We hope to receive an account of this meeting at an early date.

Bro. V. W. Still of Auburn, W. M. of Magnolia Grange, lately went with his wife on a visit to Grass Valley. They attended the Grange there, found it apparently prospering, and saw the fourth degree conferred on a brother and a sister. He has also spent several days, this month, canvassing for recruits in that part of the country, finds most of the people favorable and expects soon to organize a Grange at Union schoolhouse and another at Rough and Ready.

THE "TRUSTS."—The *Sutter Farmer* reprints the verses which appeared in our "Home Circle" June 9th, remarking: "Latter-day 'trusts' is one of the most unpoetic subjects imaginable, and yet we found a very good poem in one of our exchanges, which we have transferred to our first page. These trusts are only another name for the most heartless monopolies ever organized; hence any lick at them is in order."

The National Lecturer says: "More new Granges have been organized already this year than in all of last year, and last year had more than in any one year for ten years before."

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

FOR SHADE AND ORNAMENT.—Livermore Herald: The Northern Addition is beginning to look like a young forest. The locusts of last season's planting are making a wonderful growth this summer, while those put out this spring in both the Northern and Southern Additions are getting a good start. Fully 8000 shade trees were planted in the two additions during the two seasons. Many of the mulberry trees set out for shade and ornamental purposes last season are now fruiting. The fruit resembles the blackberry, and is very palatable. The alanthus trees planted this spring, almost without exception, have not so far made a vigorous growth. Those which are growing well are developing into very handsome trees, resembling the date palm in appearance.

VINE LIFTING DEVICE.—P. C. Waltenbaugh of this valley has a contrivance for lifting fallen vines while cultivating or clod-mashing. Two narrow strips of steel are joined at one end, so as to form an angle of about 30 degrees. The other end of one of the strips is then fastened to the cultivator, clod-masher or weed-cutter, in such a way as to allow the lower strip to extend forward from one corner and just escape the ground. The joined ends thus slip under the fallen bunches, and the upper strip gently lifts them, while the cultivator or other implement passes under. Two are used—one on each side. In this way it is possible to stir the soil of our vineyard, and break the capillary tubes throughout the season.

Butte.

OROVILLE HORTICULTURAL SOCIETY.—Register, June 14: Quite a number of fruit-growers were present on Saturday afternoon, and a temporary organization was effected by electing John C. Gray, chairman, and S. S. Boynton, secretary. Messrs. Arents, Rogers and Jackson were appointed a committee to prepare a constitution and by-laws and report at the next meeting, which will be held on Saturday of this week.

THOROUGH CULTIVATION.—Doubtless the most thoroughly cultivated orchard in Butte county is the "Villa Verona," about two miles south of Oroville. The plows and cultivators are almost constantly at work, and the ground is kept as mellow as the soil of a vegetable garden. No sooner has the land been irrigated than teams are set to work, the ditches plowed up, the ground leveled and harrowed, and when water is needed again a new line of ditches is run in a different direction and these in turn are plowed up as soon as used. The trees are making a magnificent growth under the thorough care they are receiving.

Contra Costa.

SEEDLING APRICOTS.—Antioch Ledger, June 9: Mark Walton has placed upon our table a box of apricots, seedlings of the Royal, that are certainly a superior fruit, of fine flavor, good size, and a delightful fragrance. Mr. Walton states that this seedling is ten days earlier than the Royal and that it is equal to that variety in every other particular.

Humboldt.

FROM BEAR RIVER.—Eureka Standard, June 14: Our old-time friend S. W. Morrison, one of the prosperous farmers on Bear river, says there is no room for doubt that the late rains were of immense benefit, especially to late grain crops. To the dairying interest it was also a godsend. The hay crop in his portion of the county will be larger than for some years past. The outlook for butter-makers is favorable. This condition of things will apply generally to the region lying west of Esl river.

Lake.

GLANDERS.—Cor. Clear Lake Press: A petition is in circulation and being signed by every one to check the glanders. Several animals are affected and two have died. The location of the epizootic is 15 miles from Upper Lake.

Los Angeles.

ANAHEIM ITEMS.—Gazette, June 14: Nine swarms of bees, two owls and several hundred pounds of honey have been taken from the Episcopal Church, where bees have lodged for many years. . . . Leonard Parker has a piece of corn that has gone on a boom for itself. It was planted May 7th, been irrigated only once, and now stands from seven to eight feet high and has not been manured. The patch speaks well for the corn-producing soil and climate. Corn can be safely planted to ripen by August 10th, which has been done in this section often.

ORANGE-GROWERS.—At the meeting of orange growers at Kroeger's hall yesterday afternoon by-laws were read and adopted. The following officers were elected: F. A. Korn, president; Theo. Rimpau, vice-president; E. Browning, secretary. Adjourned to Saturday, June 23d.

Mendocino.

A HORTICULTURAL SUCCESS.—Mendocino Beacon, June 9: We accepted an invitation from M. J. Byrnes one day this week and visited his place on the Little Lake road. During the past five years Mr. Byrnes has cleared up about four acres of ground and planted fruit trees of every description, all of which are in a flourishing condition. At present his raspberries are ripening, and from a patch of about a

quarter of an acre he expects to pick a ton of them. We went through the patch ourselves, and have no doubt his figures will be realized. The berries are mostly of the red varieties. Gooseberries and currants seem to do quite as well. He has also some mulberry trees, which are looking fine. Besides these he has set out quite a large orchard. In it are to be found apple, peach, pear, plum, orange, lemon, walnut, cherry, prune, olive and quince trees, all in a healthy condition and doing nicely.

Merced.

ARTESIAN WELL.—Merced Argus: We paid a visit to the artesian well and raisin vineyard on the Galland tract on Sunday for the first time since the completion of the well and planting out of the vineyard, orchard and nurseries, and were surprised at the great change made in so short a time, showing what nature, aided by the judicious application of water and proper cultivation, is capable of producing from the naturally dry soils of this valley. This important enterprise is managed by Messrs. Diew & Richards. The well is a nine-inch bore at the top tapering to six inches at the depth of 600 feet, and its capacity may be imagined from the fact that it has irrigated 30 acres of garden, vineyard and orchard since the well was finished some four or five weeks ago. Most of the vines are rooted and have made satisfactory growth, and the cuttings also promise a fair stand, though the water was late in reaching them.

Modoc.

IRRIGATING CANAL.—Alturas New Era, June 13: E. Lauer of Alturas having acquired about 1200 acres of sagebrush land a few miles north-east of town, in order to make it productive and suitable for settlers found it necessary to bring to it sufficient water for irrigation and conceived the idea of taking water from the river. It was found that the ditch would have to be about 10 miles long, and built high up on the rim rock in order to bring it to the land mentioned at a height sufficient to irrigate it. The surveyed route was in places through immense beds of iron rock and lava. Nothing daunted, Lauer put his men to work, and now, at the end of six months, the work is nearly finished. Last Monday, we visited the scene of operations. We were hardly prepared to see a canal 7 feet wide on top, 5½ feet wide on the bottom and averaging about 3 feet deep, built on a steep mountain-side and in places blasted from solid rock. The work reflects credit on the engineering skill of A. A. Smith, and on Mr. Lauer, whose energy and money made the canal a possibility. Commencing at the upper end of Sigourney's place, the canal follows around the hills, having a fall of from an eighth to half an inch to the rod the entire distance, and ends at a point on the hillside about 2½ miles northeast of town. In places long trestles are built over deep and rocky ravines, while in others immense rocks have been blown out and dirt filled in. The canal will easily carry 2000 inches of water. The work of ditching and reclamation will cost about \$10,000, and when completed the projector can consider himself, in our opinion, about \$30,000 richer.

STOCK-RAISERS.—We learn from the Argus that the annual meeting of the Northern California Stock-Raisers' Association took place at Adin June 4th. Wm. H. Mitchell, John M. Triplets and Albert Gallatin were elected members of the Association. Art. 1, Sec. 2 of the by laws were amended to read as follows: "The officers of this association shall consist of a president, two vice-presidents, secretary, treasurer and an executive committee of 15, of which the president and vice-presidents shall be ex-officio members. Three members of the executive committee shall constitute a quorum for the transaction of business." Officers for the ensuing year are as follows: T. A. Roseberry, Pres.; P. J. Goumaz and J. Thad Jones, V. P.; Geo. H. Knight, Treas.; G. Lapoint, Sec. Executive Committee—Jacob McKisick, Chas. Cramer, J. C. York, L. Knudson, W. Brockman, W. H. Nelson, Elmer Van Loan, T. Renner, J. M. Walker, Geo. Guthrie, W. K. Estill and H. S. Brown. The annual meetings are to be held at Adin, and the quarterly meetings as follows: On the first Saturday of September at Susanville, Lassen Co.; on the first Saturday of December at Fall City, Shasta Co., and on the first Saturday of March, 1889, at Alturas.

Nevada.

PEACHES.—Grass Valley Tidings, June 16: Not over a mile and a half above the Idaho mine Jos. Roberts has a large peach and apple orchard, set out in 1886. Although so young, almost every peach tree this year bears from four to eight large and all but ripe specimens of its fruit. None of the trees are three feet in height and they average less than an inch in diameter. In and around Grass Valley the peach crop this year will be very heavy.

San Diego.

HOT SPRINGS INCUBATION.—Elsinore News: Bundy Bros. have been experimenting in the chicken business, and quite successfully. The blacksmith-shop, owned by them, is situated in the midst of a number of hot sulphur springs. A dozen eggs had been placed in an empty oil can in one of the springs with a continuous temperature of 102°. Three weeks had not elapsed before three little chicks made their appearance, and the shells of all the others but one were cracked. The chicks are apparently healthy. This novel and interesting experiment has proven beyond a doubt the superiority of the waters over the many patent incubators for hatching chickens. No attention is re-

quired, no lamps to be filled and trimmed, nothing to do but put the eggs in and let the heat from the waters hatch them.

PALM VALLEY'S PROGRESS.—*Riverside Press*, June 16: The orange trees in the large 160-acre Navel orchard put out by the company are doing finely, and some of the twigs have grown 28 inches since the trees were planted two months ago. Watermelons and cantaloupes have been ripening since the first of June, but there are few vines planted this year on account of the ditch being completed at so late a date, and as the vines are not protected by fence, the rabbits and coyotes are taking a share of the crop. Muscat grapes are now full grown, and vines from last year's cuttings are filled with grapes and will yield in some instances as much as 50 pounds of grapes to the vine. The water supply in White river is still very abundant, furnishing a ditch full of water and twice as much running to waste as goes into the ditch. The mercury ranges from 90° to 107°. The highest point reached this year has been 113° in the shade.

Placer.

LIVELY LOADING.—*Record-Union*: Saturday evening, at 7 o'clock, the Newcastle Fruit Co. began loading a car of fruit for the East, and at 9 P. M. the cars were loaded, braced, locked and ready for the overland train, which took it out of Newcastle before 10 o'clock P. M. The accomplishment of this work in two hours illustrates the splendid facilities of the place for handling fruit, and it can be pronounced very fast work, as there were 1000 packages of peaches, apricots and plums in the carload. Every box had to be properly placed and securely fastened, so as to stand the jolting of the long overland trip.

Sacramento.

PROPER WHEAT.—*Record-Union*, June 16: There was shown at this office yesterday some Proper wheat from the ranch of George S. Patney on the Cosumnes, which may challenge comparison with any locality. The stalks stand between 6½ and 7 feet high, with stools containing from 6 to 10 heads, which measure from 3½ to 4 inches in length. Crops between this city and Galt show that Sacramento county need not fear a dry winter, as the wheat is fully up to the average in spite of the light rainfall.

San Bernardino.

SAN BERNARDINO CANNERY.—*Index*, June 16: The work of preparing the buildings of the canning company has been about completed, and the company are now ready to proceed with the drying process. A carload of trays were received yesterday and will be followed in a few days by several carloads more. Everything indicates that they will handle a large amount of fruit. Messrs. Burt and Drew, two of the prominent directors, are now in San Francisco, and as soon as they return, perhaps before the canning machinery will be ordered and the business of manufacturing the cans and canning the fruit will then be commenced.

San Joaquin.

FROM THREE GRAINS OF WHEAT.—*Stockton Independent*, June 15: Mrs. G. W. Melone of the Women's Co-operative Bureau yesterday received three bunches of White Australian wheat, grown on the farm of James March, three miles north of this city. These bunches are the product of three grains of wheat, and each bunch has from 80 to 95 well-developed stalks, the heads filled with plump kernels. The samples will be added to the San Joaquin county exhibit in the rooms of the State Board of Trade, S. F.

HARVESTING BEGUN.—*Lockeford Cor. Independent*, June 15: The harvest has commenced in this neighborhood. Lockeford still keeps up her reputation as a grain district. The wheat is above the average, and the farmers are well pleased. Other portions of the county have to brag, but we have the cold facts and the "62½ pounds to the bushel" wheat to show for this place.

San Luis Obispo.

A SPECIMEN TRAMP.—*S. L. O. Tribune*, June 16: A rancher was in town Tuesday looking for help, and stated that he failed to find it at any reasonable price, although he noticed, walking in the streets, a number of laboring men, one of whom approached him and asked for 25 cents with which to secure a meal. Our rancher refused to give up the required coin, and asked the man to go out to the ranch and work for \$40 a month and board, but this the hungry man scornfully refused to do, stating that he preferred to tramp rather than work for such low wages.

Santa Barbara.

PAMPAS PLUMES.—*Santa Barbara Herald*: The indications are that this year's yield will be up to the average, and at the prices offered in advance we should say that those having pampas are happy. A few years ago the crop sold at five cents, and one rancher in the Goleta valley informed us that his profit from a half acre amounted to over \$800. Over \$20,000 will be realized by growers in the Goleta valley this season; while in the vicinity of this city quite as much more will go into the pockets of the fortunate owners of plumes.

MUSTARD AND WORMS.—*Lompoc Record*, June 16: We think we may safely announce that the mustard crop with us will be without profit. There are a few crops that seem to be but little injured by the worms, but the great majority are ruinously affected. Mr. McKay,

the mustard expert, after a thorough examination in different localities, does not hesitate to say that, as a crop, mustard this year is a failure. The worms stay just long enough to do their work well, then go into the ground from two to three inches and come out in a few days changed into millers; these will go to work depositing larvæ. The effect of this year's experience may be to divert our farmers from mustard-growing for a time, not being willing to hazard too much lest this worm become a fixture with us. They are no new thing, however, for more or less of them have been found every year. They are most numerous and destructive in dry seasons, hence the damage to crops this year. . . . The beans are affected only where they are contiguous to mustard from which the worms migrate during the night. This shows that they do not come out of the soil, but must have been produced from larvæ deposited in the mustard. . . . The same kind of worm has been at work in the lower portion of the county on various kinds of crops, flowers and shrubbery, and has done much damage to the potato.

Santa Clara.

ONE WEEK'S CHERRIES.—*San Jose Mercury*, June 16: During the past week the amount of cherries shipped from this city to various points in California, Oregon, Nevada and East, through Wells, Fargo & Co.'s Express, was 80,013 pounds. Of this amount Los Angeles received 27,260 pounds; Pasadena, 5852; San Diego, 7726; Riverside, 2655; Colton, 4618; El Paso, 4311; Ogden, 21,661.

Sonoma.

HOPS.—*Santa Rosa Republican*, June 14: Reports from various sections where hops grow most abundantly, indicate that the yield will be larger than the average. The vines are not yet in bloom, but their vigorous growth and the absence of any of the pests which sometimes blight the prospects are encouraging to hopmen. Captain Guy E. Grosse, who has large interests in growing them, and has observed the present conditions of the crop, says it will be unusually large. The cut worm has made its appearance in but one yard so far as his knowledge extends.

ENGLISH CUCUMBERS.—*Sonoma Index-Tribune*: John Breen, florist and gardener, left on our table this week a couple of English cucumbers, grown on the Buena Vista farm one mile east of town. These cucumbers are a cross between Dickson & Robinson's improved Telegraph and Baldwin's Perfection, and are known as Breen's favorite. They are from 12 to 15 inches long, entirely free from seeds and have a reputation of being superior to any others grown.

Stanislaus.

WHEAT.—*Modesto News*, June 13: The first wheat of the season in Stanislaus county was yesterday put into the Grange Company's warehouse at Salida and to-day the first carload was sent to the city. The wheat was harvested on the ranch of J. G. Elmore, near Salida. The crop yield in this vicinity in most instances will exceed the expectations of the farmers in quality and quantity. . . . We were shown on Saturday a sample of summer-fallowed wheat of the Chili variety, grown on the ranch of F. C. Davis, near Salida, which excels any sample we have seen this season. It has an extraordinary length of head, and contains five kernels to the mesh. The kernels are full and plump. Mr. Davis has 80 acres of this wheat.

IRRIGATION MEETING CALLED.—Arrangements are being made for a monster irrigation meeting at Hill's Ferry on Saturday, June 23d. It is proposed to take the necessary steps toward building a canal from Firebaugh's to Tracy. The proposed canal is to go much nearer the Coast Range mountains than the Miller & Lux ditch. If carried to a successful conclusion, a large tract of land will be opened up.

Tulare.

WATERMELONS IN MARKET.—*Visalia Times*, June 14: Ripe watermelons, from the ranch of Frank Phillips, five miles northeast of this city, were placed on the market yesterday. Mr. P. says he has had ripe melons for at least two weeks.

JACK-RABBITS DIGGING POTATOES.—A gentleman who has a large crop of potatoes growing on his ranch in the Huron country has been forced to gather them early on account of the jack-rabbits having made an onslaught on them. The rabbits visit the patch in the night-time, dig the potatoes out and eat them.

EVERGREEN MILLET.—A sample of "Johnson grass" nine feet and seven inches in height grown without irrigation was brought to town yesterday by I. H. Thomas. It was grown on the Spencer ranch, one mile east of this city, and was only six weeks in obtaining its extraordinary growth from the root. For a year or two Mr. Thomas has been trying to kill it out, as he has no use for it as a fodder supply, but it has been a ceaseless and apparently a fruitless task, as it springs up anew from the least particle of root left in the ground. It is not a desirable grass for stock, and no one now pretends to raise it in these parts.

Yolo.

A NOVEL HEADER.—*Capay Cor. Democrat*, June 13: F. B. Chandler yesterday brought his header and crew from his Elmira ranch to his farm near here. Mr. Chandler's outfit is rather extraordinary. The header is a 12 foot out, with flanges on the wheels and a brake, and is propelled by six large horses; three wagons

with axles eight feet long, large beds, brake and flanges on the wheels, each wagon being drawn by four horses, all abreast, with check-lines so arranged as to draw on each alike. With this outfit Mr. Chandler can cut the deepest and most difficult lands.

COIN IN CUCUMBERS.—*Winters Express*, June 16: J. E. Sackett informed us the other day that he has sold this year \$1200 worth of cucumbers from five acres of land, planted between trees, which is \$240 an acre. He also says that at the present rate they are selling, he will more than double the above figures before the season closes.

Yuba.

NEW BARLEY.—*Marysville Appeal*, June 15: Several loads of newly-harvested barley have been received at the Buckeye mills from Brittan Bros. and William Stafford's farms in Sutter county. It is all of good quality and yielding well to the acre.

OREGON.

CROP NOTES.—*Oregonian*, June 15: R. Scott of Scott's mills says there will be fine crops in Marion county this season. Along the foothills the wheat and oats are the finest he ever saw, a little better than on the prairies, but hay is best about Salem. . . . F. H. Page has lately returned from Southern Oregon, and reports that the young peach orchards growing there are producing very abundantly this year. He estimates the total yield will load 60 cars or 600 tons. There are no large orchards in that vicinity of old growth, and those in bearing have been planted only a few years. Ashland and Rogue River valley have but begun to grow fruit, and this will be the first year when their products will be of sufficient quantity to influence the market. While Rogue river will, no doubt, lead in peach growing, there are peach orchards in this valley and on the Lower Columbia that are producing well this year, besides those grown at Hood river and The Dalles, and above there on the river. This is an unusually productive year for this fruit and from all parts of this valley and Western Oregon generally, the word is that peaches will be fine and abundant. The curl leaf prevails on some varieties but most cultivated kinds are bearing well and will find a quick demand.

NEVADA.

HAY CROP SHORT.—*Reno Gazette*, June 18: From reports from reliable sources in every section, the *Gazette* is in a position to state that not one-half of an average crop of hay will be harvested this season. This means that the farmers of the Truckee Meadows will be called upon to feed nine-tenths of the beef cattle which will be shipped to market from Nevada and the country tributary to it. In the eastern part of the State the hay crop is almost a total failure. In the country south of Carson, notably in the usually prolific valleys of that section, but half an average crop will reward the labors of the tillers of the soil; in Long valley the same state of affairs exist, and in the great feeding valleys of the north—Sierra and Honey Lake valleys—a deplorable lack of hay is announced. This means a high price for hay, and a corresponding increase in the price of beef. Further, the beef supply will be short and but few head of grass-fed cattle will find their way to market. In truth, the fact that heavy losses of cattle will ensue if the winter proves severe stares the cattlemen in the face.

CARE IN THE USE OF INSECTICIDES.—J. S. Finch of Haywards reports injury to cherry and apricot trees from the use of the Ongerth wash. He applied it in February, reducing its strength by four parts of water to one of the wash, and yet it killed his cherries and apricots. He also found it injurious to prune and nectarine trees. On pear trees it did no injury. In the University orchard it was used full strength on pears and apples, with no harm to the trees and with death to the scale. It has also been used ten to one on the plum aphid without injury to the trees, but when used stronger it has dropped part of the leaves and fruit. The lesson with this and with other insecticides should be to use it with care and not to infer that what will be good for one kind of tree will be good on another.

NEWSPAPERS BETTER THAN PAMPHLETS.—At a meeting of the Fresno Board of Trade, a few days ago, Mr. M. J. Church said he was convinced that distributing pamphlets, in hopes of attracting land-buyers and settlers is folly. He took pamphlets with him on his recent Eastern trip, but found that people did not believe what they read in them—that they wanted reliable newspapers. "If we are going to make ourselves known, we must do it through truthful articles in responsible periodicals. Pamphlets don't amount to anything."

POSTOFFICES have been established at Dehesia, San Diego county, with M. J. Gregg, postmaster, and at Steel Swamp, Modoc county, with J. Frank Reynolds as postmaster.

A FRIENDLY WORD.—Mr. H. of Santa Barbara, renewing his subscription, adds: "We all appreciate the *RURAL* and cannot do without it."

The school census of San Francisco was so badly taken this year that the work is to be done all over again.

News in Brief.

THE Hotel Del Monte has been formally opened.

GENERAL SHERIDAN continues to improve in health.

THE Northern Pacific train was robbed near Billings, M. T., on Sunday last.

A DESTRUCTIVE fire occurred at Kingman, A. T., on Sunday. Loss, \$50,000.

ACTIVE preparations are going on for celebrating the 4th of July in this city.

TELEGRAPHIC communication has been established between San Diego and Ensenada.

SAVAGE & SON, foundry men, who have been in business here for many years, have assigned.

MERCED citizens held a meeting Saturday to discuss and devise means to improve the county.

A REHEARING of the case of Goldenson, who murdered Mamie Kelly, has been denied by the Supreme Court.

SCRAP TIN from the canneries is now used in the Portland Reduction Works as a flux for desulphurizing ore.

GENERAL LOGAN's remains will soon be transferred to the grounds of the Soldier's Home near Washington.

THE grand concert to be given at the pavilion during the Educational Convention promises to be a great success.

THE St. Nicholas hotel, San Diego, was burned Saturday night. There are suspicions that it was set on fire.

THE United States Local Inspectors decide that the San Pablo was lost by strong currents, and exonerate the ship's officers.

A CAR with 600 lobsters is on the way to the Pacific Coast from Massachusetts. About 200,000 eggs for hatching at San Francisco accompany the lobsters.

THE lawyer who persuaded Teller Scott to steal \$150,000 of the Manhattan bank funds has been sentenced to nine years and eight months in the State Prison.

THE Santa Paula *Chronicle* reports the shipment of 184 tank cars of oil from that place during the month of May, the largest shipment ever made in one month.

SELMA, Fresno county, which recently had a bad fire, experienced a second one on Monday. The half of the block left from the previous fire was burned by the second one.

THE building of the Cogswell Polytechnic college, Twenty-sixth and Folsom streets, is almost completed. The first session for the reception of students will be held on Monday, Aug. 6th.

THE Denver Cattle Trust has closed a contract with the French Government to supply the French army with 150,000 head of beef cattle annually. The cattle will be all range stock.

THE deer in the northern part of Sonoma county have never been known to be so scarce as they are this year. Campers and "sportsmen" are killing the females, and even the young fawns.

ED. PATTERSON a well-known rancher near Gridley, Butte county, was on Monday caught in the main wheel of a combined harvester and crushed to death. He was a single man and aged about 40 years.

An Ingenious Device for Picking Prunes.

George A. Fleming, a San Jose fruit drier, has given the *Mercury* some interesting facts concerning prunes and prune culture. He gathers the fruit from the trees in the following manner: "A neighbor, once in a discourse lately, remarked to me that foreign prunes, picked and handled at a price far below what we had to pay, would eventually kill the prune industry in California. I jokingly replied that I intended to make a machine to pick prunes, and what commenced in jest ended in fact. The idea took hold of me, and before I got home I had conceived an arrangement by which prune-picking would be wonderfully facilitated. It is a simple machine, consisting merely of a very low platform wagon with a sideboard on one side. Boxes are arranged on the platform, and to the opposite side of the sideboard two sheets of cloth 8x16 are attached. The wagon is drawn by one horse, and when opposite a tree two men, one for each sheet, spread them under, one each side the trunk of a tree, and standing on the outer ends of the cloths gently shake the tree. When all the prunes ripe enough have fallen the two men gather up the sheets, commencing at the outer extremity, and dump the prunes over into the boxes, with sheets on top. The advantages of this simple contrivance are many. For instance, last year in a large orchard near Saratoga, where the trees bore only a half crop, a boy and a man averaged from four to five tons per day, costing us actually 75 cents per ton for picking. It saves handling the boxes, which are heavy, so often, and keeps out the dust which necessarily gets shifted into the prunes when handled in the old way." Prunes in all cases are dipped in lie and thoroughly rinsed. This is done to crack the skin, which hastens the process of drying in one-half the time, otherwise in many cases the fruit would ferment. All fruits are liable to injury by the "sweating" process if not perfectly cured. Thoroughly matured fruit without irrigation produces a better quality of dried than irrigated fruit. Irrigated fruit shrinks more and contains less sugar than non-irrigated fruit. All fruits shrink more or less by the process of evaporation. It takes about three pounds of fresh prunes to make one pound of dried.



Incomplete.

[Written for the RURAL PRESS by MAUDE S. PRASLER.]

I think the words that are sweetest,
Are the words that are never said;
And the moments that pass the fleetest,
Are the last ones with the dead.

The thoughts that are truest and bravest,
Are the ones that are never expressed;
And the tender love thou cravest,
For fear is never confessed.

I know the friends that are truest,
Are those we know in our dreams;
Though we feel the one who is newest,
Is very near what he seems.

The rose that is sweetest and fairest,
Is the bud that is killed by the frost;
And the love that is dearest and rarest,
Is the true love we just have lost.

Grammatical Errors in Writing.

[Written for the RURAL PRESS by CHAS. P. NETTLETON.]

The spelling in the following article, except in the quotations, is in accordance with the joint rules of the Philological Society of England and the American Philological Association:

To the observing reader it is surprising how many grammatical mistakes are made, even by experienced writers, in the use of the English language. Many, perhaps most, are the result of carelessness, the writers really knowing better, but not paying sufficient attention to the revision of their manuscript to avoid flagrant blunders.

One rule many persons need to remember is that a writer should so construct his sentences that the meaning he wishes to convey not only may be clear to the reader but shall be clear, for our language so often allows the words in a sentence to be transposed that without great care two meanings will be conveyed, confusing and annoying the reader. Whatever other faults the best writers may be found guilty of, for it is said mistakes exist in the writings of even the masters, this of confusing the reader by two or more possible meanings in one sentence is never found, while with persons unaccustomed to composition it is perhaps the most common of all blunders.

We all make mistakes of some kind, and because I point out certain ones I notice, think not I consider myself free from all mistakes.

For a short time I have been taking note of the blunders, inconsistencies, etc., I have come across in reading, and am surprised to see people so apparently ignorant of syntax or so careless that frequently they say what they do not mean. Newspaper advertisements present a fruitful field for the critic, since many advertisements are written by persons unaccustomed to "writing for the press." Take this I clip from a daily paper:

"Just arrived at our barn from Nevada, corner Turk and Steiner streets 25 fine horses, for single and double harness from 4 to 6 years old."

Strange horses, indeed, that should be adapted for none other harness than that "from 4 to 6 years old." Yet that is what is said and that only, no matter what was intended.

It is said that in sum parts of France, for the purpose of guaranteeing pure milk cows are driven thru the streets from house to house and milked as customers require, but a certain advertiser wants his cow even more handy than that, to judge from the following advertisement actually printed in a San Francisco daily:

"Wanted—By the 1st of April a house of six rooms and bath with place for a cow, in East Oakland," etc. Perhaps the man was lazy and wanted the cow in the dining-room.

In an advertisement of the Michigan Central Railroad, the following specimen of pathos is found:

"So long as the waters of that mighty river thunder down to the awful depths below, so long as the rush and roar, the surge and foam and prismatic spray of nature's cataract masterpiece remain, to delight and awe the human soul, thousands and tens of thousands of beauty-lovers and grandeur-worshippers will journey over the only railroad from which it can be seen."

Sum things are inexcusable, and one of these is for an author on such a subject as grammar to lay down rules and then violate them himself. Prof. Townsend has done this in his "Art of Speech." In Vol. 1, page 112, he gives this rule:

"The pronouns former, latter, either and neither signify one of two persons or things; therefore they should not be used for the first, the last, any one or no one, because these last signify one of three or more persons or things," and explains it by an illustration. Yet on page 124 the author himself, at the beginning of a chapter, uses the following language:

"After discussing the general laws of speech, together with its diction, idiom, syntax and grammatical rules, there still remains a quality which neither one of these topics covers; that quality is denominated style."

In the above quotation neither one refers to

the four topics he has just mentioned, and thus he clearly violates a rule written by himself.

Prof. William Cleaver Wilkinson can write well, but when, as in his "Greek and Latin Courses in English," he writes for as he supposes the ignorant because common people, he is unnecessarily strained and awkward, not to say ungrammatical. I have heard this remark by several fellow-Chautauqua students, but as he violates few rules except those of clearness and brevity, I find it hard to seize on anything that most people would call poor writing. However, take these two examples, as illustrative of what he is capable of doing. Speaking of Plato's philosophy he says: "Swedenborg, with his system of correspondences derives no doubt, from Plato. 'That is, to express in clearer terms what Prof. Wilkinson says, Swedenborg does not derive doubt from Plato; what he meant to say can readily be seen by placing commas after 'derives' and 'doubt' in the sentence he used."

The other example is this sentence from the preface to his "College Latin Course in English:

"The preparation of this series of books has happened to coincide in time with vivid public discussion, experiencing its irregularly periodic revival among us, of the question whether after all classical culture ought not to be regarded now as a thing that has had its day."

We may without involving a contradiction of terms say of things that they are nearly perfect and half full, but when a man says that something is "irregularly periodic" he evidently needs allopathic doses of rhetoric.

A writer in a certain weekly paper, speaking of God, says: "He who gives can only take." She could have easily transferred the words to say what she meant, which clearly is, He only who gives can take.

A doctor of divinity known to me writes as follows, in a religious paper, reporting what Mr. Sam Jones said of himself:

"In college he first learned the pleasure of sinful ways, and he kept on the downward road until he was admitted to the bar! That is bad; I had not thought as lawyers are so very depraved a class as we must necessarily infer from the wording of that sentence. But then, it seems that even a lawyer can change his ways."

Ignorance of the fact that as years pass words change in spelling led a newspaper correspondent to once say: "A common characteristic of early New England graveyard literature is bad spelling."

Dr. J. H. Gladstone of England speaks of a student who said in reply to a question in his examination paper: "Chaucer was a writer who deserved some merit, but unfortunately he could not spell." The correspondent spoken of above, if not that student, was at least capable of calling Chaucer the poorest speller of all acknowledged authors.

In the course of an editorial in the New York Independent, the writer once used the following mysterious language:

"We must sail under the guidance of this star, or our thoughts will be stranded on a shoreless sea."

A certain magazine speaking of "The Mystery of Edwin Drood," says: "This story was to have been published in 12 monthly parts, but one-third of the work only had been issued at the time of Mr. Dickens' death. One-third more was left in manuscript, the remaining half of the story was left to be written." It would have been better to say: The remainder of the story was left to be written, and not leave us under the necessity of supposing that story would have consisted of three and one-half thirds!

Thomas Dunn English, speaking of a certain person, was once guilty of the following slip: "He don't know friend from foe." The English writer James Payn, considered one of the greatest of living novelists, and editor of a London paper, said recently in the New York Independent: "There was once a newspaper called, I think, the Imperialist, published in America, which advocated the monarchical principle for a year or two, but it was not a financial success. The phrases 'advocated the monarchical principle for a year or two,' and advocated for a year or two the monarchical principle, convey two entirely different meanings, and it would have been just as easy for him to say what he meant."

In the report of a certain divorce case the following astonishing statement was made:

Mr. and Mrs. Emmons, the lawyer said, were married on August 8, 1876, in London, in the presence of only a few relatives. As far as known then, and as far as is yet known, Mrs. Emmons never had a relative.

A certain very bad poetical license that almost destroys the effect of the poem is found in "Curfew Shall not Ring To-night." The girl pleads with the sexton and he hears her, although the poem says she spoke in a whisper:

"And her lips grew strangely white
As she breathed the husky whisper,
Curfew must not ring to-night."

But when she at the risk of her life keeps the bell from ringing, we are told that the sexton is deaf and, unconscious that the bell is not ringing, pulls the rope the usual length of time. These are the words:

"And the sexton at the bell-rope, old and deaf
Heard not the bell,
But he thought it still was ringing."

That girl must have had a fog-horn voice to make the sexton hear a whisper when he was

too deaf to know whether the bell he was trying to ring was ringing or not.

The following is from that little manual entitled "Don't," which has had such a sale at home and abroad:

"Don't play the accordion, the violin, the piano, or any other musical instrument to excess. Your neighbors have nerves, and need at times a little relief from inflictions of the kind. If you could manage not to play on musical instruments at all, unless you are an accomplished performer, so much the better."

That last sentence is even worse than to tell a person not to go into the water till he can swim.

Sum of these instances of poor and careless writing that I have quoted may be thought by some person not bad enough to need mention, but we must remember it is our duty to not only keep the English language from becoming more corrupt than it is, but also to purify it from existing evils. Not a quotation have I given but is either inelegant or grammatically wrong. It is incumbent on each person who writes to be careful and precise in the use of words and to specially note that not more meanings than one are conveyed. Yet care must be taken that the very endeavor to make sentences clear do not in itself so confuse the mind of the reader that he is doubtful as to the meaning intended.

Accustom your mind to seeing all around a sentence at a glance, to transposing words while reading, in order to see if they can be better arranged, and to placing yourself in the position of hearer and criticizing from his standpoint. Read your writings to a friend or aloud for your own benefit, for many times the ear will discover mistakes that the eye alone would not. Great pains should be taken to avoid errors, for, depend on it, blemishes detract much from the force as well as from the beauty of writing.

Haywards, Cal.

The Cook Wagon—A Query.

[Written for the RURAL PRESS by I. H.]

Who was the originator of the Cook wagon? In the long hot summer days whenever I see a thrashing outfit passing along the dusty road, the odd-looking narrow house on wheels bringing up the rear, I mentally make my obeisance to him as a public benefactor.

One has only to look back a few years to realize the great revolution worked by this very simple invention.

"The threshers are coming!" The very words sent a thrill of dismay through the household, and not without cause. Eighteen or 20 men coming into any house to be provided with three meals a day would rather upset the orderly routine of daily life; but when they came, as they often did to a farm where there was one woman with her hands already full of work and two or three little children clinging to her skirts, the visitation became a nightmare.

I have heard it argued by those who had never tried it that after all it was no great matter to cook for a few additional men for a short time. But I think no woman who has gone through the experience will agree with them.

Nowhere in the world do people work longer hours than in California during the thrashing season. With the earliest dawn breakfast must be ready for the men, which means, of course, that the cook should be up and at work an hour earlier. What if she were a woman not over-strong and with a baby at her breast? All day long she must be in and out of the hot kitchen baking and boiling, washing dishes, pots and kettles; and not until darkness compelled the workers in the field to stop would they come in to supper. Afterward when the men were all locked in slumber she was still at work over the endless dishwashing far into the hours when she should have been at rest. Is this an overdrawn picture? Possibly it is, for California men are notably kind and helpful—all honor to them for it! Few of them would refuse to assist in the home at such a time, and doubtless they generally lifted part of the burdens on their own shoulders. Nevertheless the chief care and the largest share of the work necessarily fell to the house-wife, and it was to her an era to be marked in letters of gold when the cook-wagon made its first appearance.

Now the long procession comes lumbering in at the gate, the huge engine, the separator, the derrick, and in the farm-house there is no disturbance of the family life. All goes on as usual. Perhaps there are visitors from the city, and after breakfast the ladies put on their hats and go over to look at the great machine eating up the immense stacks and pouring out the golden grain. It is an interest, a pleasure and a recreation, the time that used to be an anxiety and a dread. Over there under the shade of an oak tree stands the cook-wagon which has wrought the change. Look in and you will generally find everything neat and orderly, while a Chinaman in a white apron is busily peeling potatoes and baking bread. Every inch of space is utilized, the seats for the men are boxes, and on raising the lid you see where the stores are kept and the cups and plates packed away while the house is in transit.

The invention was one of those bright ideas which might have come to any one, so simple, so sensible and so reasonable it now appears. But to whom did it first come and who deserves the credit?

Some Spanish Proverbs.

[Written for the RURAL PRESS by D. M. D.]

America's great philosopher-poet, Emerson, once said that "Proverbs, like the sacred books of each nation are the sanctuary of the intuitions." Webster's simpler definition is, "A statement without qualification, explanation, or contradiction."

The classic age of Spanish literature belongs to the sixteenth and seventeenth centuries, but the collection of sentences and apophthegms in that language dates back to the last half of the thirteenth century. The *Proverbios Buenos* may be regarded as one of the successes of Mediaeval literary effort. The morals and the theology of the times were wrapped in these short sayings. They belong especially to the Castilian division of Spain, and they were given to the world at a period when wars in Sicily and Sardinia and court luxuries and jealousies might be most unfavorable to literature. We have had pen-pictures of the country from which these proverbs came, its beautiful Bay of Cadiz, its rocky Gibraltar, and its inland forests of oak, cork and olive trees have been well described. We have its middle age history, full of contentions with neighboring powers, and squabbles about princely successions. We have the account of independent principalities, relations with Rome, and the Crusades. We have its modern history, of factions and States united by the marriage of Ferdinand and Isabella, followed by the reigns of later kings and more recent wars—a story which belongs more to Europe than to Spain.

Every people in every age has had its bits of truth done up in short sentences. We have the Proverbs of Solomon, which is the book of Wisdom. They were given for the instruction of the people, and consist of two-line maxims of a miscellaneous character, vigorously expressed, and very practical and pointed. They are rich in comparisons and relate to the life and conduct of mankind.

The forcible, sententious sayings of a people are handed down from generation to generation in these proverbs. The observations and intuitions of uncultured races are thus preserved. There are many proverbs which are common to all languages; but we select such as are best known in the Spanish. That tongue abounds in proverbial forms of expression.

"*Contra fortuna no vale arte ninguna.*" There is no fence against fortune—a comfortable conclusion.

"*La mentira tiene las piernas cortas.*" A lie has short legs—so it cannot travel fast or far, and may soon be overtaken by the truth.

"*Mucho en el suelo poco en el cielo.*" Much on earth, little in heaven—a statement which is discouraging to the few and comforting to the multitude, if it may be read backward.

"*No ay cerradura si es de oro la ganza.*" There is no lock but a golden key will open it—a sentiment which reflects upon human integrity.

"*Un cabello hace sombra.*" The least hair makes a shadow—a short sermon on the importance of trifles.

"*Viento y ventura poco dura.*" Wind and good luck are seldom lasting—therefore we will take our successes modestly.

"*Calzo qui muchas libras leventa ninguna mala.*" He who undertakes many things at once seldom succeeds in any—practical counsel on the subject of losing oneself in a sea of little efforts.

"*Juego de manos es de villanos.*" Rude play is used only by low-bred people—and with this plea in favor of politeness we close this list of Spanish proverbs.

OUR TEARS.—Tears in redundancy may strikingly express emotion, but that is a mental side, which is but a small part of their function, as we shall see. The principal element in the composition of a tear is, as may be readily supposed, water. The other elements are salt, soda, phosphate of lime, phosphate of soda and mucus, each in small proportions. A dried tear seen through a microscope of good average power presents a peculiar appearance. The water, after evaporation, leaves behind it the saline ingredients which amalgamate and form themselves into lengthened cross lines and look like a number of minute fish bones. The tears are secreted in what are called the "lacrimal glands," situated over the eyeball and underneath the lid. The contents of these glands are carried along and under the inner surface of the eyelids by means of six or seven very fine channels, and are discharged a little above the cartilage supporting the lid. The discharge of tears from the lacrimal gland is not occasional and accidental, as is commonly supposed, but continuous. It goes on both day and night—though less abundantly at night—through the "conduits," and spreads equally over the surface of the pupil, in virtue of the incessant movement of the lids. After serving its purpose the flow is carried away by two little drains situated in that corner of each eye nearest the nose—into which they run—and called the "lacrimal points." The usefulness of this quiet flow of tears to both men and beasts, is manifest. There is such an immense quantity of fine dust floating in the air and constantly getting in the eyes, that, but for it, they would soon become choked. Very little is requisite to keep the ball free, and when some obnoxious substance—smoke, an insect, or the like, that affects the nerves—does make its way in, an increased flow is poured out to sweep it away.—*Ex.*

"Dare to Be True."

I was calling upon an acquaintance not long since, a lady of refinement and culture, whose society is always a pleasure to me. We had not been talking long when the servants ushered another caller into the parlor, a richly-dressed, elegant-looking woman, and one who had traveled extensively. She was a delightful conversationalist, being a person of large observation and knowing the world like a book. There was a vivacity about her that was charming, a brilliancy of wit that continually sparkled in her chat, and a vivid power of description that was enchanting.

But with all these excellent powers she was an inveterate gossip, and one whom, while she smiled upon you, you felt was regarding you with a critical eye, and if the slightest occasion offered would be ready to attack you with unenvied tongue. As she entered, my hostess rose to greet her with a pleasant smile, saying, as she extended her hand: "My dear Mrs. B., I am delighted to see you. Have a seat. Take this easy chair and tell us about your trip abroad." Mrs. B. did as desired, and, leaning back at her ease, commenced the story of her trip, intersecting here and there some caustic remarks about various people whom she had met and had been thrown into contact with. She tore them to pieces, metaphorically speaking, until, as my friend said, there were only a few shreds of character left, and those had such a touch of doubt about them, you felt that she might as flush of shame stole over her face. "Mother will be very careful never to do so again."

"Susan," she said, as the little one left the apartment. "I realize what a dreadful example I have set my child this morning. How could I ever rebuke her for falsehood now? This fashionable lying—yes, that is what it is, and I may as well call it by its right name—is just as culpable as any other form of falsehood, but strange to say, I never considered it before."

"I am afraid that many mothers, conscientious, Christian mothers, teach their children to be untruthful and insincere in just this way," I replied. "These little students of human character are alert and quick to see such shortcomings, and to pattern after them, well have destroyed those with the rest."

When she left us we both of us naturally breathed more freely, and my hostess exclaimed: "Susan, that woman is a terror to me. I dread to see her coming. I always feel as if she were here to murder me and lay me out on the dissecting table. I've no doubt but she will go away and pick me all to pieces, just as she did the people whom she described to us this morning." "Why, mamma!" exclaimed her young daughter, "you told her you were delighted to see her." "Well, mamma should not have said that, dear," replied the mother, with a pained look upon her face. "Was it a lie, mamma?" persisted this little student of human nature. "I am afraid that it was a thoughtless untruth, my child," replied the parent, while a quick, hot for what mother does, they think cannot be so very wrong."

"Of this I am sure," said my friend, humbly. "I shall be very careful hereafter to guard against any repetition of this fault. 'Was it a lie, mamma?' It seems as if those words would ring in my ears forever." And the tears of sorrow filled that mother's eyes, for she was a good, true woman, abhorring whatever is false and deceitful. Will not other mothers regard this?—*Susan Sunshine in Los Angeles Times.*

THE CIVILIZING POTATO.—The potato has been a great civilizer. It commenced its work 300 years ago as a native American, and it has gone all over the world, doing its work in all lands quietly yet steadily, and in two ways—first, by being so cheap and abundant that everybody came to like it; next, by failing until everybody missed it and went to hunting all over the world for it. In 1880 this country produced about 170,000,000 bushels of potatoes. To-day we are importing potatoes from Germany, Belgium, Scotland, England, Ireland. Our potato crop failed in a great degree last year because of drought in the West and long continuous rains in the East. Hence, we are importing potatoes and paying a duty of 15 cents per bushel on them besides freight. If there been a total failure of the potato crop we would have ransacked the world for them, for now we must have them however high they come. This shows how the potato has become a civilizer. We are short 20,000,000 of bushels, and must call on the world to make up that shortage. Generally, England is short on potatoes. Luckily this year she and all Europe have a surplus. Next year the situation may be reversed. Ireland ran out of potatoes in 1847, and commenced starving until we supplied her. Six years ago we had a great failure, and Ireland supplied us. But the year before that England and Ireland had to import potatoes. So the potato appears and disappears, to teach the world mutual dependence. The original potato still flourishes in an island off Chili, a gnarled and diminutive tribe, the ancestor of a long and prolific and beneficent line.—*Exchange.*

A WOMAN'S INVENTION.—Vanderbilt paid Miss May Tillinghast \$30,000 for inventing a new kind of tapestry hanging for his house.

YOUNG HOLKS' COLUMN.

Mowed In.

"Capital, Al. Now for your story, Fred."

Four members of the Bicycle Tourists' Club were relating their adventures of the past season, and the one last addressed, a tall handsome athlete, laughed slightly as he knocked the ashes from his cigar before replying.

"A droller adventure than mine, boys, never happened. There's the pathetic, the ludicrous, the tragic, the sentimental, all combined in this story of mine, and it's true, every word of it. It happened, let me see, just six weeks ago to-day."

"I went with Clark and Anderson, you know, up to Bethlehem, from there to the White mountains, then to Lancaster."

"Now just before starting mother said to me coaxingly:

"If you go as far as Lancaster, do not forget that Janet Harding, the only cousin I have in the world, lives in the next town."

"All right," I replied. "Janet Harding lives in the next town to Lancaster. I'll remember."

"Janet Harding unmarried would have been bad enough, but with a husband, two giddy girls and an overgrown boy of seventeen, could I stand it? Mother thought I could, and mother rules our house."

"When we started on our bicycle trip to Dixville Notch I planned to see the Hardings, bowl leisurely up to the door, introduce myself to Mrs. H., joke with the girls and then proceed; but man proposes, etc."

"As luck would have it, my bicycle broke down, and I had to leave it at the Falls, a little village five miles from Lancaster, for repairs. Clark and Anderson went on without me to North Stratford, where I was to meet them by train, and I proceeded on foot to the Harding farm, some two miles from the Falls."

"The farm, a smooth interval dotted with fields of ripening grain, and the large verandah house and great roomy barns clustering about it, but not too near, all bespoke plenty, comfort and hospitality."

"Hospitality, did I say? Well, I shan't take it back, although I found the door locked and not a living thing in sight except an old white hen. Mark the exception, for that hen plays an important part in my adventure."

"I noticed her, and in particular marked the proud, complacent step, the conceited 'car-car' she uttered, as she looked at me knowingly from the corner of her eye. Little did I think—but no matter. You will see by-and-by the golden thread that binds all the points together."

"Well, here we were, the white hen and I, but Janet Harding was not, nor the girls, nor the boy, nor Mr. Harding."

"I decided to go to the barn and lie down on the hay—the new-mown hay—and await their coming."

"For me to think is to act. A few minutes later I had climbed to the mow and ensconced myself under a brace in the corner where the afternoon sun glistened through a long crack, making slanting dust-beams across my breast."

"I made a few verses as I lay on the fragrant hay, but I didn't poetize long. I fell asleep, and I dreamed, and my dreams grew thicker and blacker and heavier, until at last I dreamed that Janet Harding and her whole family were seated on my stomach, and oh, the pressure! I groaned and waked myself up, but I wasn't much better off then, for Egyptian darkness reigned about me, except for the crack where the light still sifted through."

"Where was I? What was the matter? I couldn't think, the horrible pressure was so maddening. All about, around, above, was packed piles of oats, not shelled oats, you know, but oats before they are thrashed, on the stock, or whatever you call it. While I was asleep I had been mowed in, and that's all there was to it, except that I couldn't move hand or foot. Two or three loads must have been thrown on top of me, trod down, and clinched, so to speak."

"Well, I tumbled around a bit and got my hands free and poked the grain away from my face a little. It was in a corner, as I told you, under a brace, and this gave me a chance for my life, that and the crack which gave me a breath of air in the hot, stifling place. I was just as effectually immured as were the monks in olden times when they were walled up in their living tombs, for no amount of strength served to lift the burden a particle."

"By and by something fluttered at my feet and rose up and cackled."

"It was the white hen."

"I knew her and she knew me, but bless you, she didn't want anything of me nor my company. I could see that. But she couldn't get out? Oh! but couldn't she? She cocked her head impudently to one side, stepped daintily to a tiny aperture about half as big as her head, and I saw at a glance that she meant business. The less sense the more instinct; I saw that the creature would get out somehow."

"Why not use her for a carrier pigeon and thus establish communication with the outside world? I shouldn't care to die here and be pitched out to the cattle by forkfuls, or put through a threshing machine, although I might deserve such treatment, and I couldn't get out myself."

"I tore a leaf from my notebook and wrote something like this:

"Come to my rescue. I am buried fathoms deep in oats, northwest corner of the barn, just opposite the house. My blue necktie is thrust through the crack. Perhaps you can see it. I am mowed in. Your relative,

"FRED INGERSOLL."

"I tied the note to the hen securely with a portion of the necktie, the rest fluttered from the barn, and Biddy stepped forth, 'one foot up, the other foot down,' carefully, conscientiously, as a hen does, and by and by a faint rustling spoke hopefully of her progress to my waiting heart. Meanwhile I was a prey to anxious thoughts."

"Suppose she should never reach the light, but perish in her perilous journey, become hemmed in and unable to go any farther; suppose she should lose the letter in her passage—but a triumphant cackle assured me that the white hen had reached the barn floor, and blessed sight! a little later I saw her through the crack walking proudly away from the door with the letter plainly in view."

"Just then two young ladies drove into the yard. Pretty? Well, I guess so. You don't often see handsomer girls than Janet Harding's. One was dressed in seal brown and the other in navy blue."

"Do look at that hen!" cried Seal Brown. "I do believe it's a billet-doux from your William. If it is, now, I'll clap my hands hard, just so, and I'll say, 'Billy, do send me one, too.'"

"One, two; and it will take two to satisfy you?" said Navy Blue, laughing at her sister's saucy face."

"They lured the hen toward them with a handful of corn. Seal Brown swooped down, and loosened the letter and read it."

"I saw all this through a crack in the barn, and heard them make merry over the distress of their city cousin."

"Well, to make a long story short, the girls dug me out, for the men were in the meadow after more oats. It seems that they were in a great hurry to get at the oats, and the hired man mowed away. Probably the first forkful covered me, and that was doubtless put on without looking. Nobody knew just how it came about. When I came to view I did the best and the only thing I could do. I laughed and the girls laughed. It was a ludicrous introduction to the family, but it served its turn. I found the girls no less charming than pretty; Harry, a fine lad, home from college; Mrs. Harding, a lady in every sense of the word, and Mr. Harding, shrewd, corpulent and good-natured; and that is all."

GOOD HEALTH.

THEATER AIR.—An interesting account has been given by Cosmo J. Burton of the amount of carbonic acid and organic matter in the Theater Royal and the Royal Lyceum theater in Edinburgh. At the time of the experiments the theaters were by no means full, nevertheless the temperature was from 10 to 15 degrees above that record immediately before the houses were opened, while carbonic acid was multiplied from three to five times. Mr. Burton remarks that the vitiation of the air proceeds with extraordinary rapidity at first, but the rate of change soon decreases till toward the end of the performance the air becomes little or no worse, and, indeed, in a few instances, it appeared to slightly improve. The air of the gallery was worse than that of any other part of the house; the amphitheater, dress circle and pit did not come in the same order as to degree of impurity in the experiments, but the pit was always worse than the dress circle. Headache and vertigo are produced when the amount of carbonic acid in the air of respiration is not more than from 15 to 30 volumes per 10,000. The facts as to all theaters ought to be known, for the public had much better lose an evening's enjoyment than submit to the enforced inhalation of a polluted atmosphere for a number of hours.—*London Lancet.*

THE BANANA AS FOOD.—According to one authority, one pound of bananas contains more nutriment than three pounds of meal or as many pounds of potatoes, while as food it is in every sense superior to the wheat bread. Although it grows spontaneously throughout the tropics, when cultivated its yield is prodigious, for an acre of ground planted with bananas will return as much food material as 33 acres of wheat, or over 100 acres of potatoes. It is not generally understood that bananas—fried, baked or roasted—are very appetizing, and that, sliced and placed in a dish with alternate slices of orange, they make a most delicious desert. In the West Indies, where they are grown in profusion, as elsewhere, they are much esteemed as food, and being easily obtained nearly all the year round, they are justly looked upon as being a great dainty by the natives."

THE USES OF THE EUCALYPTUS TREE.—The uses to which the products of the eucalyptus trees are put are annually becoming more varied and valuable. A very good cement is now made from the gum of the trees and is being introduced in the local market. From the leaves and tender branches there is compressed a substance used largely by engineers in steam boilers for the prevention of scale. Then, too, the nuts or acorns are, by powerful pressure,

made to give forth an oil of which many medicinal preparations are made, chiefly liniments, salves and lotions. A local manufacturer of rustic furniture for arbors, summer houses and ornamental grounds says he finds the limbs of the old trees and the trunks of the young ones especially adapted to the purposes of his trade."

REDUCING FLESH.—Every physician has his own idea as to the best method of reducing flesh. Bismark, once very stout, reduced himself according to the Schwenninger method. The plan consisted essentially in dry diet. He was not allowed to drink anything during meals nor for two hours and a half afterward. At the expiration of that time he was allowed to drink freely. By that time his food was digested and the fluids were readily absorbed and carried to the kidneys, and served to wash out the system. Schwenninger also restricts the patient to one food at a time in case of extreme obesity. For instance, if he should take meat he could have nothing but meat. If he took bread nothing but bread, and so with potatoes or anything he chose."

NOT AN INFALLIBLE TEST.—A "test for sewer gas" has been going the rounds of the papers which deserves notice on account of its misleading character. It consists in exposing to the suspected atmosphere pieces of paper moistened with a solution of sugar of lead, which are supposed to indicate the presence of the dreaded gas by turning black. This test is entirely unreliable, and only indicates the presence of sulphureted hydrogen, a very disagreeable gas, but not especially dangerous in small quantities. There is no definite test for sewer gas known, and it is much better to avoid all possibility of its presence than to depend upon any chemical tests for indications of its existence."

DOMESTIC ECONOMY.

WAFFLES.—One pint of sweet milk, two eggs, one pint of flour, one-half cup of butter, one teaspoonful of cream of tartar, one-half teaspoonful of soda, a pinch of salt. Bake in waffle-irons, well heated."

GINGER POUND CAKE.—Three cups of flour, one cup of molasses, one cup of buttermilk, one-half cup of butter, two teaspoonfuls of saleratus, two teaspoonfuls of cinnamon, one teaspoonful of ginger and two eggs."

LEMON JELLY.—Made the same way as orange jelly, only using six lemons and the rind of one; serve quite white, and add a gill of Buccellas or any very pale wine. Calt's foot stock, reduced and clarified, may be used instead of the isinglass or gelatine."

SEYMOUR PUDDING.—One-half cup of molasses, half-cup of milk, half-cup of raisins, seeded and cut in halves, half-cup of currants, half-cup of suet, powdered, half-teaspoonful of soda, one egg, 1½ cups of graham flour, spice and salt to taste. Boil or steam for 2½ hours."

GRAHAM BREAD.—Take twice as much graham as white flour, two teacupfuls of the former and one each of white flour, sour milk and molasses, or less of the latter if not liked pretty sweet, and one teaspoonful each of salt and soda. Mix well; pour the mixture into a buttered pan and steam two hours."

TAPIOCA FRUIT PUDDING.—One-half cupful of tapioca soaked over night in one quart of cold water. In the morning cover the bottom of a baking-dish with any kind of fruit, either canned or fresh, sweeten the tapioca with one-half cupful of sugar, add a little salt and nutmeg, pour over the fruit and bake one hour. Serve with sauce."

SALLY LUNN.—Sift into a pan 1½ pounds of flour; make a hole in the middle and put in two ounces of butter melted in one pint of warm, not hot, milk, one tablespoonful of salt, three well-beaten eggs and half a teacupful of yeast. Beat well, pour into well-greased tin pans, and set aside to raise. When light, bake in a moderate oven."

WELSH RAREBIT.—Half a pound of English cheese, three egg well beaten, one scant cup of fine bread crumbs, three tablespoonfuls of butter, melted, two teaspoonfuls of made mustard, one saltspoonful of salt; mix all well together and beat to a smooth paste; have ready some slices of toasted bread, from which the crust has been pared; spread them thickly with the mixture, and set them upon the upper grating of the oven until they are slightly browned. Serve at once."

FRICASSEE OF FOWL.—Divide a fowl into eight pieces, wash it well, put the pieces into a stewpan and cover with boiling water, and one teaspoonful of prepared seasoning; let it boil 20 minutes, pass the stock through a sieve into a basin; take out the pieces of fowl, trim nicely, then put into another stewpan two ounces of butter, with which mix a good spoonful of flour; moisten with stock, put in the pieces of fowl, stir occasionally until boiling, skim well, add 20 button onions; let simmer until the onions are tender, then add a gill of cream, with which you have mixed the yolks of two eggs, stir in quickly over the fire, but do not let it boil; take out the pieces, dress in pyramid on dish and serve. If you require to warm up the remainder of the above, put it into a basin which stand in a stewpan in which you have placed a little warm water; put the cover over and let it boil gently, by which means the contents of the basin will get warm without turning the sauce; when hot dish up and serve."



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W. B. EWER.

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State Fair of 1888—Sacramento.
Engines—D. J. Lynch, Kelseyville, Cal.
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Stencils—S. F. Stencil and Brand Works.

See Advertising Columns.

The Week.

Correspondents seem to lack words in which to describe the peculiarity of the season, and it is no wonder, for so unusual a thing as frequent and really wet showers in June are not within easy memory. The coldest January and the wettest June in the same year show that the weather machine has slipped a cog in some part of its gearing. At some points an inch of rain has fallen, in others but a fraction. There has been considerable injury to hay and grain, and farmers have caught themselves timidly watching the clouds, as they used to do back East. It is an old theory that rains follow aerial concussion like that produced by the cannonading in a heavy battle. This gives the clue to the course of recent weather. It is the result of the boom. Corroborative testimony is found in the unusually wet seasons in Southern California during the last few years.

In spite of the rain there is now the greatest activity in the hay-field, the grain-field, the orchard and in the packing-houses and canneries. Farmers have little time even for politics, which can generally be crowded into any rush. But politics will keep.

STOCKTON is likely to have a cannery before long, as a party of enterprising men have taken the project in hand and are pushing it energetically.

Architecture and the Age.

Man shares the building instinct with the beaver, ant and bird. It exists in him as the power of language, to be developed according to his needs and circumstances. It found its first expression in erecting a shelter from the elements. The rain and hot sunbeams soon suggested the need of a roof. Hence the Indian has his oval-shaped hut, the Esquimaux his ice-dome. Architecture dates from the day that man began to decorate his shelter in order to gratify some vague craving for beauty and proportion.

The story of a man's social life is written in his buildings: their style, elaboration and use mark his advance in civilization. They are the symbols of his progress in law, politics, learning and religion. The architecture of Egypt consists of temples and tombs. Greece has left us only temples, and Rome, in addition, has left us baths, amphitheatres, aqueducts, triumphal arches and columns. The marriage of the classic and Teutonic races produced the Gothic cathedral, that marvel of reeded piers, skyey arches, buttresses and pinnacles, mullioned window and stained glass. Here the painter emblazoned the legends of saints and angels on the piers. Here the emperors and warriors hung along the vaulted arches the trophies and symbols of war. Here pilgrims from the Holy Land, and poor, pale women, brought their votive offerings. Here the people fled, as to an ark of safety, from the plague and devil. But all over the ages of Egypt, Greece, Rome and Gothic art there is not a free school, a public library, nor an asylum for the insane, the blind, the deaf and dumb, nor an altar to human love and brotherhood. The fraternal sentiment flickered in a few esoteric clubs, like a feeble lamp in a stormy night. It grew as a wayside flower, as a tender plant under the eaves of a glacier.

Ruskin somewhere says: "In main we require from buildings, as from men, two kinds of goodness; first, the doing their duty well; then that they be graceful and pleasing in doing it, which last is itself another form of duty." This is why we are more attached to the cozy and elegant cottage than to the garish, ribboned and embroidered structures of the French Renaissance. Its use is apparent, and it is such a charming use. As we look at it we feel almost sure it shelters love, marriage and children. It has such a sociable look. Every stone and bit of timber, even the gate says, "Come in, you are welcome." Ruskin finds much to stir his wrath in the fact that so much modern architecture does not symbolize use. We have stores with turrets and bannerets, like college buildings; insane asylums, that look like Moorish alcazars or European palaces, and churches that sport the airs of the tivolio or casino. It may have been a joke that a Michigan woman saw an engine-house with a steeple, and innocently asked a gentleman, "What church is that?" and on reading, "Deluge, No. 3," replied, "I guess it must be the Third Baptist." Still it would not be safe to judge our churches, theatres and city halls from appearances.

THE CANNERIES.—The Yuba City and Marysville canneries are reported by the *Appeal* as in full action. The former has 175 hands and the latter 200. The product up to June 15th was 70,000 cans and 150 tons of apricots respectively. The Yuba City cannery is to make a run on cherries shipped by A. B. Woodworth of San Leandro, Alameda county. It speaks well for the concern to draw fruit from such a distance, but Alameda Co. ought to do her own canning.

LABOR AND FRUIT.—At the regular June meeting of the State Horticultural Society, "labor supply and labor-saving appliances in fruit handling" will be under discussion. The meeting will be held at 1 P. M. on Friday, June 29th, at the State Board of Horticulture rooms, 220 Sutter street, S. F. All interested are invited to attend.

THE last spike celebration at Santa Rosa took place on Wednesday.

It Should be Done.

Baltimore has just set a good example. Public opinion culminated at a grand mass meeting, demanding the enforcement of the law against dives and deadfalls, and the worst places have been compelled to close their doors. We hope this example may prove catching. San Francisco badly needs a boom in the direction of decency. We have enough law to make the city clean, and a safe place for our children to go to school in, were it enforced. Stop the music and dancing and vi'e dramatic slush wherever liquor is sold, and the dive would quickly vanish. Such dens live and thrive by beating tom-toms, tooting horns and thumping pianos. This attracts a crowd to loaf and guzzle, for lewd women to entice and toughs to drug and rob. This sort of orgy is steadily going on, and that, too, on our most prominent streets.

But if musicals and theatricals must be tolerated, then close the bar and stop the sale of intoxicants upon the premises. This would make the game hardly worth the candle to the keepers. It is only when the two run together that pimps and panderers thrive. The young, the weak and the unwary are inveigled into these dens to hear a song or witness a dance. Soon the bar attracts them; they become the victims of the vile compounds, and are easily picked and fleeced by the degraded habits of the place. This state of things could be broken up, or greatly modified, if the people demanded it. It is not preaching against scarlet sins we want; it is the authorities, armed with mop and scrub-brush and vigorous muscle.

The Australian Scale Destroyers.

Prof. C. V. Riley has written a letter to D. W. Coquillett of Los Angeles, concerning the search in Australia for the parasites which are thought to be instrumental in holding in check the cottony cushion scale. The following is an extract from Prof. Riley's letter:

It strikes me that there is not the slightest occasion for hurry in this matter, as the proper time to start will not be before the 1st of September at the earliest. I think that there is no doubt but that the commissioner will be in such position as to authorize the sending of a Government agent, whose expenses will be paid either by the Department of State or by this department. Moreover, there is still some chance for a special clause authorizing this department to send an agent on this special trip. At all events, as our Appropriation bill has passed the House, I feel that I have power, and probably means, to do something and shall decide early in July. The probabilities are that I shall send either yourself or Koesele, and perhaps follow myself a little later.

We are glad that there is a chance of Prof. Riley's taking a personal share in this investigation, and it seems to us that it would be a fitting thing if our Government entomologist could have opportunity to observe the Australian fauna in its habitat. He has accomplished very much by his visits to Europe, and should have the fullest opportunities for observation elsewhere.

Concerning the proper time for the work of the Australian mission, Prof. Riley writes:

The Australian spring corresponds with our fall, and the proper time to study the parasites in their active life will be our late fall or winter months. I do not mean by this that it will be the best time to ship them to California, because the probabilities are that the best time for that will be the season corresponding to our spring, in which event I should be in favor of arranging with some local agent there, or, perhaps, leaving one of the party there until spring.

Prof. Riley naturally takes a deep interest in this matter, as it was at his request that the parasites were sent to Mr. Klee and Mr. Coquillett. He welcomes, however, the fullest co-operation of California fruit-growers, and would be glad to have Mr. Crow participate in the enterprise, as has been suggested. The whole enterprise has a promising look, and we trust nothing may occur to prevent its advancement.

COMMENCEMENT EXERCISES of the University of California, and the transfer of the Lick Observatory to the Board of Regents, will take place at Berkeley on Wednesday, June 27th, beginning at 11 o'clock A. M.

Sugar or Wheat.

Wheat-growers who are nearly always cogitating as to what they can do with their lands to secure larger returns per acre will be interested in an article which we print upon another page in which sugar is brought forward as a substitute for the great cereal. This home-grown sugar is an old subject, and it does not make progress at all commensurate with the amount of talk there is given to it, and yet if we are to judge by reports there is continually being some progress made toward a satisfactory demonstration. We refer to sorghum as a sugar source. This plant seems to have demonstrated its value clearly enough to secure the investment of money by Boston capitalists to carry on sugar-making at two points in Kansas. They have joined interests with Prof. Swenson, who recently was arraigned before Congress for securing a patent upon a process which he devised while in the Government employ in the Department of Agriculture. This process, they claim, enables the company to extract "three times the amount of sugar that has heretofore been possible, and the sugar of improved quality." Instead of crushing the cane between the rollers, the juice is taken out by the method known as diffusion, warm water being used. In the work of crystallization the losses arising from inversion are avoided by the Swenson process. The company has two factories in Kansas and they have a capacity for 500 tons of sorghum canes per day. The cane is grown by farmers and sold to the company.

The State of Kansas allows a premium of two cents per pound on sugar from sorghum, the bounty remaining in force for four years. This bounty is the Government favor which the writer, on another page, believes should be extended by the general Government to all sugar-producers. Other claims by the Boston Company are as follows:

Growers can raise from 10 to 20 tons of sorghum cane to the acre, and their crop can be perfected in 90 or 100 days.

The average outcome of a ton is 102 pounds of first sugar, testing 94 to 98, and in addition 15 gallons of molasses. The by-products form an important addition to the main profits. In fact, these were sufficient to meet all the operating cost last year.

The by-products are the seed which is used as grain and for glucose leaves and cane chips for cattle food.

The sorghum crop has special advantage over the sugarcane as produced in Louisiana in that it is three months earlier, thus gaining much in the time of reaching the market.

We give these statements as we read them without vouching for their accuracy. Our wheat lands are being reduced by the advance of fruit growing, and the many irrigation enterprises now being developed will turn much more into alfalfa farms with their complement of live-stock, etc. But still we have a great deal of land in this State, which we can grow as good sugar plants on as the world can show whenever the capitalist is ready to come in and offer a fair price for the crops.

Beware of Sparks!

Warnings against the small beginnings of field fires multiply. On Tuesday of last week sparks from a locomotive set the grass ablaze in three places at Sargents, Santa Clara county. A stiff breeze was blowing and the flames quickly devoured 17 acres of dry grass; but a band of resolute fighters put out the fire before it could reach the 250 tons of hay stacked in the field adjoining.

On Friday some boys were shooting on John Boggs' ranch near Princeton, Colusa county, and the discharge of their gun started a fire which destroyed 150 acres of wheat averaging, it was estimated, 25 bushels to the acre.

And on Tuesday of this week some small boys at play in the Presidio of San Francisco set some grass burning "just for fun," and thus started a conflagration which overran 900 acres and required the calling out of all the troops and some hours of battling with wet sacks to save the trees and buildings adjacent. The dense smoke from the burning brush filled the western part of the city and harbor and aroused for a while a deal of apprehension.

Such monitions at the opening of the dry season should be heeded and taken to heart. Look out for the small beginnings. "Beware of sparks!"

MINNESOTA is threatened with a grasshopper scourge.

A Packing and Drying Establishment in Vaca Valley.

As the fruit-packing and drying season is now opening, it is timely to give a sketch of one of the best outfits for drying and packing in Vaca valley, which is owned by L. W. Buck & Son. In our account of a visit to the valley we alluded to the establishment. There are two buildings separated by a narrow passage-way. The two-story structure is 36x44 feet. The lower story is used for packing, paring and cutting fruit for drying, etc., and the upper for box nailing, storage of dried fruit, etc.

The one-story building with the veranda is the drier, 16x36 feet with a brick furnace bisecting it. The drier is Blowers' patent. Of the cost and manner of construction Mr. Frank H. Buck gave the following account, in answer to questions, at the Sacramento fruit-growers' convention.

The building cost me, as I have it now, with the capacity of four tons of green fruit, \$850, with the brickwork, furnaces and the building,

found of great value in hastening the drying and thus increasing the capacity of the machine. The fan is run by a portable engine outside the building. Mr. Buck found out last year, however, that he must utilize the sun as well as the drier to use up the vast amount of fruit which he had ripening. He handled an average of 20 tons a day of green fruit during July and August last year and employed 80 to 85 hands, and his busy season with different fruits extended from June 15th to October 1st. The orchard area under ownership of L. W. Buck & Son comprises 250 acres. It reaches across the floor of the valley from side to side and up and down the valley rather more than a mile.

This year preparations are all ready for re-enactment of the busy scenes of the summer of 1887. Much more extended facilities for sun-drying have been secured.

Our picture gives a hint of several matters pertaining to the fruit interest in Vaca Valley. In the background is a large group of the "hands" employed in cutting fruit. Men

The Dairy in Oregon.

Dairying in our sister State seems to be scoring some progressive points. At the meeting of the State Dairymen's Association an address was delivered by President Paulsen, in which he says that during the last three months several new creameries have been started, but there is room for more. Mr. Paulsen advocates the increase of the cheese product for he says: "In my opinion cheese factories would in all localities not very close to the city market, return a far better profit than butter factories; the price of cheese being relatively far higher in this State than butter, especially in the summer months. Cheese also has the further advantage that it can be marketed in bulk, whereas butter has to be sold fresh to realize best prices. There is no reason why we should not produce all cheese needed in our home market, but so far only a very small portion of the cheese used here is manufactured by our own people."

The Oregon dairymen evidently do not be-

The Way it Works.

A few years ago there were representative Australians inspecting this country to discover what our local facilities were for the production of fine wools. They liked to sell wool in the United States, but they found it a hardship to grow it in Australia, and pay the tariff on it before reaching American markets. They naturally thought they could do better by moving here and growing wool in a country which afforded such good markets. We have not heard whether they acted on this natural conclusion or not, but the idea was a good one. People who like American markets should bring their capital here and build up our local producing industries. Removing the tariff would allow them to have their capital and labor in Australia, and we should have the privilege of shipping our gold there to build up that country instead of advancing our own.

This fact is recalled by a note in the *Evening Post* the other day to the effect that several Australians who have visited the State Board



HON. L. W. BUCK & SON'S PACKING HOUSE—THE LARGEST IN VACA VALLEY.

without the trays. I use a tray made of half-inch slats, nailed together and spaced about one-eighth of an inch apart. The trunk of the drier in one end is the brick furnace, or the hot-air chamber, which contains the sheet-iron drums, or fire-box, and from this, then, is a system of drums running back and forth through the hot-air chamber, which thoroughly heats the air, and the cold air current comes in at one side of the furnace; it is deflected by the heat drums to the top of this air chamber; from there it comes back nearly to the ground, and passes out into the drying-rooms. There are five rooms running parallel and alongside of each other; each one is separate from the other, and each of these rooms holds about 120 trays. The current comes in at the bottom, and right there where the hot air comes out we have a row of solid trays, which carry the heat from the back right through to the front. Then each layer above that is the slotted trays, with occasionally two or three more rows of solid trays toward the top, that carry the current back and forth; then the first row of trays above the solid row in the bottom goes clear back against the wall, and leaves a space of about six or eight inches next the doors, which allows the current to go up one row of trays; it strikes over the next row of trays, coming clear out to the door, which carries it back, which gives it motion like that back and forth, clear across the room, and about one-third of the way up from the bottom we let in a smaller current of air up from the furnace.

Last year Mr. Buck improved his drier by placing an exhaust fan on the top. It was

women, and children were all kept busy at profitable prices.

In the foreground are two of the orchard trucks, which are largely used in hauling fruit from the orchard to the packing and cutting houses. They are light, turn easily, and have broad tires, so as to run well on the loose soil of the orchard. Beyond is a four-horse fruit wagon, used in conveying the fruit from the packing house to the railway station. The picture generally suggests the activity which pertains to the fruit harvest.

THE SAN DIEGO FLUME.—A party of Eastern capitalists and citizens of San Diego—among whom were Col. W. G. Dickinson, Benj. Kimball of Boston, James D. Phelan of S. F., O. S. Hubbell and J. H. Braly, San Diego bankers, Geo. D. Copeland, vice-president of the flume company, and T. S. Van Dyke—lately made a trip of inspection along the great flume. The *Union* says that they went out to the diverting dam and viewed the line of the flume and the country through which it passes 25 miles down to the Cajon valley, coming about nine miles in a boat on the water in the flume, and got back convinced of the immense value of the project and the wonderful results which must immediately follow its completion, now near at hand.

lieve in relaxing their local efforts against bogus butter, even though the United States has legislated concerning it. Mr. Paulsen said on this point:

A most determined effort was made in our last Legislature to repeal our Oregon Dairy law, under the plea that the national dairy law rendered a special State law unnecessary. While the national dairy law is of some benefit to regulate the manufacture of "bogus" butter, it is of but little value to protect us against the sale of the "stuff" in our markets, and no greater injury could be done to the dairy interest of the North Pacific Coast than the repeal of the Oregon Dairy law; and whosoever advocates such repeal, under any plea whatsoever, is and should be treated as the enemy of the dairymen of this coast; and the consumer as well should earnestly protest against the repeal of this law. It would be well for the dairymen and farmers of Oregon to call meetings, pass resolutions and otherwise inform the members of our next Legislature that any legislation repealing or altering our Dairy law does not meet the approbation of our farmers.

This is good doctrine. It has been shown that the States have rights in this matter, even to absolutely prohibiting the manufacture of the bogus material, even if it is licensed by the United States Government. Our State laws are valuable and should be maintained upon the statute books.

of Trade rooms in this city have been surprised at the fineness of the wool and wool products there on exhibition. One of them is credited with saying that he had always heard that Australian wool was the finest in the world, yet he had no idea that such splendid blankets could be made in this country, and that the blankets we made here were far superior to those made in Australia. The Australian sheepmen are wonderfully pleased with the wool they saw from Tehama county, and declare that nothing like it was ever seen in Australia.

They say that there are 80,000,000 sheep in Australia, and that they are ardently praying for free trade to have sway in this country, and that this is the daily and nightly burden of their prayers.

This is the idea exactly, and the question is shall we continue the production of this fine wool and increase it, as we easily can if the proper protection is given to our producers, or shall we kill our sheep and enrich Australia? That is one of the questions which has been forced upon this country as a political issue. How shall it be answered? It is not surprising that Oregon has declared that American markets are, and shall be, for American producers.

PUBLIC AFFAIRS.

Our Local Interests in Tariff Reform.

[Being intended as a prize essay, in answer to an offer by the Reform Club of New York City, of \$250 for the best essay, and \$100 for the publisher, open for all parts of the United States.]

CHAPTER I.

Lay the foundation first on patent fact
And then your theory, solid and compact.

The tariff is and will be a vexed question in the United States for many years to come. It affects different parts of our country, and different persons so unlike, that no argument could possibly be acceptable by all concerned. It is not hoped to suit everybody. It is not expected to reach all the judges in this case with a solemn conviction that we are correct. We shall be content if the determination be that we have deserved public attention and done something to bring about a better understanding of this vexed question.

The invitation is to the Union at large. We shall therefore understand that "Our Local Interests" means those of all our Union, as distinguished from the rest of the world. We may glance at tariff effects in different parts of our great country, and incidentally of New York and New York State; but the general argument will affect our people and territory as a whole, and regard their general interests as one, which indeed they are, when truly considered.

The first element in this discussion is the facts of the case, and they may be stated as follows:

We have three millions of square miles of territory, removed 3000 miles by water, and some of it as much by land, from the great world of civilized commerce.

It is in the temperate zone, with a fair share of rich soil, mines, fisheries, forests, pasturage and raw material of all kinds. We have 60,000,000 of people, about 20 to the square mile. It follows that we select for our own use the best of all these good things. We cultivate only the best soil, work the best mines, fisheries, forests, etc.

In this work we are aided by the natural product of all the rest around us. The farmer who cultivates 100 acres has often 1000 in wild grass, etc. His stock picks up all this, in addition to what he raises by the plow. A day's labor, well bestowed, under these conditions will produce five times as much as that of a Chinaman whose tenth-rate land is cultivated and only the most sterile remains out of doors to be cropped by stock.

Among the American people thus employed on these rich natural resources, at least one half of the laborers have some education, ambition and skill, and work brain nerve and muscle to better their condition. They are well-fed, alert and eager to earn all they can, better wages and more profits. It is a notorious fact that in any process where dexterity is an object even the English workmen falls at least one-fifth behind the American, and the slaves of China, India and Egypt are mere drones in comparison.

Take all these facts into consideration, and you will find the product of a day's labor in the United States to be all the way from one to five times what it is in England, France, Italy, Egypt, and other nations on a par with them.

Let us take wheat for a familiar illustration. The American farmer has A. 1 soil, and takes 30 bushels to the acre. He has fine horses, well fed on the common, all around him. He has gang-plows and the best of other machinery. When his grain is housed he has spent six days in labor, and has 30 bushels, 5 for each day. Rent is small, because the farmer will rather take up second-rate land, of which there is plenty, than pay more than the difference in rent. Labor, seed, and machinery divide the product. And either labor must be well paid, or rent and profits get the lion's share.

Then this holds, to keep down rent and keep up labor, and moderate the price of the product, that there are but 20 persons on the square mile to eat the crop and only the workers of that 20 can be hired to labor. In such a state of things the wages of the laborer must buy at least two bushels of wheat.

In England many of these facts are reversed. In a small island there are 35,000,000 of people, 300 to the square mile. All the land is inclosed, save the mere desert. Tenth-rate land is cultivated, fertilized, thoroughly manipulated. The horses are fed in the barn. The whole process is slow, methodical, nerveless drudgery. The result, twice the number of days' labor, and only 20 bushels to the acre. To the day's work two bushels and a fraction.

Of this, rent takes the lion's share, because labor is abundant, and the price of the product is enhanced in the market, because there are 300 people to buy. The laborer cannot buy one bushel for his days wages. Whenever the land is richer and approaches the American soil, the landlord gets all the difference. The poorest land in cultivation settles the wages of labor and what it will buy in the market. The wages never can buy much more than half its product in the poorest land in use in any country.

In Egypt, India and China, labor is at its lowest terms. The population is thick, tenth-rate land is cultivated by the poorest implements and by spiritless slaves. The satrap or mandarin takes every grain in rent, that the rich land is worth over the poorest. Wages are just what this nerveless unskilled labor can

make, less the other expenses and profits. And it occurs that when all is done, 20 cents a day is large pay, and will only buy a quarter of a bushel of wheat, or its equivalent in rice, etc.

When we come to fisheries, mines, timber, etc., we have an abundance of all, and only the best are operated. The farmer will not leave his rich soil and two bushels of wheat a day for any other business that will not pay as much. Gold mines in California are worth nothing that will not pay \$2 per diem for working. In England such a mine would be a fortune. In India or China it would be worth millions.

So with our timber. We have the growth of ages. We select the best, hew it down, take the finest parts and leave the rest to rot. So our workman gets out 200 feet of timber a day with ease. In England the culling has all been done. Good trees are valuable. Second, third and fourth-rate are taken. The whole must be worked up, the knots, all. The result is, 50 feet of lumber is the day's product. Wages cannot buy more than 40 feet, while in America they will buy 160 up to 200.

This is the primary reason why wages are and must be in the United States higher and able to buy more than in any other country in the world. Here are the elements that go to make it so:

Rich natural resources.

The best only worked.

With energy and skill.

Labor in demand.

Home market small.

Wages high from few people.

Prices low from few consumers.

Exporters of raw material.

Importers of finished manufactures.

These wages, these products, are independent of any tariff. They are in the very nature of things. Where a laborer can produce five bushels of wheat a day, his wages must be able to buy three of them or he is most grievously robbed by somebody, and this is the case in the United States.

In England, where good land is limited, where tenth-rate is cultivated, and the dull laborer can only produce two bushels of wheat an acre on such land, his wages cannot buy more than one bushel.

In India, with the same tenth-rate land, and much inferior, sluggish, slave labor, from one to two bushels will be the utmost product, and the slave is denied all but a mere subsistence.

This is the rule: Given a land replete with people, uneducated slaves and their masters, and the masters take all except what is necessary to subsist the slave and his family. The slave race must not die out for want, but it must not advance to wealth and independence. To work, eat, drink, rest, breed and die is their fate.

Given a free and intelligent people, not too many to the square mile, amid rich natural resources, and they will take a fair share of those resources.

If all our fields produced a hundred bushels of wheat to the acre, and 20 to the day's labor, and all our mines, forests, fisheries, etc., paid in proportion, our wages would go up, or the prices of produce come down, till the expert laborer could buy his 20 bushels of wheat with his day's work. It must be, or somebody get it from him by indirection. Labor's wages must represent the product of that kind of labor, on that kind of soil, mine, etc., less the rent, expenses, profits and taxes.

Were we 300 to the square mile, and as we reach that condition, labor will earn less, and food will cost more, till we achieve the condition of England. The prime factors that enter into this account are resources, population, skill and energy in production. These determine wages and prices.

It is true that other influences may produce slight waves of advance or depression, but these prime factors forever fix the water mark of high or low wages.

The finding of gold in the gravel surface of a large portion of our country, that would yield \$5 a day to the hand, would take wages to that figure. We should cease to export anything but gold, and the price of all our commodities would come up.

So the sudden influx of cheap labor, beyond what our natural resources demand, would take wages down, till it abated. We shall perhaps some day have 300 people to the square mile. We shall move on a gradual incline to that condition, with undulations, as population overflows the resources, or war or pestilence may reduce the people.

A tariff is comparatively a small factor. It can do a little, to smooth and modulate, but it is an exceedingly small fraction, even at its utmost, compared to the great causes here enumerated.

(To be Continued)

C. E. GRUNSKY, who has been connected with the State Engineering Department for ten years, has resigned his position as Chief Assistant to the State Engineer, to accept the position of Chief Engineer of the Central Irrigation District, the Colusa county and the Modesto Irrigation District, Stanislaus county. He will retain his residence in Sacramento.

PROPOSING to tap Goose lake and thence draw water to irrigate 100,000 or 200,000 acres of desert land in Modoc county has roused a deal of opposition among the lake-dwellers in both California and Oregon.

UNIAH is to have a colt-show at the race track July 4th.

THE IRRIGATOR.

What the Wright Law Provides.

EDITORS PRESS:—I have received the "marked copy" of your paper containing an editorial entitled "The Wright Irrigation Law." In it occurs this statement: "The riparianist will not forget that the water cannot be taken from him under this law."

In this you are in error. The law makes full provision for subjecting the rights of riparian owners to the wants of an irrigation district upon making the compensation provided for by the Act. That is to say, the interest of the riparian owner in the water may be acquired by an irrigation district by condemnation. No decision of the Supreme Court has ever, in this State, been in conflict with this principle. If you will interpret the decisions of our Supreme Court, and the irrigation law together, you will find that they together amply protect the waters of the streams from monopoly, and, at the same time, provide for their complete distribution for irrigation purposes. — C. C. WRIGHT, Modesto, Cal.

[Thanks for the statement. We intended to convey the idea that riparian rights are recognized so far as to require an equivalent to be tendered therefor when the needs of the greatest number require condemnation of the water. Of course, to divert the water for irrigation, and at the same time not take it away from the riparian owner would be in most cases a physical impossibility. We are glad Mr. Wright has called attention to the statement which we unintentionally made in the matter.—EDS. PRESS.]

Stanislaus County Enterprises.

EDITORS PRESS:—Since the decision of the Supreme Court sustaining the validity of the Wright Irrigation law, the people of Stanislaus county have aroused to a pitch manifesting considerable enthusiasm on the question of irrigation.

The Turlock and Modesto districts were formed last year under the "Wright Act," with boundaries permanently defined, with water rights located and canals surveyed, ready for immediate action as soon as the constitutionality of the law should be declared valid.

The Modesto district made a location comprising or covering about 108,000 acres, lying between the Stanislaus and Tuolumne rivers, and extending west to the San Joaquin. To obtain water and raise to an elevation to cover said territory, they located a dam site about two miles above Knight's Ferry, on the Stanislaus river, requiring a dam high enough to elevate water into a ditch 90 feet above the surface of the stream at low water and 10 feet higher additional in order that no water be allowed to pass over said dam into the main channel, but to be carried over an artificial embankment and thus establishing a new channel for the surplus to pass off, at an estimated cost for the whole works of about \$600,000.

Oakdale and vicinity, comprising a territory of some 5000 acres of the finest land in the county, nestled down in a beautiful nook on the south bank of the Stanislaus river between the north line of Modesto district and said river, was for some reason not apparent on its face, entirely ignored by said Modesto district, and left out wholly unprovided for. The people of Oakdale not desiring to be starved out or die of thirst, sought means of averting their impending calamity by the discovery of other resources not yet appropriated. An Irrigation Company was duly formed with a capital of \$100,000, and the services of a competent engineer employed who, in a preliminary survey discovered that at a point on the Stanislaus river—11 miles above Oakdale and two miles below Knight's Ferry—a dam could be built for \$10,000 which would secure the full use of the water from the oldest water right on said stream, after passing the Knight's Ferry flouring mill, from which point with an outlay of less than \$100,000 water can be conveyed over the Oakdale district, and also over 80,000 acres or about four fifths of the entire Modesto district, including the town of Modesto.

Under the present law there is no provision allowing the Modesto district to annex Oakdale to its territory. The only way, if there is any way open, would be for Oakdale to form a district under the Wright law, then by a majority vote of both districts a portion of the Modesto district could be annexed to Oakdale district. But we propose to wait till the Legislature shall so amend the Wright law that a portion of a district, by a vote of a majority of its citizens, can be set to whichever district they may choose.

In the meantime the people of Oakdale, believing they have one of the most valuable water rights in the State, with unsurpassed facilities in proportion to the expense required, propose to hold on to their rights and commence immediately to construct a ditch of sufficient capacity to irrigate the Oakdale district, which our engineer says can be done, including dam, for \$30,000, and thus obtain water one year in advance of any other district in the county.

C. S. S. HILL.

Oakdale, June 18, 1888.

The Arizona Climate and Tree Pests.

EDITORS PRESS:—Will you permit the columns of your paper to bring together or disperse those parties pro and con who offer to "I'll bet you."

Here is the wager I have to offer: That some one in California (or elsewhere) furnish a given number of trees of any and all kinds of fruit-trees—shade and ornamental, anything that carries any or all classes of scale bugs. Ship them to Phoenix, Arizona, there to be received by a commission of one or more persons mutually agreed on, planted out and well cared for. Said trees are not to be sprayed, fumigated nor in any way molested, so as to militate against the well-being of the life and health of the scale bugs, parasites, fungus, blue mould or rust.

Now it is agreed that if these trees of their own strength in growing cast off all parasites, scale bugs, moulds or rusts, then shall the party of the first part be without any remuneration for the prime value of said trees, together with costs of transport, and shall pay also the gardener's (reasonable) bill, for caring of said trees in said test. But if any of the parasites, scale bugs, fungus, rust or mould be and remain on any of the said trees in said test, then shall the said party of the second part pay to the party of the first part the prime value of said trees, together with the cost of transport and the gardener's (reasonable) bill of care and culture. The growth of one year shall decide the case.

Tempe, Arizona.

GEO. K. MILLER.

From Southern Oregon.

DEAR OLD RURAL PRESS:—Thinking a few lines from Southern Oregon might be of interest to some of your readers, I write you.

We had a very dry spring until about the 25th of May, which shortened up grain crops somewhat, but since that time at least four inches of rain has fallen and vegetation is just hopping. Alfalfa is badly down; would like to have a few weeks of California sunshine to do our haying. It looks like clearing off now.

The fruit crops will be good. A great many new orchards have been set out the last winter, and old ones are receiving better attention than formerly. Winter apples, pears, plums, prunes, peaches, almonds and the Mission grape do well in this country, and farmers are turning a great deal of attention to fruit.

Diversified farming is carried on much more than in the Sacramento valley. Farms are generally small. The country is just awakening to its resources. A great many new-comers are buying and settling in Jackson county. We have a great deal of very fine productive soil, and as good a climate as any country 1400 to 2000 feet high, surrounded by timber-covered mountains, could expect. We have but little heavy winds, last winter being an unusually cold one; the mercury for three or four mornings hovered close around zero, 3°, 4°, 6°, 7° being the coldest. It was a little tough on us old Californians after living in the Sacramento valley for 23 years raising wheat.

I have as good a grass ranch, for its size, as there is in Southern Oregon. All kinds of vegetables do well on our best land without irrigation. A great deal of foothill land is vacant, and railroad land could be utilized by irrigating with the waters of Rogue river, a clear, rapid stream abounding in trout and salmon. Such a stream in the dry interior valleys of California would be worth millions.

I must close, wishing success to the RURAL and its many readers. Inclosed find one year's subscription. I think I have taken it 14 years; hope to be able to take it 14 more.

J. B. DUNGAN.

Gold Hill, Or., June 10, 1888.

An Erroneous Statement.

The following paragraph appeared in the Lakeport Democrat of June 15th:

The County Pamphlet.

The Lake county pamphlet has been received and every one is disappointed in the appearance of it. The work bears the imprint of the *Clear Lake Press*, but we feel satisfied that Brother Haeussler never printed it, for he is too good a printer to allow such a blotch to leave his office. The *Rural Press* office of Oakland, however, did print it, and they should never receive a cent for the work, as the contract provided for a far better job in every way. The money donated by the county, together with what advertisers contributed, was sufficient to have paid for a first-class job, and the county and business men should not pay a cent until the contract is fulfilled. The pictures in the book are simply outrageous. Two in particular—a view of Lakeport and one of Clear Lake—are disgraces to the subjects they are supposed to represent or to any subject for that matter, and it is necessary to label them in order that the oldest inhabitant may recognize them. These pamphlets will go begging for circulation, and the money spent on them thus far is just that amount wasted.

[The PACIFIC RURAL PRESS office is not in Oakland, neither has the PACIFIC RURAL PRESS done any such printing as is described above.]

TO PRESERVE BUTTER WITHOUT ICE.—Put your butter in a small bowl, set this in the deep saucer of a flower-pot, turn the flower-pot upside down over the bowl of butter; plug the hole in the pot with a cork; keep the saucer filled with fresh water, and the evaporation will preserve your butter without ice.

The Mesquit Bean Tree.

In Arizona and portions of Southeastern California, there grows a tree called the Mesquit bean tree, the timber of which is especially suited for that exceptionally dry, hot climate. When made into felloes for wheels it will not shrink, even if newly cut, as its sap is of an oily nature like lignum vitae. This wood is dark in color, hard and knotty, and rather rough to work. It is valuable, not only as wagon timber, but because it produces a large crop of beans which when ripe drop off and are harvested with a rake. The beans are about ten inches long and quite thin, and about half an inch wide. The seed or bean proper is very small, but the pod and pulp is very sweet and the Indians use them for food, grinding the pods up into flour. The Moqui Indians make this flour into tortillas and bake them on a flat stone from which their fire had been swept. The tree grows in the sandy deserts, but thrives best in the sinks of streams, or ancient riverbeds where, as it forms an obstacle to the drifting sands, great sand hills accumulate around the trunk, from the top of which the branches spread out luxuriantly. When wood is wanted by the teamster to rim his wheels, or by the settler for fuel, the trunk or larger branches have to be dug out, recalling the complaint of an Irishman in Arizona: "Begad its a quare country where a man has to take a shovel wid him to git firewood and a hoe wid him to cut hay" (the gietta grass).

It is surprising that this wonder of the vegetable kingdom has not been systematically cultivated in Southern California. It will grow anywhere there with small care, and in addition to its value as a wagon hardwood, furnishes shade, fence, fuel and forage, for the beans are excellent food for sheep or hogs. What the Caraba tree is to Cyprus and the shores of the Eastern Mediterranean the now neglected mesquit my yet become to Arizona and semi-tropical California.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING JUNE 12, 1888.

- 384,228. — SAWMILL DOG—M. J. Anderson, Wapinita, Ogn.
 384,273. — BUTTON—Anderson & Pattison, San Luis Obispo, Cal.
 384,500. — SAW-HANDLE—J. Beaulieu, Arcata, Cal.
 384,417. — LIFTING-JACK—W. N. Best, Los Angeles, Cal.
 384,420. — SAMPLING APPARATUS—Allen Bradford, Wardner, I. T.
 384,425. — FARE REGISTER—H. R. Coffey, Stockton, Cal.
 384,524. — HYDRO-CARBON BURNER—A. Heberer, Alameda, Cal.
 384,444. — CHALK-LINE HOLDER—B. Howard, Sheep Ranch, Cal.
 384,367. — FEATHERING PADDLE-WHEEL—R. J. Jones, Carrollton, W. T.
 384,534. — WAGON SEAT—W. A. Ladd, Colfax, W. T.
 384,371. — FRUIT-STONING MACHINE—Benj. A. Little, S. F.
 384,542. — SEAL LOCK—O. C. Pratt, San Rafael, Cal.
 384,285. — ASTRONOMICAL APPARATUS—E. L. Rugg, Wood and, Cal.
 384,549. — MACHINE FOR MAKING HONEY FRAMES—Jas. Ware, Madera, Cal.
 18,379. — DESIGN—J. B. Clifford, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Carriages.

We are receiving 10 carloads of Carriages, Buggies and Wagons from the Briggs Carriage Company of Amesbury, Mass., which will be sold at prices that will be satisfactory, considering style and workmanship. Quality of material guaranteed the best.

A. A. BRIGGS & CO.,

220 & 222 Mission St., San Francisco, Cal.

\$500,000

On Country Real Estate in large and small amounts at lowest rates, by A. Schuller, 106 Leidesdorff St., Room 3.

REMEMBER.—We can make it an object for some friend going East to consult us before buying tickets.

REMANT PALACE,

1326 Market St., opp. Odd Fellows' Build'g
 LEON LEMOS, Proprietor.

Remnants of Domestic Suits to Order,
 \$15, \$16, \$17, \$18, \$20; Imported
 from \$20 to \$30.

California is a Paradise, but the people would object to go in Paradise to it. Leon Lemos has contracts with several leading Woole Mills to buy all their REMNANTS, and can make a fine fitting, well-trimmed suit from \$15 upward.

Farmers will save money by calling on him, as he makes suits to order for the same price as ready made. Samples and prices by mail. Don't forget.

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IMPROVED
Butter
Color.

EXCELS IN STRENGTH
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Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color.

Three sizes, 25c, 50c, \$1.00. For sale everywhere.
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(33 Colors.) DIAMOND DYES

are the Purest, Cheapest, Strongest, and most Durable Dyes ever made. One 10c. package will color 1 to 4 pounds of Dress Goods, Garments, Yarns, Rags, etc. Unequaled for Feathers, Ribbons, and all Fancy Dyeing. Also Diamond Paints, for Gilding, Bronzing, etc. Any color Dye or Paint, with full instructions and sample card mailed for 10 cents. At all Druggists
 WELLS, RICHARDSON & CO., BURLINGTON, VT.

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Agricultural and Grazing
LANDS FOR SALE.

7975 Acres of fine grazing and agricultural land, including 4000 head of fine grade stock sheep; abundance of water; 9 miles from Merced City, and near Merced River; price, \$7.25 per acre; 1000 acres good wheat land. Address

OSTRANDER & SONS,
 Merced, Cal.

Or N. C. CARNALL CO.,
 624 Market Street, San Francisco, Cal.

CHICO VECINO!

Best location in the State of California for beautiful suburban

HOMES.

Located near the thriving city of CHICO, Butte County, California. Subdivided from the heart of the famous

RANCHO CHICO,

The well-known property of

GENERAL JOHN BIDWELL.

Town Lots and acreage property, from fractions of an acre upward. TERMS REASONABLE. For further particulars, address:

CAMPER & COSTAR, Real Estate Agents,
 Chico, Butte Co., Cal.

Or WM. H. MARTIN,
 809 Market Street, San Francisco, Cal.

Artesian Belt Land
AT LOW FIGURES.

The southwest quarter of Section fifteen, Township twenty-three, Range twenty-four west, one-hundred and sixty acres of rich level land, near the center line of the Artesian Belt in Tulare County, five miles northwest of Alila, on the S. P. R. R., is offered for sale at the exceedingly low price of fifteen dollars per acre. Address, "Landowner," Box 2361, San Francisco P. O., or to the care of this paper.

LAND & WATER FREE!
800 Acres Rich, Level Land.

To some one who will summer fallow and cultivate well, will be furnished free water and use of 160 acres of good land (S. E. Sec 13, T. 21, R. 23) within 9 miles of Tulare, S. W. Forty acres formerly plowed. Land on all sides cultivated and pastured. Water for irrigation (if needed) free. Also (without water) 640 acres (Section 13, T. 23, R. 24), four miles westerly of Tipton and S. P. R. R., all in Tulare County and the Artesian belt. For particulars call on E. M. DEWEY, 7 miles S. W. of Tulare, or A. T. DEWEY, 220 Market St., San Francisco.

FOR SALE OR EXCHANGE.

Ranch of 200 acres on Coquille River, Coos County, Oregon; 40 acres bench land 160 acres bottom, 80 acres under cultivation; 1 1/2 miles from Coquille City, one-half mile from river landing. An abundance of fine spring water on place. Price, \$1500 cash, or will exchange for California property in vicinity of San Francisco Bay. For further particulars apply to
 H. GOETZ,
 659 Clay St., San Francisco, Cal.

PALM VALLEY!

TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land?
 DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?
 DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?
 DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10 acre lots, which they are now selling at \$200 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. Two hundred acres have now been sold on this basis, starting at \$150 per acre. The price is now \$200 per acre.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They have completed a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State. No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

BRIGGS, FERGUSON & CO., General Agents,

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SANTA YNEZ,

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THE SANTA YNEZ LAND AND IMPROVEMENT COMPANY

Is now offering for sale at low prices and upon very moderate terms the choicest of

Agricultural and Horticultural Lands

Of the famous College Grant, in the aforementioned beautiful valley. The CLIMATE is perfect, SOIL rich and diversified, TOPOGRAPHY unusually varied and beautiful, a park-like growth of Oaks covering the entire valley. WATER SUPPLY more than sufficient for irrigation of all irrigable lands, and no alkali either in water or soil.

TRANSPORTATION FACILITIES superior now, and two trunk lines certain to pass through the valley within a year.

43,000 ACRES OF THESE CHOICE LANDS

Are for sale at from \$25 to \$150 per acre; terms of payment being one-third cash, one-third in two, balance in three years; six per cent interest on deferred payments.

To reach the Santa Ynez valley take any transportation line to San Luis Obispo, thence by Pacific Coast Railway to Santa Ynez or to Santa Barbara, thence by stage to Santa Ynez. Persons seeking lovely homes or lands for home or quickly paying investments, cannot do better than purchase here. For further information refer to

E. W. STEELE, Manager, Santa Ynez, Cal.

E. de la CUESTA, Agent, Santa Ynez.

McCLUNG & PRAY, Agents, 325 Montgomery St., San Francisco.

SIDNEY LACEY, Agent, Los Angeles.

COOPER & DREYFUS, Agents, Santa Barbara.

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Summer Homes & Summer Music.

Refined temporary homes in pleasant places are ill furnished, if without a few well-chosen music books. Two books of recent publication,

CLASSICAL PIANIST and
PIANO CLASSICS

(each \$1) contain together a hundred piano pieces of exceptional beauty.

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(\$1.25) contains 115 songs that are world favorites.

VOCAL BANJOIST.

(\$1) Good assortment of songs with banjo accompaniment.

CHOICE VOCAL DUETS.

(\$1.25) A fine and large collection.

Emerson's Male Voice Gems, and Emerson's Part-Songs and Glee for Mixed Voices,

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College Songs and War Songs (each 50 cents) and Jubilee and Plantation Songs (30 cents), are favorites everywhere.

Any book mailed for retail price.

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COOKED CANNED MEATS

ARE THE BEST,

And as a consequence have a world-wide reputation.

Neither Bone nor Waste of any kind.

EVERY CAN GUARANTEED.

We give you our positive assurance that the utmost care is taken in the selection and handling of our meats, and we guarantee you that they are as clean and wholesome as any you might prepare in your own home.

NO PICNIC, EXCURSION, HUNTING OR CAMPING PARTY

Is complete without some of the following:

CORNER BEEF, LUNCH HAM, BRAWN, OX TONGUE,
PIGS' FEET, ROAST BEEF, LUNCH TONGUE,
CHIPPED BEEF, DEVILED HAM, DEVILED TONGUE.

There is not an article named but is a feast in itself. Also

'49er Ham and Breakfast Bacon,

COVERED AND UNCOVERED.

Choice Family Lard,
Boneless Ham,
Soused Pigs' Feet, Tripe, Etc.

DON'T FORGET THE BRAND!

You will get the very best by asking for

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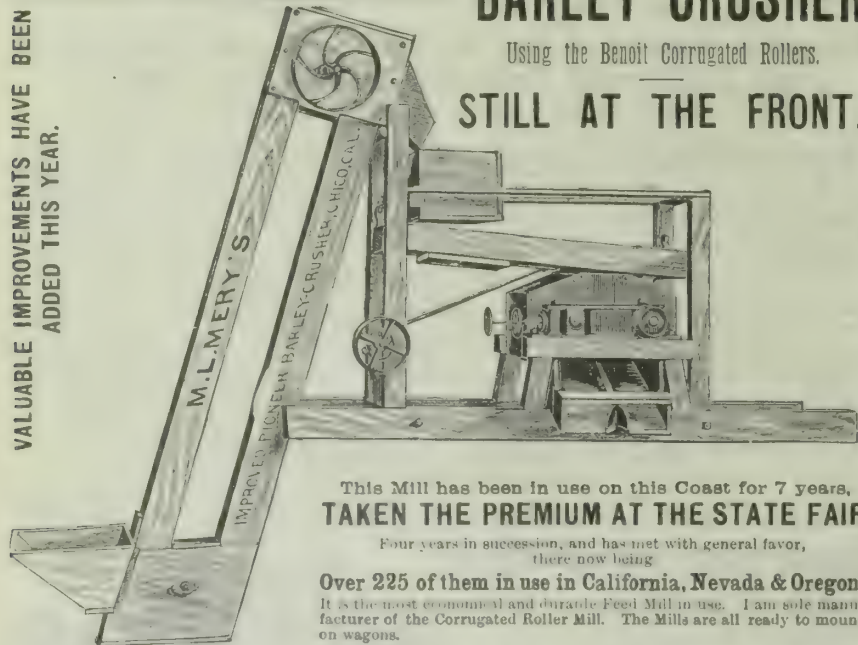
JAMES McCULLOUGH,

Pacific Coast Agent, 123 CALIFORNIA ST., SAN FRANCISCO.

MERY'S IMPROVED PIONEER BARLEY CRUSHER

Using the Benoit Corrugated Rollers.

STILL AT THE FRONT.



This Mill has been in use on this Coast for 7 years,
TAKEN THE PREMIUM AT THE STATE FAIR

Four years in succession, and has met with general favor,
there now being

Over 225 of them in use in California, Nevada & Oregon.

It is the most economical and durable Feed Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

GRAINLAND, BUTTE CO., CAL., June 9, 1887.
Mr. M. L. Mery—DEAR SIR: We have used one No. 2
Ritter Barley Crusher now for eight years and have used
it steady during that time; have crushed 45 tons a day,
and the crusher is as good to day as when it came out of
your shop. I am satisfied that it is the best mill made.
You may reconstruct this testimonial to the best advantage
for you and sign our names, for you cannot overrate
the merits of your mill.
F. E. REAM,
JOHN P. SUTTON.

DURHAM, May 21, 1887.
Mr. M. L. Mery—DEAR SIR: I write to you of the
19th, would say that I crushed from two to two and a
half tons per hour, but could crush three and a half tons
per hour if my elevators were large enough to carry the
barley from the machine. The No. 1 machine I used at
Gridley was run on a sack a minute, but if we got behind
we could run through five tons an hour, and do
good work. The machine I use here is a No. 2.
Yours, WM. M. TAYLOR.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY, Chico Iron Works, Chico, Cal.

GRANGERS' CO-OPERATIVE BUSINESS ASSOCIATION, SACRAMENTO, CAL.

Hardware and Groceries
AS CHEAP AS THE CHEAPEST.

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50 cents. SPECIMENS FREE. THE FLORIDA
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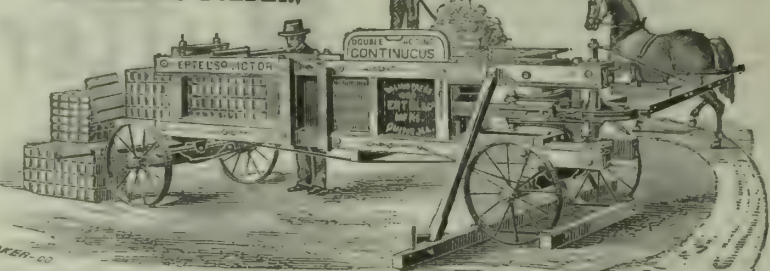
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DEWEY & CO., 220 Market street, San Francisco, Cal.

We have some extra room
suitable for storage pur-
poses, which we will let on
very reasonable terms.

The Ertel VICTOR

AUTOMATIC FOLDER,



THE LEADING BALER IN THE MARKET.

PROTECTED BY 44 PATENTED CLAIMS.

Double-Acting Perpetual Hay and Straw Press.

A Machine imitated but not equalled. Baling Hay or Straw faster, more compact,
easier, more economically (to load 10 to 15 tons to the Car) than is done with any other
so warranted or no sale. Circulars mailed free address, Geo. Ertel & Co., Quincy, Ill.

N. B.—The above Victor Baling Machine, making 16x22 size of variable length bales, is
warranted to bale from 12 to 20 tons of Hay per day; loading from 10 to 15 tons to the railroad
box car. Price low and satisfaction guaranteed. Represented and sold this season by Messrs.
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Francisco.

Howe's Scales and Crescent Coffee Mills

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FLOUR MILL

—WITH—

Immense Water Power
FOR SALE

At Merced Falls, Merced County, located on Merced
River, size of Mill, 33x70; two stories in front and four
stories in rear; latest improved roller machinery; new
capacity, 100 barrels per day, power to increase to any
capacity desired; title to water and land perfect; 60 acres
of land, comprising the town site of Merced Falls;
reputation of flour is A1; commands all mount-
ain trade; fine wheat country surrounding; no failures
ever known; grain warehouse 80x90; four dwelling
houses; 28 shares of Merced Falls Woolen Factory go
with purchase. Address

OSTRANDER & SONS,
Merced, Cal.

Or N. C. CARNALL & CO.,
624 Market St., San Francisco, Cal.

WINCHESTER HOUSE,

44 Third Street, San Francisco, Cal.

This Fire-proof Brick Building is centrally located, in
the healthiest part of the city, only a half block from
the Grand and Palace Hotels, and close to all Steamboat
and Railroad Offices.

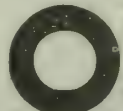
Laundry Free for the use of Families
HOT AND COLD BATHS FREE.

Terms, Board and Room, \$1.00 per Day

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ROOMS WITH OR WITHOUT BOARD.

FREE COACH TO THE HOUSE.
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can clothe you and furnish you with
all the necessary and unnecessary
appliances to ride, walk, dance, sleep,
eat, fish, hunt, work, go to church,
or stay at home, and in various sizes,
styles and quantities. Just figure out
what is required to do all these things
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1358-1360 MARKET ST. S. F.
MANUFACTORY AT LINCOLN CAL.

Fruit Shippers' Box Strap.

A SAVING OF MONEY, TIME and LABOR.
The Best.

Cheapest and
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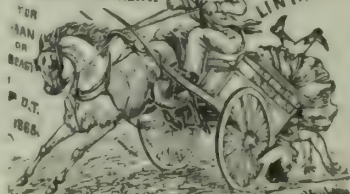
Box Strap in use. Can be applied in half the time of any
other. Now in use by all the large houses.



TWISTED WIRE BOX STRAP,
On Reels of 4000 to 5500 feet.

A. I. HALL & SON, Sole Pacific Coast Agts
528 & 530 Market St., San Francisco.
For Sale also by the Wholesale Hardware
Trade

H. H. H. HORSE LINIMENT.



THE H. H. H. Horse Liniment puts
new life into the Antiquated Horse!
For the last 14 years the H. H. H. Horse
Liniment has been the leading remedy
among Farmers and Stockmen for the
cure of Sprains, Bruises, Stiff Joints,
Rheum, Windgalls, Sore Shoulders, etc.,
and for Family Use is without an equal.
The H. H. H. Liniment has many imi-
tations, and we caution the Public to see
that the Trade Mark "H. H. H." is
everywhere before purchasing. For sale
everywhere for 50 cents and \$1.00
bottles.

For Sale by all Druggists.

IT STANDS AT THE HEAD!

"DOMESTIC"

DO NOT FAIL to SEE THE "DOMESTIC"
Before Buying a Sewing Machine.
It is the leader in practical progress. Send for price list
J. W. EVANS, 29 Post St., S. F.

GOOD CROPS EVERY SEASON WITHOUT
IRRIGATION.

Free by mail, specimen number of "The California
Real Estate Exchange and Mart," full of reliable infor-
mation on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, H. MEYRICK, Box 5, Santa Cruz, Cal.

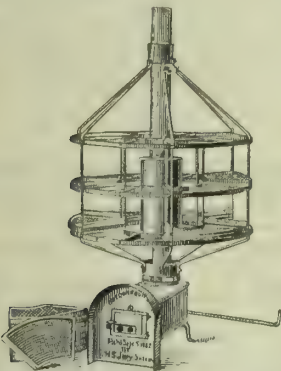
The Oregon Fruit-Drier.

We give herewith engravings showing the exterior appearance and interior arrangement and mechanism of the Oregon fruit-drier, which is being sold in this State by Charles Jory of 459 Union St., Stockton. This drier was awarded first prizes at the State Fairs of California and Oregon in 1887, and is highly commended by a number of those who have used it. The Oregon drier consists of a hollow cylindrical tray-supporting-rack frame, situated



Oregon Fruit Drier—Exterior View.

above a furnace and revolving around a central drum and smoke-pipe, the whole being inclosed within a circular shell of brick or wood lined with sheet iron and provided with doors, ventilators, etc., for the purpose of confining the heated air used in drying fruits and vegetables. The principle of operation of the Oregon drier is essentially different from all others, as will be readily seen from examination, having a central heating drum from which the heat is radiated out through the entire drier evenly and thoroughly, thus enabling the operator to dry the entire charge of fruit without changing of trays, as the heated air from the under trays rises obliquely through the inner edge of the



Inside Revolving Rack, Frame and Furnace.

trays above and is discharged through the ventilator near the center of the cone. Provision is also made for placing drip pans under each section of trays to catch the drippings which will fall in drying any kind of juicy fruit, a feature those who have plums, prunes, or any kind of juicy fruit to dry, will appreciate.

The manufacturers of this drier publish a circular of information concerning the operation of the machine and the testimonials of those who have used it, which will be read with interest by those who are investigating driers.

Freights on Canned Goods.

There is still need of concession by the transportation companies. The present schedule bears heavily upon the canned fruit interest and those engaged therein are endeavoring to secure a better tariff. They should succeed. We wish the fruit to get out readily and cheaply in every form, and hope the claims of the canners will be recognized. At a meeting of those in the canning interest, on June 14th, the following resolutions were adopted:

WHEREAS, Present freight rates on canned fruit is working serious injury to the fruit interest of this coast, being almost prohibitory on some descriptions of fruit; and, whereas, the present rates are much higher than last year, notwithstanding the fruit crop of the East this year will be much larger than last season; and whereas, Eastern canned fruits will be sold at lower prices than last year, and unless freight rates are materially reduced, the result will positively be a curtailed pack and decided decrease in Eastern consumption of California canned fruits; therefore, be it

Resolved, That we most respectfully petition and earnestly urge the Transcontinental Association to make the necessary reduction in freight rates. It is further resolved that unless a material reduction from present rates is made, a full pack will not be made, as sales cannot profitably be effected, for the reason that Eastern goods will go largely into consumption throughout the Eastern and Western States, and a decrease in pack and shipment eastward of California fruits must necessarily result.

Resolved, That lower rates this year are an absolute necessity to the fruit interests of this State.

It is believed that the concession asked by the canners will be allowed.

A NEW CANNERY.—The Glendale Canning Company has incorporated to do a general canning business, with \$100,000 capital in 1000 shares. Directors—F. C. Delong, G. E. Chittenden, S. B. McKee, E. Ransom and A. J. Gove.

PACIFIC COAST WEATHER FOR THE WEEK.

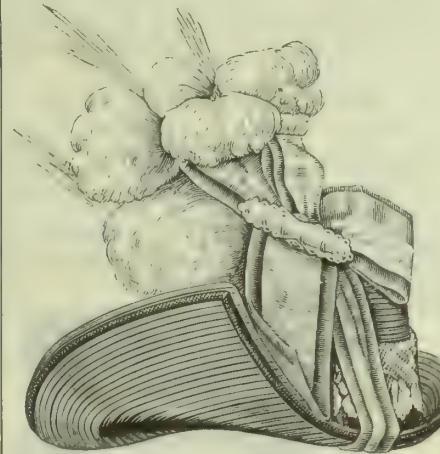
[Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.]

DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S.Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
June 14-20.																																				
Thursday.....	.84	64	S	Cy.					.18	72	S	Fr.	01	76	SW	Cy.	.01	68	S	Cy.	.00	88	W	Cy.				.00	84	SW	Cl.	.00	70	NW	Cl.	
Friday.....	.32	60	SW	Ry.	2.11	64	W	Fr.	.34	70	S	Fr.	.00	74	SW	Cl.	.00	67	NW	Cl.	.00	78	NW	Cl.				.00	81	SW	Cl.	.00	70	NW	Cl.	
Saturday.....	.14	52	SE	Cy.	.T	60	W	Ry.	.00	70	S	Cy.	.00	74	S	Fr.	.00	64	W	Cy.	.00	78	NW	Cl.				.00	84	SW	Cl.	.00	70	SW	Cl.	
Sunday.....	.20	68	S	Fr.	.04	60	NW	Cl.	.06	68	SE	Fr.	.01	68	W	Cl.	.03	64	W	Cl.	.00	72	N	Cl.		.T	67	S	Cy.	.00	70	SW	Cy.			
Monday.....	.06	62	SE	Cy.	.T	66	S	Cy.	.00	72	S	Cy.	.00	74	S	Cl.	.03	65	SW	Cl.	.00	76	S	Cl.				.00	76	SE	Fr.	.00	70	SW	Cy.	
Tuesday.....	.24	54	NW	Ry.	.23	64	NW	Cy.	.02	72	S	Fr.	.T	74	W	Cl.	.04	65	W	Fr.	.00	78	NW	Cl.				.00	73	SW	Cl.	.00	68	W	Cl.	
Wednesday.....	.76	62	SW	Cy.	.00	60	N	Cl.	.00	78	N	Cl.	.00	76	N	Cl.	.00	73	W	Cl.	.00	78	NW	Cl.				.00	86	SW	Cl.	.00	72	W	Cl.	
Total.....	2.36				2.38				.60				.02				.08				.00					.T			.00			.00				

EXPLANATION.—C. for clear; Cy. cloudy; Fr. fair; Fy. foggy; — indicates too small to measure. Temperature, wind and weather at 12:30 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Seasonable Millinery.

While green, blue, pink and brown are still the fashionable colors, it must be borne in mind that the green is the veritable apple shade, the blue that peculiar tone found only in a cashmere shawl, the pink that most delicate of tints, vieux rose, while the brown is almost golden.



charming ornaments for the *chapeaux* of woman-kind.

The bonnet shapes differ mainly from those of last season in the greater width of their brims. Their crowns are of the regulation horse-shoe shape, with the outline at the back over the hair made a little deeper and more decided. The brim is sometimes a pointed poke, and again it will be round, with a slight



SOME LATE FASHIONS IN MILLINERY.

The liking for pink has made apple blossoms, and the dainty pink field flowers more popular, while the demand for roses and carnations amounts to a *furor*. Corn flowers, "Quaker ladies," and "ragged robins" are candidates for favor with the admirers of blue, while the list of fashionable greens begins with fine ferns and smilax and does not stop with the ivy and the oak leaf, but embraces also the thistle with its mingling of blue and green. Brown is represented by velvet wallflowers, scarlet by poppies, and crimson by orchids of that shade, while in white there are blossoms galore, roses small and large, and orchids so perfectly imitated that they would delight the soul of a collector; for *la mode* demands not only that flowers be judiciously used, but that each be perfect of its kind.

The aspect of a millinery shop this season has been aptly compared to "Tom Tiddler's ground," for there seems no end to the bits of gold of every conceivable shape that are to be found therein. There are fillets such as the Grecian maidens bound around their heads, and there are coronets, clasps, embroideries and laces, while in combination with silk or net the glittering metal is wrought into new and

flare that invites a filling of roses or other flowers. This last style is especially quaint and picturesque in a dull-yellow Tuscan, banded about its edge with gold braid. The inside of the brim, where it flares, is filled with crush roses of the smart pink shade, and on the upper side is a roll of pink *crepe* that is drawn down at the edge and fastened under a tiny gilt clasp. Loops of pink grenadine ribbon stand up high in front, and the bridle is of *crepe*, its long, pointed ends being fastened with small gold pins. The net bonnets are in the same shape, though occasionally a veritable Nanon cap is seen.

Contrasts are liked in these dainty *chapeaux*, but they must bear the *cachet* of novelty. Apple-green and black, scarlet and black, and two shades of tan are in special vogue. A bonnet of apple-green tulle, drawn over a wire frame, displays a brim of black lace in frills, while full, feathery aigrettes of apple-green stand up somewhat defiantly at each side. The ties are of apple-green ribbon. Another, rather more striking, has a crown and brim of bright scarlet net, with a *bandeau* of out jets laid on the brim. Just in front are soft loops of black moire ribbon, and similar ribbons are used for

the strings that are knotted under the chin. Black bonnets are in vogue, but frequently they are brightened by clusters of flowers draped in net or by aigrettes of green, rose or brown.

Ribbons are approved as garniture for the front of bonnets and hats, but their arrangement is somewhat different from heretofore. Soft ribbon is generally used for the loops, which are high but not quite so aggressive as formerly, being arranged rather from the brim up to the crown than from the base of the crown to its top. Grenadine ribbons striped with satin, moire or brocade, heavy, soft grosgrains, rich moires and old-fashioned taffetas are all in vogue. It has been predicted that velvet ribbon will obtain later in the season, but this may be doubted. The ribbons are in many instances heavily lined with gold or some other metal, while the *ombre* effects, which seem to have had their day some time ago, have returned not for a day, but for a season. In green the shading runs the gamut from apple or Nile through all the tints to the very darkest, in brown from golden to seal, and in rose from the very faintest to the vieux-rose that is so fashionable. Great caution is needed, however, with regard to these *ombre* effects, for unless they are very carefully managed the result is apt to be crude.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and, as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3.00 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

CRYSTALLIZED FRUITS.—The semi-annual meeting of the State Board of Horticulture which will be held at 220 Sutter street, S. F., on Monday, July 2d, at 10 A. M., promises to be of unusual interest, because at that time will be presented the essays on crystallizing fruits in competition for the prizes offered by the Board. There are two prizes to be awarded; one of \$50 and one of \$20. Those intending to compete should inform the Secretary of the Board, B. M. Lelong, at once.

THE CHICAGO PACKING CO., so impressively organized last winter across the bay by "Col." Wm. Selover of Chicago—an account of whose enterprise appeared in our issue of March 3, 1888—has proved remarkable as a failure. The plausible organizer failed to furnish any of the funds he had subscribed, the unfinished building stands on the ground encumbered with law-suits, and the whole business is at a standstill.

CRAWFORD PEACHES.—Onesti & Connor report the arrival of the first Crawford peaches this season, being sent in from the Winter's ranch of H. & W. Brink, and selling quickly at 12½ cents per pound.

\$13,000.00
GIVEN AWAY

—WITH—
Le Roi des Savon,
THE KING OF SOAPS.

THIS YEAR.

Washes Without Rubbing,
The Best Bleaching Soap,
The Woman's Friend.
THE MARVEL OF THE AGE.

Ask Your Grocer for It.

See small circulars for list of presents.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

SETH COOK, breeder of Cleveland Bay Horses, Devon, Durham, Polled Aberdeen-Angus and Galloway Cattle. Young stock of above breeds on hand for sale. Warranted to be pure bred, recorded and average breeders. Address, Geo. A. Wiley, Cook Farm, Danville, Contra Costa Co., Cal.

W. J. MARSH & SON, Dayton, Nevada. Registered Shorthorns of choicely bred strains.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

R. J. MERKELEY, Sacramento, breeder of Norman, Percheron Horses and thoroughbred Shorthorn Cattle.

HOLSTEINS—New lot Eastern-bred animals, including Netherlands; Angies and Case Strains. Pouch for ringing bulls, \$1.00 postpaid. Berkshire Swine. Catalogues. F. H. Burke, 401 Montgomery St., S. F.

M. D. HOPKINS, Petaluma, Cal. Eastern Imported registered Shorthorn Bulls and Heifers for sale.

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PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 16 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. Write me.

BRADLEY RANCH, San Jose, Cal., breeder of recorded thoroughbred Shorthorn Cattle. A choice lot of young stock for sale.

EL ROBLA RANCHO, Los Alamos, Santa Barbara Co., Cal. Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford Cattle. Information by mail. C. F. Swan, manager.

VALPARAISO PARK. Thoroughbred Polled Angus and Durham Cattle. Thoroughbred Berkshire Swine. Address F. D. Atherton, Menlo Park.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

T. E. MILLER, Beecher, Ill. Oldest and best herd Hereford Cattle in U. S. Cattle delivered in California.

P. H. MURPHY, (Brighton,) Perkins P. O., breeder of Recorded Short Horns and Poland China Hogs.

COTATE RANCH BREEDING FARM, Pages Station, S. F. & N. P. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

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CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

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ANDREW SMITH, Redwood City, Cal.; see adv't.

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SHEEP DIP.

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San Francisco, Cal., Oct. 22, 1886. **PETER SAXE & SON**, Lick House, S. F.

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To grow large and profitable crops and at the same time to make the farm better each year, is the problem for the farmer.

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FERTILIZE!

NITROGENOUS SUPERPHOSPHATE.

UNIVERSITY OF CALIFORNIA, Nov. 3, 1886.

DR. J. KORSIG—Dear Sir: I have analyzed your sample of "Nitrogenous Superphosphate," with the following result:

Soluble Phosphoric Acid.....	12.90 per cent
Reverted Phosphoric Acid.....	.95 "
Insoluble Phosphoric Acid.....	2.83 "
Potash.....	2.23 "
Ammonia.....	1.87 "
Nitric Acid.....	2.95 "

The above amount of Nitric Acid is equal to 0.85 per cent Ammonia, therefore, total of Nitrogen calculated as Ammonia, 2.72 per cent.

This Fertilizer is a Valuable Manure for vineyards, orchards, gardens, farms, and I recommend its use by the cultivators of the soil generally, in California. Yours truly,
DR. E. A. SCHNEIDER.

University of California, College of Agriculture.
BERKELEY, Nov. 20, 1886.

DR. J. KORSIG, San Francisco—Dear Sir: I take pleasure in adding my testimony to that of Dr. Schneider as to the high quality of the "Nitrogenous Superphosphate" Fertilizer, analyzed by him at your request. It is a high-grade article, and as such returns the user a better money value than a low-grade.

H. M. NEWHALL & CO., Agents, 309 and 311 Sansome St., San Francisco.


fertilizer. It is especially well adapted to use in California, on account of the predominance in it of Phosphoric Acid, which is generally in small supply in our soils. Yet it is desirable that "complete" fertilizers be used in our orchards and vineyards, and yours is of that character in furnishing Potash and Nitrogen as well. Very respectfully,
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The value of this Fertilizer consists in the large percentage it contains of Phosphoric Acid—the chief element of all plant food—in combination with the necessary quantities of Potash and Ammonia, and the ease and cheapness with which it can be applied.

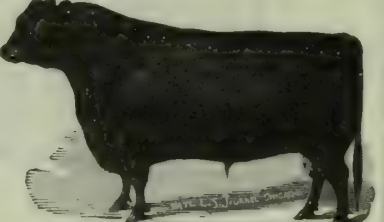
In ordinary soils the following quantities will be found sufficient: For Wheat, Barley, Corn and Oats, 300 to 350 pounds per acre. For Grass, Sugar Beets and Vegetables, 250 to 300 pounds per acre. For Vines, Fruit Trees, from 1 pound to 5 pounds each. For Flower Gardens, Lawns, House Plants, etc., a light top dressing, applied at any time, will be found very beneficial.

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For information address or call on S. N. Straupe as above. No trouble to show stock to intending purchasers.

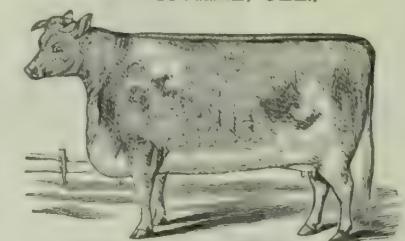
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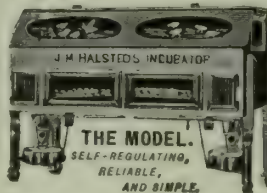
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STANDARD POULTRY preparation for TEN YEARS. Sold by every principal merchant; also at 425 WASHINGTON STREET, SAN FRANCISCO.

Great Combination Sale



TRACK and ROAD HORSES,

Trotting Colts and Fillies,

STALLIONS and BROOD MARES

At 11 A. M. on
WEDNESDAY, JUNE 27th,

—AT—
Bay District Track, SAN FRANCISCO.

The well known Trotting Horse, **Conde (2:20)**, will be offered at this Sale.

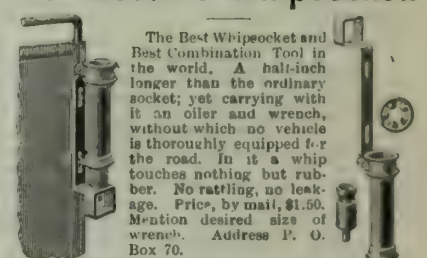
Among the other Track Horses offered will be Old Nick (2:23), Patch Allen, Albert, Col. Hawkins (2:29) and Clara G (2:34), Totters, and Pocahontas (2:22) and Little Hope (2:26), Pacers. Colts and Fillies will also be offered by Monroe Chief, Guy Wilkes, Antero, Sterling, Prompter, Fallis and other noted Stallions; also Brood Mares of approved blood with foal by Harold, Cassack, Ezra, Mount Vernon, Waldstein and other standard horses. Trotters and Pacers are now being exercised at the track daily. Remainder of Horses will be on exhibition June 24th.

Catalogues giving full description and pedigrees may be now obtained of

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San Buenaventura, Cal.

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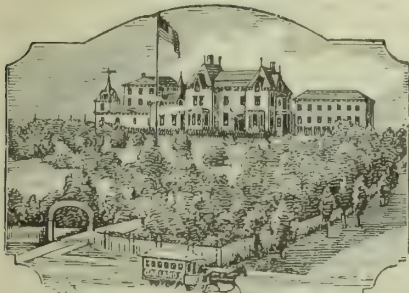
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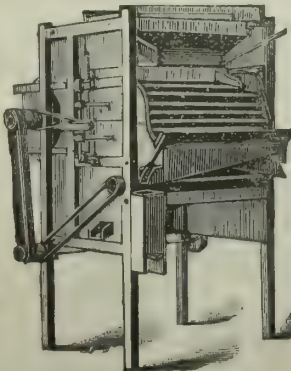
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S. H. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, June 20, 1888.

Trade the past week in farm products, outside of cereals, has been quite active. The rainy, cloudy weather has been against grain maturing evenly, and at the same time has been against fruits, which at this season of the year, require clearer skies. The nutriment in the dry grass has been killed by the rains, which will operate against large owners of stock. The grain harvest is well under way. The wheat market at the East and abroad has been gradually receding the past week. The following is today's cable:

LIVERPOOL, June 20.—Wheat—Quiet but steady. California spot lots, 6 1/4 d to 6 7/8 d; off coast, 33 3/4 d; just shipped, 33 3/4 d; nearly due, 33 3/4 d; cargoes off coast, steadier; on passage, better feeling appears to prevail; quantity on passage to Continent, 616,000 qrs.; wheat and flour in Paris, steady; weather in England, cold.

Foreign Review.

LONDON, June 18.—The *Mark Lane Express* in its review of the grain trade, says: Supplies of English wheat are growing less; values are unchanged. The wheat-crop prospects are less promising, but the potato crop will be unusually good, and this, together with the large crop left over, will influence trade in breadstuffs. Flour is 3d cheaper. Trade in foreign wheat is slow. At today's market wheat and flour were against sellers. Australian and Russian wheats were 6d lower. Corn was 3d cheaper. Barley was dull and oats steady. Calcutta linseed is 3d cheaper.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Day.	Cash.	June.	July.	Aug.	Sept.
Thursday	96 1/2	96 1/2	91 1/2	92 1/2	92 1/2
Friday	92 1/2	90 1/2	89 1/2	90 1/2	91 1/2
Saturday	91 1/2	89 1/2	89 1/2	90 1/2	90 1/2
Sunday	91 1/2	89 1/2	89 1/2	90 1/2	90 1/2
Monday	90 1/2	89 1/2	89 1/2	90 1/2	90 1/2
Tuesday	90 1/2	89 1/2	89 1/2	90 1/2	90 1/2

The closing prices for wheat have been as follows, at Chicago:

Day.	Cash.	June.	July.	Aug.	Sept.
Thursday	82 1/2	82 1/2	83 1/2	82 1/2	83 1/2
Friday	82 1/2	81 1/2	82 1/2	82 1/2	83 1/2
Saturday	81 1/2	81 1/2	81 1/2	82 1/2	82 1/2
Sunday	81 1/2	81 1/2	81 1/2	82 1/2	82 1/2
Monday	81 1/2	81 1/2	81 1/2	82 1/2	82 1/2
Tuesday	81 1/2	81 1/2	81 1/2	82 1/2	82 1/2

CHICAGO, June 20.—Wheat—82 1/4 c for cash, 82 1/2 c for July, 83 1/2 c for August and 83 1/2 c for Sept. Corn—5 1/2 c for July.

NEW YORK, June 20.—Wheat—81 1/2 c for cash, 89 c for June, 89 1/4 c for July, 90 1/4 c for August and 91 1/4 c for Sept.

California Products at Chicago.

CHICAGO, June 16.—On account of heavy receipts of peaches from the South there from California are having a slow sale. Boxes of 20 lbs sell at \$1.75. Plums are quiet with Royal Natives quotable at \$3.25 per crate of 20 lbs.

Cherries of very choice Royal Anne variety, in 10-lb boxes, sold at \$2.50, but sales are rather slow.

Oranges are steady, and trade in that fruit from California is only moderate on account of peaches and other green fruits being quite plenty; they sell as follows: California bright fruit, 1/2 box, \$4.50; 5/8 box, \$3.50; 3/4 box, \$3.75.

California dried fruits are ruling about steady at former prices. No changes to note in the general state of trade. The demand is mainly for bleached or evaporated apricots. For unpeeled peaches and for raisins, plums and prunes the market is slow. Prices are: Apricots, sun-dried, 1/2 lb, 8@9c; bleached, prime, 1/4 c; do., choice, 1/4 c; do., fancy, 15 1/2 c; evaporated, choice to fancy, 14 1/2 c; peaches, sun-dried, 1/2 lb, 9@10 1/2 c; do., evaporated, unpeeled, 1/2 lb, 14c; do., evaporated, peeled, 1/2 lb, 10@20c; plums, unpitted, 1/2 lb, 6@7c; do., pitted, dull at 10@11c.

Raisins, loose Muscates, 2-crown, 1/2 box, \$1.35 @1.40; do., 3-crown, 1/2 box, \$1.45 @1.50; do., London layers, 1/2 box, \$2.2 @2.25.

Prunes, small, 1/2 lb, 6@7c; do., fancy, large, dull, 8 1/2 @9c.

New California potatoes are slow at about \$1.65 per sack.

In consequence of warmer weather the demand for hops is somewhat improved. The supply is reported very small, and a continuation of good trade, it is said, will cause prices to improve, though as yet there is no change to note. Crop advices in the Eastern States are favorable only so far that the growth is somewhat irregular but the vines are very clean. English reports say that the yards are somewhat infested with vermin, but not to any serious extent as yet. We quote Pacific Coast, choice, 1/2 lb, 12@13c; do., common to prime, 10@11c.

Fruit Sold at Auction.

NEW YORK, June 18.—A carload of California peaches was sold at auction here to-day for from 65 to 85c per box. The fruit was forwarded here from Chicago, and was not sent by the California Fruit Union. It was in poor condition.

Wool.

NEW YORK, June 19.—Texas wool had good attention. Several full lines were taken. The market shows a degree of steadiness not noticeable for some time past. High qualities are quoted fairly firm, even with free receipts reported on the way. The worst of mills diminish. The reports of Philadelphia's business names only 380,000. Sales—10,000 lbs spring California, 18c; 7000, 18c; Texas, 13@18c; 5000 Texas, 17c; 3000 scoured Texas, 47c; 2000 half-blood, 33c; 10,000 quarter-blood common, 33c; 10,000 fine Territory, 17 1/2 c; 10,000 medium Territory, 21c; 2000 Southern, 23@24c; 25,000 fine delaine, 32c; 322,000 Texas, 40c; Noils, 6000. Fifty-nine bales of foreign on private terms.

Miscellaneous.

NEW YORK, June 19.—The latest wheat-crop re-

ports and estimate award only 50,000,000 bu. for exportation.

One carload of peaches by auction to-day brought 85c @ \$1.25.

Apricots are plenty, and, with trying weather, are down to 10@12 1/2 c.

There is more movement in hops; 500 bales sold at 10@12c; grades of State range from 10@13c; new Pacific, 8@11c; all old, 3@6c. Crop reports favor holders.

Raisins and barley are steady, owing to the warm weather. Two-crown, \$2.40 @2.65; 3-crown, \$1.50 @2.05; layers, nominal at \$2.60 @2.75.

Lima beans are firm at \$2.75.

Mustard seed is dull and has been offered as low as \$3 @6. The price of one rumored sale was \$2.50.

Hides are in fair demand, but mostly at concessions. There are holders at full rates for the best.

Local Markets.

BAGS—The market has been gradually settling until the range for Calcutta's at the close is 7 1/2 to 7 3/4 c. The latter for choice guaranteed.

BAKLEY—The market has held steady with a firm tone throughout the past week. The selling pressure is not large; there is more disposition to hold. On Call trading was light throughout the week. The following are to-day's sales:

Morning Session: Buyer 1888—500 tons, 94 1/2 c; 500, 95c; 200, 94 1/2 c. Seller 1888, new—200 tons, 85c; 100, 85 1/2 c @ c. Afternoon Session: Buyer 1888—100 tons, 94 1/2 c. Seller 1888, new—300 tons, 85c @ c.

BUTTER—Choice to gilt-edged is scarce and fetch good prices. Fair to good are in liberal offerings. Eastern butter glut the market at low prices.

EGGS—Strictly choice, fresh laid are wanted. Indeed the entire market is stronger and in better position. The demand is good.

CHEESE—Choice is steady at full prices. Fair to good is barely steady. The demand is good.

FLOUR—Cutting in prices of outside brands is reported. Standard brands are firmly held at full quotations. The demand is steady.

WHEAT—Millers report a great scarcity of choice, bright old. The stock of good to choice is light. In options, trading the past week was light; dealers appear disposed to await crop advices from Europe, and also from the Central States. The following are to-day's sales on Call.

Morning Session: Buyer 1888—300 tons, \$1.48 1/2; 1000, \$1.48 1/2 @ c.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to June 18 '87.	July 1 '87 to June 16 '88.
Flour, qr. sks.	4,060,389	3,595,227
Wheat, cts.	12,753,189	8,267,000
Barley, cts.	2,234,857	2,261,518
Oats, cts.	134,472	157,704
Potatoes, sks.	842,851	1,119,235
Corn, sks.	125,813	239,476
Rye, sks.	27,784	18,490
Buckwheat, sks.	5,865	3,054
Beans, sks.	442,061	394,703
Brn, sks.	438,558	499,933
Hay, tons.	104,213	117,027
Salt, tons.	22,828	17,050
Wool, bales.	85,922	74,004
Hides, No.	108,657	105,555
Raisins, 20-lb boxes.	138,916	112,266
Quicksilver, flasks.	18,321	30,276
Hops, bales.	13,370	15,918

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1 '86 to June 18 '87.	July 1 '87 to June 16 '88.
Flour, sks.	254,560	430,262
Wheat, cts.	998,374	1,190,939
Barley, cts.	6,198	721
Oats, cts.	338,522	277,725
Corn, cts.	117,804	12,590
Wool, bales.	21,258	12,072
Brn, sks.	29,834	68,810
Hops, bales.	801	508
Hides, No.	35,834	32,947
Rye, cts.	5,827	5,827
Potatoes, sks.	144,834	82,365

Cereals.

The closing sales on the San Francisco Call Board were as follows:

Date.	WHEAT.	Buyer Season.	Buyer Year.
Thursday
Friday
Saturday
Sunday
Monday
Tuesday

Date.	BAKLEY.	Buyer Season.	Buyer Year.
Thursday
Friday
Saturday
Sunday
Monday
Tuesday

The New York Produce Exchange Reporter in reporting on flour, says: "Winter-wheat brands continue in much the same general condition before noted. A great many holders talk confidently at least, owing to the unfavorable crop reports received from the winter-wheat States; millers in many sections are unable to buy wheat, claiming that wheat in the country tributary to their mills is nearly exhausted. Hence there is a reluctance about selling. A good many lots if sold at the price now obtainable could not be produced again at the same figures. Some holders are known to be refusing to offer supplies at the moment, but the general market lacks a positive tone and values do not keep well up to extremes. The winter-wheat States of Ohio, Indiana, Illinois and Michigan, suffered severely from climatic influences, and prospects for a minimum crop are patent. The Illinois State report, from returns to June 2d, says the outlook for winter wheat is discouraging. In but few of the Southern counties will there be even three-fourths of an average yield per acre on the limited area of wheat that has not been plowed up, while in many of the lead-

ing winter-wheat counties there will be from 10 to 35 per cent of an average yield per acre. The State Board of Agriculture at Missouri announced a decrease of 13 points in the condition of the crop since the May report, or 64 against 77. A prominent flour merchant has received from 23 reliable mills in Ohio estimates about the wheat crop. The acreage is given at 63 per cent, but there has been general improvement in the last month. The amount of old wheat is given as 20 per cent of the crop.

The total stocks of wheat in the United States and Canada on June 2d, out of farmers' hands, as reported to Bradstreet, from 950 points of accumulation, aggregated but 46,810,000 bushels on both sides of the Rocky mountains, against a total of 90,991,000 bushels five months ago, January 1, 1888, and as compared with 58,036,000 bushels reported to this journal one month ago, May 1st.

The decline in visible wheat stocks during the month of May, 1888, both coasts, amounted to about 11,200,000 bushels, as compared with a decline of 11,500,000 bushels during April last, and with a decline of nearly 19,000,000 bushels during the three months of January, February and March, 1888. Tabulating these decreases and contrasting them with corresponding declines in totals of the "official" visible supply stocks (east of Rocky mountains only) we find Bradstreet's reports show a decline of 44,444,000 bushels, January 1st to June 1st, as compared with a reduction of but two-fifths that quantity in official report:

	Bradstreet's.	N. Y. Prod. Exchange.
During May, 1888	11,238,000	6,047,818
During April, 1888	14,537,000	1,911,233
During Jan., Feb., March, '88	18,022,000	10,036,654
Total decrease	44,444,000	17,995,704

The decline in stocks of wheat from January 1st to June 1st, as shown by special reports to this journal, has been about 50 per cent, and as exhibited in official returns published by the exchanges but 41 per cent.

Comparing the two reports, for the region east of the Rocky mountains only, the figures are as follows:

	Bradstreet's.	N. Y. Prod. Exchange.
During May, 1888	9,400,000	6,047,818
During April, 1888	11,400,000	1,911,233
During Jan., Feb., March, '88	14,000,000	10,036,654
Total decrease	34,800,000	17,995,704

The total stocks of wheat at the dates named, east and west of the Rocky mountains, and east of the Rocky mountains, United States and Canada, as reported to this journal, were as follows.

	Bushels.	June 1.	May 1.	Jan. 1.
East of Rocky mountains	39,020,333	48,436,782	73,825,685	80,991,685
East & west of Rocky Mts.	46,800,333	58,036,782	90,991,685	90,991,685

During the next four weeks, to the nominal end of the crop year, the visible supply will continue to decline at a rate probably not less than 2,000,000 bushels a week. This points to a probable total visible wheat supply for the United States and Canada of perhaps 30,000,000 bushels east of the Rocky mountains on July 1, 1888. One year ago, on July 1, 1887, the total quantity of wheat remaining in sight, as reported to Bradstreet's, amounted to 38,620,000 bushels, two years ago to 33,460,000 bushels, and three years ago (1885) to 48,196,000 bushels. The stocks of wheat in sight to be carried over on the first of next month, it is perceived, promise to be the smallest for three years past—the period within which stocks held at northwestern interior elevators have been uniformly reported in these columns.

At the close of each season the market for cereals drag, and the one just closing is no exception. Wheat has the entire week been dull and listless. This condition is due more to dealers watching the harvest now under way and also the crops in the central States and in Europe. In this State the outlook is spotted. Many localities report a large yield and plump grain, while others report a light yield. But then there is no denying but it is much better than promised a few weeks ago, yet the acreage is small, owing to the large number of fields cut for hay, and the severe dry spell in the early spring drying up many hundred thousands of acres. This was given at some length in these columns a few weeks ago. It is an established fact, based on the very best information, that the surplus this year will not equal that of 1887. The tonnage to carry off the surplus is larger than at this time last year, which means a low rate of charters for the entire season. Silver is advancing abroad, which, if it goes up higher, will be against Indian and Russian wheat, but particularly the former. Crop advices abroad are poor, while in the United States the surplus this year is now estimated at about 40,000,000 bu. less than last year, while the stock of old will be about 10,000,000 bu. less than in 1887. Total shortage, 50,000,000 bu.

Oregon advices are essentially unchanged. Newspaper reports are to the contrary; the yield of wheat and barley in that State and Washington Territory will not be more than that of 1886, which was all of one-third less than last year's. The quality will be poor, and very much will be shriveled, although cool weather lately has very materially helped in filling out the kernel. The carry-over stock will not be as large as thought, owing to liberal shipments to this State and fair shipments to Europe.

In barley the market maintains a fairly steady, firm tone the past week. Trading was light, as were the receipts. Prices have been hammered low by the bears and cause well-informed to claim that it can only be a question of a short time before higher values obtain. This opinion is further strengthened by the short crop compared with last year and the large increased consumption. The loss of the dry feed on the plains, by the heavy rains, will stimulate the consumption still further, owing to the necessity of feeding "cut-feed." The supply of bright barley will be proportionately less than last year. Oregon advices report that the yield east of the Cascades will fall all of 25 to 40 per cent below that of last year, but it will be bright. Last year it was off-colored, owing to rains at the wrong time. In oats the market ruled dull and weak, except for choice, throughout the week, due chiefly to buyers bidding down and confining purchases to as small quantities as possible. The crop of the coast this year will be short. In the central States our advices report a

large increased acreage seeded and the outlook favorable.

In corn there is absolutely nothing new to report. Crop prospects continue good. In the central States the acreage planted is largely in excess of last year. The carry-over this year will probably be the least ever before known.

Rye is inactive but steady. Buckwheat is dull; nothing doing.

Fruits.

Cherries are growing scarcer, and consequently prices begin to appreciate. Apricots came in very heavily the past week, and as only one canner was buying up to Monday he cleaned up the market at from 2 to 2 1/4 c. On Monday other buyers came and prices did a shade better, running from 2 1/4 to 2 1/2 c. Canning varieties of peaches are not coming in yet. Those received sell low. For canning varieties canners still contract at about 1 1/2 c @ 1 lb, although as high as 2c has been paid for something considered extra. Mr. Wakefield, at Los Gatos, sold his crop of Muir's, at the latter price, to a canner. In pears 1 1/2 to 2c are named as the contract prices.

The shipments of green fruits to the central and eastern States have been heavier so far this year than ever before. This necessarily is of great assistance in keeping values up. In some localities fully three-quarters have been sent East.

Grapes are beginning to come in, but as yet they are confined to sample parcels.

The weather in the Coast counties has been against sun-drying. Cool, moist nights always make dark-colored and undesirable fruits when sun-dried. The stock of 1887 dried fruits is very light, but then dealers will not buy only to fill the small trade orders, even if decided concessions in asking prices are made, owing to the new season being near at hand. Farmers should remember that the best time, nine times out of ten, to sell is in the buying season, that is, when dealers are disposed to stock up; then any sized consignment can be placed, but at the tail end of the season it is hard to get buyers unless the new crop promises to be a failure.

Feedstuff.

Ground barely is barely steady; some cutting in prices is reported. Bran and middlings are lower under heavy receipts from Oregon. The consumption is increasing.

Hay, contrary to general expectations, holds strong. The crop in Oregon is short and that State like California has poor pasture this year which will require more hay for feeding. The rains in this State have taken the nutriment out of the grass on the grazing land, which will necessitate earlier feeding. The receipt of hay is only fair while the demand is good. The crop of volunteer this year was a failure, which has caused more fields of wheat, barley and oats to be cut for hay, but even with this increase it is doubtful if the supply will more than equal last year's, while the carry-over is smaller and the consumption is larger.

Live-Stock.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain fed and one-half from the price of grass fed, that is, animals running at large.)

HOGS—On foot, grain fed, 6 1/2 @ 6 3/4 c @ lb.; dressed, 9 @ 9 1/2 c @ lb.; soft, 5 1/2 @ 6 c @ lb.; dressed, 8 1/2 @ 9 1/2 c @ lb. Stock hogs, 4 @ 5 1/2 c @ lb.

BEF—Stall fed, 8 @ 8 1/2 c @ lb.; grass fed, extra, 7 @ 7 1/2 c @ lb.; first quality, 6 1/2 @ 6 3/4 c @ lb.; second quality 6 @ 6 1/2 c @ lb.; third quality, 5 @ 5 1/2 c @ lb.

VEAL—Choice 8 @ 9 c @ lb.; fair to good, 6 @ 7 c @ lb. MUTTON—Wethers, 6 @ 6 1/2 d @ lb.; ewes, 5 1/2 @ 6 c @ lb.; lamb, spring, 8 1/2 @ 9 1/2 c @ lb.

Choice bullocks are scarce and wanted. Choice mutton sheep are scarce and fetch better prices. Hard hogs are also wanted, and a desirable consignment can be placed at a slight advance. In milch cows there is nothing doing. In horses there is a slightly better inquiry. General utility horses fetch from \$150 to \$300 each. Single footers from \$200 to \$600.

Poutry kept strong up to Monday when the arrival of an Eastern shipment knocked values, but on Wednesday prices were again better.

Hops are stronger. The stock is light. In futures nothing outside of that heretofore reported has been done.

Tallow is scarce and wanted; as are deer skins.

Wool has a stronger tone but is not quotable higher. Sales the past week aggregate about 1,000,000 lbs. Miller & Lux are reported to be large buyers under the belief that prices are too low below foreign markets, even if wool is admitted free. Prices, they claim, will advance from 3 to 5c per pound. Choice grades of wool are scarce and wanted.

In beans there is nothing doing. The flax crop, it is said, will be short this year in Idaho and Eastern Washington Territory.

Vegetables.

Under a falling off in the shipping demand and continued free receipts, potatoes have fallen to lower prices with a weak tone at the closing.

As onions improve in quality the market strengthens, owing to a better demand both near and distant. The market closed firm.

String beans have dropped to figures which allow canners to clean up the market at from 1 to 1 1/2 c @ lb. Peas are steady, with canners still cleaning up the market when it is overstocked, and prices low. Green corn fluctuates from day to day. Tomatoes and cucumbers continue to recede. In other vegetables the market is regulated from day to day by the supply and demand.

Miscellaneous.

The tonnage movement compares with last year at this date as follows:

	1888.	1887.
On the way	435,851	276,119
In port, disengaged	76,754	96,288
In port, engaged	19,366	25,487
Totals	521,971	397,774

To obtain the carrying capacity, add 60 per cent to the tonnage.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS.		ONIONS.	
Bayo, chl.	2 00 @ 2 25	New.	50 @ 60
Butter.	3 40 @ 3 65	Nuts.	6 @ 8
Peas.	2 00 @ 2 25	Walnuts, Cal. lb.	6 @ 7
Red.	1 75 @ 2 00	do Chile.	6 @ 7
Pink.	1 75 @ 2 00	Almonds, hd sh.	5 @ 6
Large White.	3 00 @ 3 50	Soft shell.	11 @ 15
Small White.	3 00 @ 3 50	Paper shell.	14 @ 15
Lima.	3 00 @ 3 50	Brazil.	9 @ 11
Fld Peas, bk eye	2 00 @ 2 20	Pecans.	10 @ 16
do green.	3 00 @ 4 00	Peanuts.	4 @ 6
do Niles.	3 00 @ 4 00	Filberts.	10 @ 12
BROOM CORN.		Hickory.	5 @ 8
South'n #1 ton.	60 00 @ 80 00	POTATOES.	
North'n #1 ton.	60 00 @ 80 00	Early Rose.	25 @ 60
CHICORY.		Chile.	50 @ 60
California.	6 @ 7	Peerless.	40 @ 60
German.	7 @ 8	POULTRY AND GAME.	
DAIRY PRODUCE, ETC.		Hens, doz.	5 00 @ 7 00
BUTTER.		Roosters.	5 50 @ 13 00
Cal. fresh roll, lb.	20 @ 25	Ducks, tame.	3 00 @ 9 00
do Fancy brands.	26 @ 27	Geese, pair.	1 25 @ 1 50
Eastern.	14 @ 17	do Goslings.	1 75 @ 1 50
CHEESE.		Turkeys, lb.	15 @ 19
California, lb.	9 @ 11	Rabbits, doz.	1 25 @ 1 50
Eastern style.	10 @ 13	Hare.	1 00 @ 1 75
EGG.		PROVISIONS.	
Cal. ranch, doz.	25 @ 26	Cal. Bacon.	11 @ 12
do store.	20 @ 24	Heavy, lb.	12 @ 12
Eastern.	16 @ 19	Medium.	12 @ 12
FEED.		Light.	12 @ 12
Bran, ton.	15 50 @ 17 50	Ex ra Light.	13 @ 13
Feedmeal.	30 00 @ 31 00	Lard.	9 @ 11
Gr'd Barley.	18 00 @ 19 00	Cal. Sm'd Beef.	11 @ 12
Hay.	9 00 @ 10 00	Hams, Cal.	12 @ 14
Middlings.	18 00 @ 19 00	do Eastern.	14 @ 15
Oil Cake Meal.	32 50 @ 35 00	SEEDS.	
do new process.	32 50 @ 35 00	Alfalfa.	8 @ 9
Straw, bale.	40 @ 50	Canary.	3 @ 4
FLOUR.		Clover, Red.	11 @ 12
Extra, City Mills.	4 00 @ 4 35	White.	20 @ 22
do Co try Mills.	3 75 @ 4 00	Cotton.	20 @ 22
Superfine.	3 25 @ 3 50	Flaxseed.	2 @ 2
GRAIN, ETC.		Hemp.	4 @ 4
Barley, feed, chl.	80 @ 92	Italian Rye Grass.	10 @ 11
do Brewing.	95 @ 115	Millet, German.	5 @ 6
Chevalier.	1 10 @ 1 20	do Common.	5 @ 6
do Coast.	90 @ 1 05	Mustard, white.	12 @ 21
Buckwheat.	1 50 @ 1 70	do Brown.	2 @ 3
Crust, White.	1 45 @ 1 55	Rape.	11 @ 2
Yellow.	1 25 @ 1 30	Ky. Blue Grass.	15 @ 17
Oats, milling.	1 55 @ 1 60	Red quality.	13 @ 15
Choice feed.	1 40 @ 1 42	Swat. Y. Grass.	7 @ 8
do good.	1 35 @ 1 37	Orchard.	17 @ 18
do fair.	1 30 @ 1 32	Red Top.	9 @ 10
do Gray.	1 30 @ 1 32	Hungarian.	8 @ 9
Wheat, milling.	1 75 @ 1 80	Lawn.	30 @ 40
Gilt edged.	1 45 @ 1 50	Mesquit.	8 @ 9
do Choice.	1 40 @ 1 45	Timothy.	7 @ 8
do fair to good.	1 37 @ 1 40	TALLOW.	
Shipping, cho'ce	1 35 @ 1 40	Crude, lb.	3 @ 5
do good.	1 32 @ 1 35	Refined.	6 @ 7
do fair.	1 30 @ 1 32	WOOL, ETC.	
HIDES.		SPRINGS—1888.	
Dry.	11 @ 12	Humboldt and	15 @ 18
Wet salted.	5 @ 6	Mendocino.	12 @ 15
HONEY, ETC.		Sac'to valley.	12 @ 15
Beeswax, lb.	20 @ 24	Free Mountain.	15 @ 18
Honey in comb.	11 @ 13	S Joaquin valley.	9 @ 12
do fancy.	14 @ 15	do in mountain.	10 @ 13
Extracted, light	6 @ 7	Calav & N'h'll.	12 @ 17
do dark.	5 @ 6	Oregon Eastern.	12 @ 17
HOPS.		do valley.	— @ —
Oregon.	6 @ 15		
California.	6 @ 15		

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grad a sell less than the lower quotations.

Apples, bx, com		do unspiced.	
do Choice.	1 00 @ 1 35	Pruces.	5 @ 9
do Choice.	1 00 @ 1 35	do French.	8 @ 11
do Choice.	1 00 @ 1 35	RAISINS.	
do Choice.	1 00 @ 1 35	Delmas, Chus, fcy	3 25 @ 3 50
do Choice.	1 00 @ 1 35	Imperial Cabio.	— @ —
do Choice.	1 00 @ 1 35	et, fancy.	2 00 @ 2 25
do Choice.	1 00 @ 1 35	Crown London	— @ —
do Choice.	1 00 @ 1 35	Layers, fcy.	2 00 @ 2 25
do Choice.	1 00 @ 1 35	do Loose Mus-	1 90 @ 2 10
do Choice.	1 00 @ 1 35	cats, fancy	1 90 @ 2 10
do Choice.	1 00 @ 1 35	do Loos Mus-	1 60 @ 1 90
do Choice.	1 00 @ 1 35	Cal. Valencia.	1 60 @ 1 80
do Choice.	1 00 @ 1 35	do Lay's.	1 50 @ 1 60
do Choice.	1 00 @ 1 35	do Sultanas.	1 60 @ 1 75
do Choice.	1 00 @ 1 35	Dried, sacks, lb.	5 @ 6
do Choice.	1 00 @ 1 35	Outside brands of raisins	— @ —
do Choice.	1 00 @ 1 35	sell at from 25 cts to 50 cts less	— @ —
do Choice.	1 00 @ 1 35	than above quotations.	— @ —
do Choice.	1 00 @ 1 35	Fractions come 25, 50 and 75	— @ —
do Choice.	1 00 @ 1 35	cents higher for halves, quar-	— @ —
do Choice.	1 00 @ 1 35	ters and eighths.	— @ —
VEGETABLES.		Asparagus, bx.	1 75 @ 2 50
do Choice.	1 00 @ 1 35	do ext' choice	3 00 @ 4 00
do Choice.	1 00 @ 1 35	Okra, dry, lb.	15 @ 25
do Choice.	1 00 @ 1 35	do Green, lb.	25 @ 30
do Choice.	1 00 @ 1 35	Parasips, chl.	1 50 @ 1 75
do Choice.	1 00 @ 1 35	Peppers, dry, lb.	8 @ 10
do Choice.	1 00 @ 1 35	do green, bx.	1 00 @ 1 10
do Choice.	1 00 @ 1 35	Squash, Sum-	— @ —
do Choice.	1 00 @ 1 35	mer, bx.	15 @ 30
do Choice.	1 00 @ 1 35	String beans, lb.	1 @ 3
do Choice.	1 00 @ 1 35	Turnips, chl.	1 0 @ 1 25
do Choice.	1 00 @ 1 35	Beets, sk.	1 25 @ 20
do Choice.	1 00 @ 1 35	Cabbage, 100 lbs	90 @ 1 00
do Choice.	1 00 @ 1 35	Carrots, sk.	30 @ 50
do Choice.	1 00 @ 1 35	Green Corn, sk.	1 0 @ 20
do Choice.	1 00 @ 1 35	do Sweet doz.	15 @ 25
do Choice.	1 00 @ 1 35	Green Peas, sk.	75 @ 1 00
do Choice.	1 00 @ 1 35	Sweet Pea, sk.	1 00 @ 1 75
do Choice.	1 00 @ 1 35	Mushrooms, lb.	5 @ 25
do Choice.	1 00 @ 1 35	Rhubarb, bx.	— @ —
do Choice.	1 00 @ 1 35	Cucumbers, bx.	25 @ 75
do Choice.	1 00 @ 1 35	Garlic, lb.	3 @ 1

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BY CALLIE L. BONNEY.

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No. 4 of this serial contains "The Choice of Occupation, or My Right Place in Life and How to Find It." Illustrated by Nelson Sizer, who has been the principal examiner in the Fowler & Wells office for forty years, and, skilled in the science, knows whereof he speaks. Mr. Sizer opens his able paper with this pertinent assertion: "If every boy or girl could be introduced to the line of industrial and economic effort to which he or she were, on the whole, best adapted, it would double the prosperity and material good of the next generation and greatly enhance the happiness of the race, besides abolishing poverty and nearly abolishing crime, as the choice of a pursuit is to a great degree the formation of a man's fortune and happiness."

Fairs of 1888.

Los Angeles—6 h Dist.—Live-Stock department, Aug. 6 to 11 (Hort. department, Oct. 6 to 11).
Napa—Napa Co.—Aug. 6 to 12.
Yuba—26th Dist.—Aug. 7 to 10.
Mechanics' Institute, San Francisco.—Opens Aug. 7.
Santa Rosa—Sonoma Co.—Aug. 13 to 18.
Petaluma—4th Dist.—Aug. 20 to 25.
Placerville—8th Dist.—Aug. 20 to 25.
Chico—3d Dist.—Aug. 21 to 25.
Oakland—1st Dist.—Aug. 25 to Sept. 1.
Marysville—13th Dist.—Aug. 27 to Sept. 1.
Sacramento—California State—Sept. 3 to 15.
Santa Barbara—19th Dist.—Sept. 11 to 14.
Hot Springs—Indians—Sept. 14, 15.
Independence—18th Dist.—Sept. 17 to 21.
Reno—Nevada State—Sept. 17 to 22.
Salem—Oregon State—Sept. 17 to 22.
Stockton—2d Dist.—Sept. 18 to 22.
Lakeport—12th Dist.—Sept. 18 to 22.
Concord—Contra Costa—Sept. 24 to 29.
San Jose—S. Clara Valley—Sept. 24 to 29.
Susanville—11th Dist.—Sept. 24 to 29.
San Luis Obispo—16th Dist.—Sept. 25 to 29.
Fresno—21st Dist.—Sept. 25 to 28.
Salinas—7th Dist.—Oct. 1 to 6.
Portland—Mechanics' Oct. 4 to 23.

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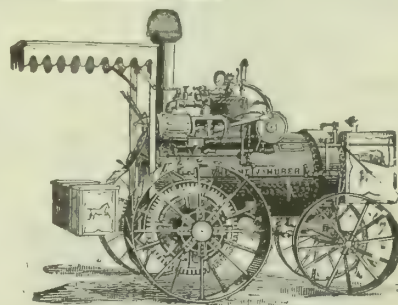
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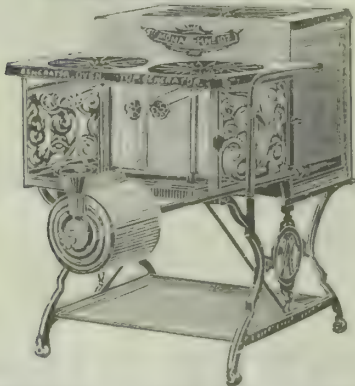
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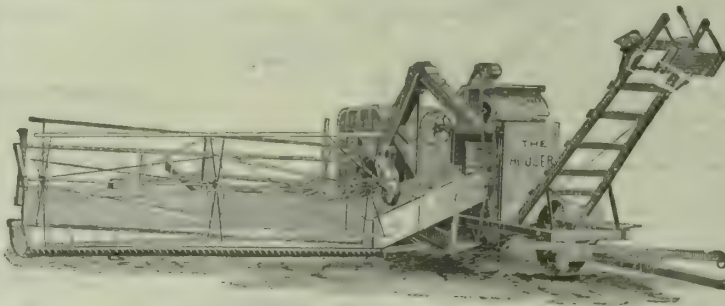
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They Have a Larger Sale than all Other Harvesters Combined.

THE SMALL HOUSER

Is adapted for Small Farms—few animals; rolling or foothill land. In weight, one-half of the
Large Houser. Both the Large and Small Houser have our

Improved Double Shoe Cleaner.

Which received the Premium over all competitors at both State and County Fairs and Field
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The MILLER LIGHTNING HAY PRESS

AWARDED

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Gold and Silver
Medals at Nevada
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won Contest
Money, \$50.

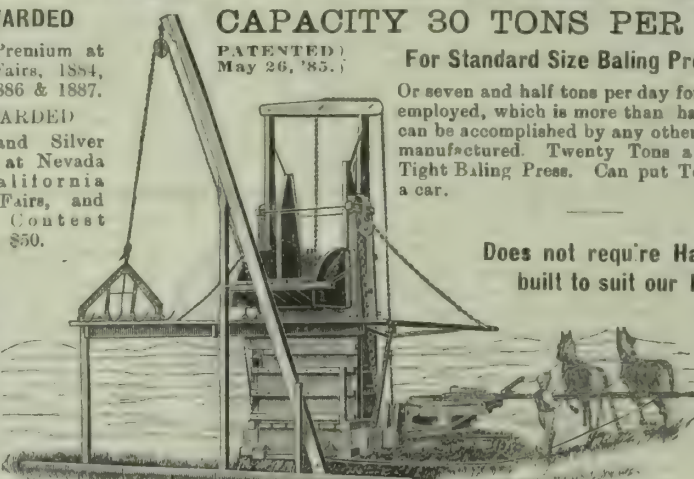
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Or seven and half tons per day for each man
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Tight Baling Press. Can put Ten Tons in
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For Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and Farmers wherever used.

The Cheapest and Best.

Put up in 1-pound, 5-pound, and 5-gallon Tins.
Every Can Warranted.

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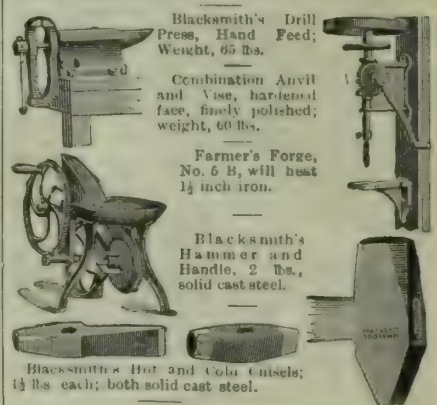
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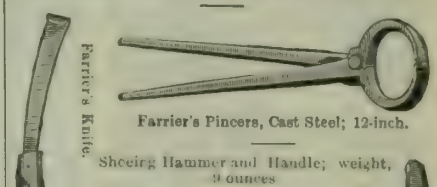
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Combination Anvil
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face, finely polished;
weight, 60 lbs.
Farmer's Forge,
No. 5 B, will heat
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solid cast steel.
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1 1/2 lbs. each; both solid cast steel.



Blacksmith's Tong, Wrought Iron, 18 inches.
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Farrier's Knife.
Farrier's Pincers, Cast Steel; 12-inch.
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EVERY TOOL GUARANTEED,
And we offer this complete
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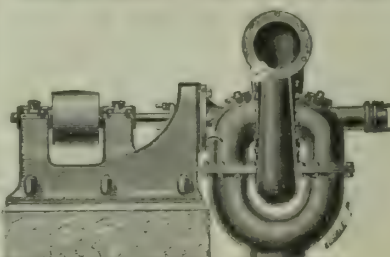
Which is hardly half the regular prices, and none can
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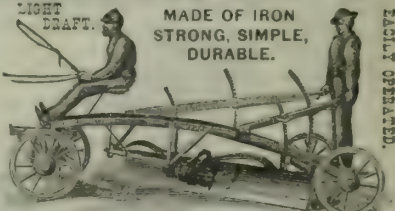
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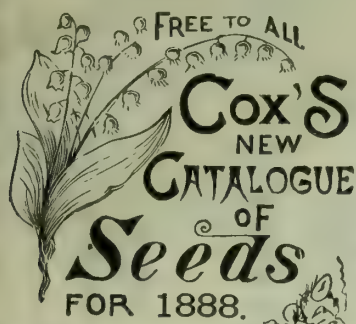
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French Walnuts, Home-grown Oranges and Rooted Grapevines.

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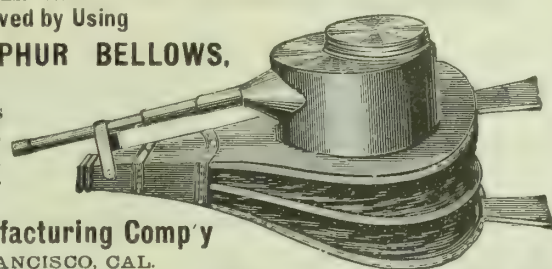
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Express C. O. D. All kinds of Bel-
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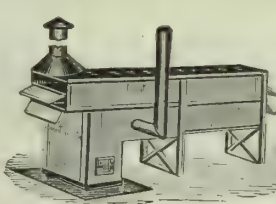
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HAY PRESSES!



THE HURRICANE—Size A.

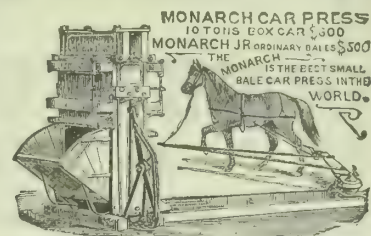
A mounted, horizontal double-ender. Size of bale,
when in the press, 17x22 40 inches. Average weight of
bale, 220 pounds. Capacity, from 16 to 25 tons per day.
Uses 4 men and works with 2 h-rses. REQUIRES NO
TRAMPING. Puts 10 tons or over in a box car.

Price.....\$1000.

THE HURRICANE—Size B.

Size of bale in press, 22x24x46 inches. Average
weight of bale, 260 pounds. Capacity, from 20 to 35
tons per day. Uses 5 men and works with 1 or 2 horses,
at option of baler. REQUIRES NO TRAMPING. Uses rope
or wire. Puts from 7 to 8 tons in box in a box car.

Price.....\$1000.



MONARCH CAR PRESS
10 TONS BOX CAR \$300
MONARCH JR. 5 TONS BOX CAR \$200
THE MONARCH
IS THE BEST SMALL
BALER CAR PRESS IN THE
WORLD.

THE SELF-TRAMPING JUNIOR MONARCH

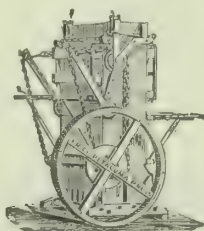
Size of bale in press, 22x24x46 inches. Average
weight of bales, 260 pounds. Capacity, from 15 to 25
tons per day. Uses 3 or 4 men, at option of baler.
Works with 1 or 2 horses. Uses rope or wire. Does its
OWN TRAMPING. Puts from 7 to 8 tons in a box car.

Price.....\$500.

THE MONARCH.

Same principle as Junior Monarch, only smaller and
heavier. Size of bale, when in press, 17x20x40 inches.
Average weight of bale, 220 pounds. Capacity, from 12
to 20 tons per day. Requires 3 men and 2 h-rses. Uses
wire only—rope will not hold. Does its OWN TRAMP-
ING. Puts 10 tons or over in a box car.

Price.....\$600



THE GENUINE PRICE PETALUMA.

Size of bale in press, 24x24x50 inches. Average
weight of bale, 250 pounds. Capacity, from 10 to 18
tons per day. Requires 4 men and 2 horses. Uses rope
or wire. Hay has to be tramped into the press. Puts
from 5 to 6 1/2 tons in a box car.

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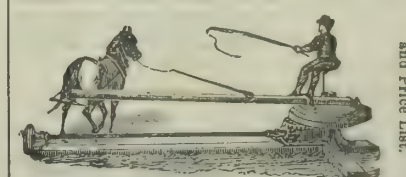
Size of bale in press, 26x26x50 inches. Average
weight of bale, 235 pounds. Capacity, from 10 to 15
tons per day. Requires 4 men and 2 horses. Uses rope
or wire. Hay has to be tramped in the press. Puts from
4 1/2 to 5 1/2 tons in a box car.

Price.....\$250.

The above is the finest line of Baling Presses in the
United States. They are nearly double the capacity of
those of other makers.

For large, illustrated Catalogue of the same, ad-
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HORSE POWERS, WINDMILLS, TANKS
and all kinds of Pumping Machinery built to order.
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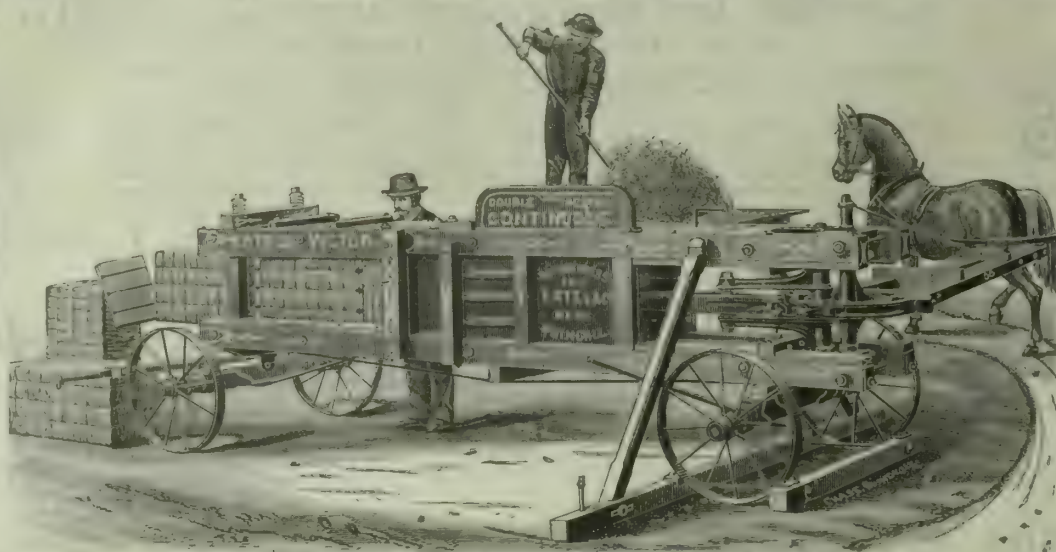
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VICTOR

Automatic Folder.

The Strongest, Fastest and Easiest Operating Baler Ever Made. Patented February 16, 1886, September 28, 1886, and May 10, 1887, by 44 Patented Claims of all New and Original Designs.

1888



1888

Guaranteed to Bale Hay or Straw Cheaper than any other. Full Weight to the Car. So Warranted or No Sale.

DOUBLE-ACTING PERPETUAL HAY and STRAW PRESS, A MACHINE IMITATED BUT NOT EQUALLED

In Symmetry, Simplicity, Durability, Ease of Management, Effectiveness of Power, Fast and Neat Baling. Needs but to be seen to be appreciated, and while the machine is only claimed to bale 10 to 15 tons per day's work, yet many parties using the Victor are baling over two tons per hour.

FOR REFERENCE WE NAME YOU A FEW OF THE MANY PARTIES USING IT:

MR. N. MATTHEWS, of Los Angeles, says his men have hauled with a Victor as many as 37 bales per hour (good weight).

CUNNINGHAM BROTHERS, of Glendora, say they have baled 4800 pounds of hay per hour.

MR. FRANK JOHNSON, Banning, says he is baling 6 tons per three hours.

MR. JAMES P. BURDICK, of Santa Ana, says the Victor is the only machine baling hay successfully.

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POWELL'S PATENT DERRICK.



MOVING.



UNLOADING.

Derricks complete, with ropes and block (no nets).....	\$120.00
One long net for one wagon.....	22 00
Two short nets for one wagon.....	32 00
Powell's Patent Net Blocks, per pair.....	8 00
Powell's Patent Foot Blocks, each.....	5 00

IMPORTANT FEATURES.

The entire wagon load is hoisted up in a center opening net, by a self-braced Portable Derrick, which is moved from stack to stack ground without being taken down. Half an hour is ample time to move and set. Two nets can be used in each box, and the load taken out in two parts by having a partition in the box. Any farmer can at once see many advantages gained by the use of this invention.

One large or two small Nets used for each wagon. Parties having boxes longer than 16 feet should order two nets for each box.

In ordering nets, send inside length of box, and state whether one or two nets are required for each.

In Use Over 15 Years and never One Returned.

H. C. SHAW PLOW WORKS,

MANUFACTURERS AND SOLE OWNERS,

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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XXXV.—No. 26.

SAN FRANCISCO, SATURDAY, JUNE 30, 1888.

\$3 a Year, in Advance.
SINGLE COPIES, 10 Cts.

A Historic California Town.

Generally by a historic town in California we mean a town which has lived through the Mexican regime and continued through American occupation, but we refer now to a town which sprang up since the occupation and is one of the oldest towns with a purely American history. It is the town of Benicia, which was founded by the early American settlers and was designed as the metropolis of California. The place was made the capital of the State, and it seemed that the substantiality of the city was assured. But by one of those vagaries for which trade is noted, the scene of busy commerce shifted, the capital was moved, the interests which promised to contribute to a city's growth were dispersed, and the town of Benicia, with its wealth of natural advantages, is yet one of the smaller municipalities of the State, and awaits with never-dying hope the fruition of its early promise. It has a permanent population of 3000 or more. It is about 30 miles from San Francisco, and 57 from Sacramento. The Central Pacific railroad runs through the town, crossing the Carquinez straits upon the monster ferry boat Solano, which conveys loaded cars and locomotives across the stream. At Port Costa, on the other side of the straits, connection is made with the Southern Pacific railway, which runs to Los Angeles. There is thus a convergence of railway lines at Benicia and Port Costa that makes this locality favorable for manufacturing and shipping, and immense wharves and warehouses have sprung up, and there has been established, in some measure, the results that the early settlers of Benicia foresaw. But the interests are now scattered. Could they have been concentrated in Benicia, the city would be one of the most flourishing in the State to-day. The favorable conditions, however, are being more and more appreciated, and Benicia undoubtedly has a prosperous era ahead.

The site of the city consists of hills and sloping or rolling land. The heights back from the water front offer elegant building spots, and already numerous showy and pretentious dwellings are to be seen. The view from these elevated sites is fine indeed, looking out upon the turbid waters of the straits, and over to the highlands of Contra Costa county beyond. To the west, the waters of San Pablo

bay spread out, offering a water stretch as far as the eye can reach. The health of the residents of Benicia is excellent, as the climate is a happy medium between the dampness of the coast and the heat of the valleys. It is becoming a favorite resort for tired dwellers of the city, who can profitably spend their vacation here. It is now the site of a number of excellent private schools and of prosperous manufacturing enterprises, including the Benicia Agricultural works of Baker & Hamilton, the largest factory of agricultural machinery in the State.

Our view of Benicia looking toward the

Pasteurizing the Rabbits.

Our files of Australian papers bring accounts of the early experiments with inoculating rabbits with the germs of chicken cholera which Pasteur said would breed an epizootic among them and thus carry them off by myriads. The experiments began April 28th. A number of rabbits were inoculated with the microbes in the morning and placed under close supervision in isolated boxes, but on the following Monday the rabbits did not show the slightest traces of the disease, which, according to M. Pasteur, should prove fatal in about 24 hours. Critics

Co-operation.

The advocates of this grand idea of self-help for producers can find much ground for satisfaction in the records of experience which come from a distance, even if co-operation does not advance more rapidly at home. If the plan continues to demonstrate its success on foreign soil, it is only a question of time when it will adapt itself to our conditions and needs and thrive here. The latest encouraging information on the subject is contained in a recent article in the *Economiste Francaise*, and we present the substance thereof as we find it translated in an exchange.

The account refers especially to what are called "agricultural syndicates" recently organized in France. It appears that there are nearly half a million occupiers and owners of land who have banded themselves together through the medium of syndicates for their personal advantage. The first syndicate was formed upon a small scale by one of the French professors of agriculture, who obtained the assistance of the Consul-General of his department and a small subsidy, by means of which the organization was established. This did so well that the idea was taken

up and many other syndicates were formed. They have enabled farmers and others who are members to obtain manures 15 per cent less than they would have to pay if they were not members of those bodies. The arrangement also includes seeds.

Further than this some of the syndicates already supply machinery and implements to their members at considerably reduced prices, and sometimes guarantee the payment from the member up to a certain limit. The syndicate at Nantes goes beyond the purchase of goods; it provides experts to advise the farmer, and arbitrators to act in disputes which may arise between the owner and occupier of the land. The same syndicate has organized an insurance fund for the benefit of its members, as well as a register enabling them to obtain laborers as they require them. In Paris there is a permanent center of existing syndicates, which has been joined by nearly 200 societies representing 150,000 agriculturists; and they have already arranged, so that the stock-selling farmers can dispose of their beasts and sheep direct to the butchers at the great Paris market, La Villette,



VIEW OF A PORTION OF BENICIA, LOOKING SOUTHEAST.

southeast, shows a part of the town in the foreground. Beyond flows the magnificent Strait of Carquinez, a mile in width, connecting the upper bay of Suisun and the lower bay of San Pablo. Opposite lie the low rolling Contra Costa hills, while away to the southeast looms up the purple dome of Mount Diablo, as shown on the left of the distance in the picture.

WOOL FREIGHTS.—The agent of the Canadian Pacific gives the following account of reduced rates: Scoured wool we took at \$2 50, and now we can take it at \$2.25. On greased wool, valued at 12 cents a pound or over, our rates were \$1 63 a hundred. Now they are \$1.60, and on a valuation under 12 cents a pound, they are \$1.38 as against \$1.40.

CATTLE THIEVES COME TO GRIEF.—Mariposa officers not long ago arrested Jerry Culver and one Kendall on a charge of branding cattle, to which they pleaded guilty on the 19th inst. Culver was sentenced to two years in Folsom prison and Kendall was let go on his promising to leave the State.

were disposed to consider the experiment a failure and others thought the microbes had become inert through age and claimed that a fresh culture would give potent germs. On May 3d, however, three of the rabbits were found dead and the microscopists were proceeding to determine whether death followed from the suspected cause or not. This is the latest news contained in our exchanges. The reason assigned for the apparent failure in microbes in the first instance, is that they must lose a certain amount of vitality during the voyage, and though delaying the action of the disease germs they are not less sure. The Executive Committee were experiencing some difficulty in obtaining a suitable place to conduct the experiments. They asked for Shark island, Sydney, which they regarded as most suitable, but some objection was raised as to the possible danger to stock, which may in future be quarantined there. The matter was being considered by the Minister, who was being pressed for a decision as the Commission had no further time to waste in selecting sites. Probably our next mail advices will bring fuller accounts.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Industrial No es in Austria.

EDITORS' PRESS:—Vienna is a great city, and is the capital of a mixed population of some thirty odd million people. How so many million people can find subsistence in an area so limited is a question the more difficult to solve when we take into consideration that no considerable portion of this population are compelled to devote years of their time in the service of the State as soldiers. Add to this costly system of governmental machinery, so much so that real estate incomes are taxed as high as 40 per cent. (My authority for this statement is U. S. Consul here), and you will be puzzled the more for an answer, when you ask yourself the question: How do these people manage to exist? The answer is clear enough after due and careful examination has been made.

It would be an utter impossibility for these or any other equally large numbers of people to live here were they content to live on the produce of their limited territory. In addition to the production of that which their limited space affords, it would still be absolutely necessary to introduce and foster such industries as would tend to supply the deficiency. This the Austrians have done and are doing, and do it in such an orderly and systematic manner that their efforts in that direction are worthy our serious consideration, and with but few modifications they may serve us as models.

A few days spent at their *Hochschule für Bodencultur*, their *Handel's Akademie*, their *Technischen Hochschule*, their *Commercielle Akademie*, and a number of their other similarly inclined institutions would soon give light on the subject as to the manner of procedure of these people in the way of obtaining a permanent support. Thousands of young men are trained in these schools, receiving a thoroughly practical education in almost all the current branches of industry, art and science. I have visited several of these schools and have been shown through the various departments, and in some of them I have interviewed the professors and have noted down that which I believe may be of interest to your readers.

The *Handel's Akademie* I found to be a large building with a courtyard in the center. Contiguous to the class-rooms were the exhibition-rooms, in which were displayed in an orderly and systematic manner, and in their various stages or processes of growth, manufacture or manipulation the following: Furs, silks, feathers, hairs, cordage, textile fabrics, cottons, woods, bents, linens, fibrous materials, paper, paints, leather, dyes, nuts and hulls, tanning materials, ratons, reeds, tules, hat braids of straw, wood, etc.; palm leaves and their manipulation; ivory, bones, vegetable ivory, horn, cable, metal in sheets and wire; laces edging and embroidery; grain sacks, threads; plumbers' and gasfitters' tubes and angles and tools; machinists' tools and fittings; manures, eggs, snake skins, isinglass, wax earth and alkalies; colored and plain window, French plate and crystal sheet glass; grain, plumbago, pencils, metals, passementerie; coffee, preserved fruits, pulverized fruits, medicinal plants, seeds, rubber and gutta percha; drugs, precious stones, ores, meerscham, metal springs, stones, bones, leaf and metal. I did not have time enough to go through the other and larger departments.

Professors Pallota and Hassack conducted me on my tour of inspection. I asked Prof. Pallota what were the advantages to be derived from attending this academy. He replied by saying: "We aim to impart a practical knowledge of goods."

"What do you mean by that?" "An acquaintance with the most current articles of commerce in the whole world, their origin, structure, mode of production and distribution."

"What do you mean by an acquaintance with the most current articles of commerce?" "I mean an acquaintance and the obtaining a knowledge of and the countries and places in which they are found or produced, the forms in which they are found in commerce, essays as to their quality and their current and relative value."

"What value is this school to the commercial prosperity of Austria?" "I need only say that while Austria is commercially progressive, England without these schools is losing ground. Is not that an indication of its value?"

There are in regular attendance at this school 680 scholars, 30 professors and some minor teachers.

At the *Technischen Hochschule* I found an array of articles and materials similar to that described above in the *Handel's Akademie* with these additions. Working machines for textile fabrics, paper machines, agricultural and sewing machines, engines, models of houses, etc. In this school there were 1800 students.

At the agricultural school I found models and skeletons of men, horses, sheep, cattle, poultry, hogs, etc., in various varieties, stages and structures, beginning with the embryonic until maturity.

Forestry Laws.

In the evening I had an appointment to meet Prof. Adolf Ritter von Guttenberg, who is professor of *Bodenculture*. At this place I found varieties of woods and barks, principally of forest trees. Prof. Guttenberg is ranked as a

high authority in forest culture, and I therefore confined my remarks to that subject. "Have you forest laws for the protection of the forests?" I asked. "Yes, strong laws," he replied.

"What is the spirit of the law?" "What is forest must remain forest. Whenever a patch of trees has been ordered or allowed to be out, another batch of trees must be at once planted on the same ground, for it is strictly forbidden to devastate any forest or timber growing place."

"Who forbids it?" "The Government through an efficient force and commissioners, who are responsible and personally liable and answerable to the Government for the condition of the forests."

"This apparent arbitrariness of action on the part of the Government in the protection of the forests does not interfere with the rights of ownership and of property?"

"How can it? Do you not see that the Government has the right to so order an owner of property to so use his property as not to interfere with the best interests of the commonwealth? Yes, not alone a commonwealth, but even an individual."

"Will the use of the forests by the owner in any manner to suit his convenience do injury to the commonwealth?"

"Well, not in every instance. There is less to fear from forest destruction in the plains, but the real danger is in the mountains."

"What is the relation and value of forests to the commonwealth?" "First, it has an intrinsic value as a product of necessary utility. Second, in Austria there are many localities where wood is the natural and we may say the only possible product. Third, Austria has a great export trade for wood, hence it is a source of perpetual income. Fourth, the conservation of the forests is the condition for the maintenance of the highest state of agriculture; because the water percolation and flow is regulated to the needs of the soil moisture necessary to maintain plant life. Fifth, in the mountains the forests shield the fields and homestead from the destructive results of the avalanche, stone slides and land slides. Sixth, the forests are a condition to the attractiveness and beauty of the landscape."

"What is the result of the destruction of the forest?" "The answer is here" (showing me photographic views of Curusquet, Bourget, Barcelonnette, all of France). "See these barren sides of the mountains (I did), these were covered with earth and trees, now they are bare of earth and trees. In summer the sun rays reflect back from these barren slopes and the heat is intensified in the valleys. In the winter and spring these valleys are dangerous places of abode, for they are subject to sudden dangers to life and property; and the foothills and valleys that were once the homes of many people are now covered with stones, gravel and sand."

"Will not manuring the land by herding sheep, horses or cattle aid the restoration of the forests by reason of the manure they leave?"

"How can manure restore earth to places where the earth has been washed away? Besides there can be no greater damage to a forest, especially young forests, than to have cattle or sheep in them. You would not do so in a valuable orchard or vineyard; and a young forest tree is as tender as a fruit tree; besides there is always danger from forest fires by reason of carelessness or accident in camp fires, lighting pipes, etc., of the herders."

"Cannot the places where forests formerly were be replanted?" "Yes, they can; it is possible, but the cost is enough to stagger those who would attempt it, for in the first place you have to bring the earth and deposit it on the sides of the barren mountain; next you have the planting and care of the young trees, and when you have done all this you will have to scrape the valleys of the boulders, gravel and sand to find the original soil. Spain, Italy, and the Mediterranean countries, by reason of their almost incessant wars and by reason of neglect have lost almost the greater portion of their forests, and as a consequence, much of their land that was once in a tillable condition is now desert, and in many places they are obliged to resort to irrigation, for the absence of trees causes a scarcity of rain."

Preparation for Codlin Moth.

I thanked the Professor for his valuable information and asked him to tell me what remedy they use for codlin moths. He told me that it was a sort of glue, which is applied around the trunk of the tree in two bands, one about a foot, and the other about 20 inches from the ground. It is applied warm, with a brush, or cold with a smooth flat piece of wood. He gave me the address of a druggist, who, he said, could mix the solution. I called on the druggist and had him put me up a package, and also obtained from him the ingredients and quantities to be used, which I give herewith:

Resina pini, 300; Pix oil, 200; oil paraffin, 100; oil reparum crudum, 150; heat above until assimilated then add *acidum salicydicum*, 0.5. After this stir thoroughly.

In another boiler mix the following: Terebinth common, 100; vaseline (raw), 50; yellow beeswax, 100; balsam gurgun, 50. Heat and stir, and when thoroughly assimilated, mix with above first-named mixture and stir thoroughly. For "softening" use oil.

Packing and Preserving Fruits.

I next asked Prof. Guttenberg what is used in packing green fruit so as to preserve it as long as possible without rotting, and he said they use salicylic acid, as a powder, or dissolved

in alcohol, and the paper wrappings dipped in the preparation. They use it here, however, in the powdered state. It is not a poison. I shall send you a small box containing some. Also a sample of packing used in Italy, which I obtained from among a box of apples.

DAVID LUBIN.

[The codlin moth remedy, which Mr. Lubin sends, somewhat resembles shoemakers' wax. It might be well to try it. It would probably serve against all insects which crawl up the tree.]

The packing paper was more fully described in Mr. Lubin's previous letter. It is merely soft paper cut up by machinery into strips one-quarter of an inch wide. The same is used in this country for packing merchandise. It would seem better calculated to obviate jarring and to absorb moisture than the ordinary method of wrapping.—EDS. PRESS.]

THE VETERINARIAN.

Glanders—Equinia.

EDITORS' PRESS:—The word glanders is derived from the Latin roots, *glandula* and *glans*, the latter signifying a fruit kernel, the former, its diminutive, any small fruit kernel. The above terms are also used in medicine to denote the glands of the body, many of which are small, and compare in shape and size to acorns or other kernels.

This loathsome disease is generally the result of a specific matter, contaminating the surfaces and parts to which it is applied, affecting the organic functions, and giving rise to the changes characteristic of it.

The specific origin of glanders in the horse has not yet been demonstrated.

Symptoms of Glanders.

It is generally ushered in like catarrh or common cold. First, there is a slight discharge from the nose. The discharge at the commencement is scanty and limpid, amounting to nothing beyond a little aqueous or serous fluid, trickling commonly from one nostril only, but without intermission. In the course of a day or two this watery discharge mostly appears streaked or intermingled with ropes of mucus, and in a day or two after that it will most likely have become altogether mucous in its character, and glairy in appearance, after which it gradually assumes a yellow tinge, from the mucus being mixed with albuminous matter. We also have enlargement of the submaxillary lymphatic glands (the glands under the jaw), inflammation of the Schneiderian membrane (the membrane lining the nose), and the membranes lining the different sinuses of the head. There may or may not be palpable depression of spirits and disinclination to eat, but it is generally ushered in by constitutional disturbances; there will be more or less indications of fever, the pulse is quickened, roughness of the coat mouth hot and dry, and increase of temperature. I have known the temperature to reach as high as 107° Fahrenheit.

Generally after the first change has passed, as soon as the discharge from the nose is established, the animal improves from any indisposition he may have shown, recovers his spirits and appetite, and to a non-professional observer appears as well as ever. One of the characteristic symptoms often noticed in this disease in certain stages, is the good condition and feeling of health the animal manifests.

Second or Ulcerative Stage.

The discharge becomes copious from one or both nostrils of a sanious matter, and by degrees acquires consistence, exhibits true purulent characters. In time it becomes thicker, of a gluey character, and firmly adheres to the hair of the nostrils, collecting and concretizing to the wings of the nostrils, obstructing the aperture, and by this impeding the breathing. We also now find to be frequently the case, and which did not exist in the first stage, fetor, and that is often of such an offensive and peculiar nature that it is sufficient to enable a competent veterinary surgeon to swear to the case. I have only met with a few cases of glanders where fetor to some extent did not exist, in the whole of my 20 years' experience.

We now have the membrane lining the nose studded with small irregular-shaped ulcers, and at irregular distances from each other, they afterward coalescing. These ulcers also in time extend to the cartilages and bones (the septal cartilages and turbinated bones) producing a disgustingly offensive stench. The membrane becomes a dirty brown or leaden color, the discharge is sometimes streaked with blood, and a horse in the act of snorting blows masses of scab and exfoliated cartilage, and even bone will be thrown out. When the discharge is tinged with blood it proves that the ulceration is deep and extensive, or a disposition to ecchymosis, from some change in the condition of the blood.

We place more reliance on the ulceration than any other symptom to denote this terrible disease. Scratch the membrane and introduce some of the virus, the wound inflames and secretes an ichorous matter, and becomes converted into a vesicle. In a few days the vesicle will have broken, and in the place of it we will find a pale, foul, superficial ulcer, and in

the course of 24 hours it acquires the character of a glandular chancre.

Glandular Swellings.

The earliest external indication of glanders is enlargement or tumefaction of the submaxillary lymphatic glands. In cases of inoculation the glands are generally swollen on the third day. The swelling of the gland or glands is due to their sympathizing with the irritation going on in the nose, the same as buboes in man, occasioned by irritation going on in the organs of generation. The swelling at first is small and round and moveable, but occasionally the enlargement is so great as to lead one to believe the case to be one of distemper or strangles. These swellings at first are generally painful to pressure, and when first formed are generally loose and moveable; after a time it acquires firmness and apparently hugs the bone, the skin being drawn tightly over it. If the disease exists on both sides of the nose, the glands on either side will be enlarged.

They are rarely ever known to suppurate, but become hard and scirrhous in their nature. I will here remark that glanders, though especially affecting the equine race, is readily transmitted to man, sheep, goats, felines and rodents.

Glanders in the Human Species.

Without telling our readers, in a positive and unmistakable manner, the great danger they incur in attending to animals affected with glanders, or, in fact, coming in contact with them in any way, we would do them a great injustice, as this is a fell, dreadful, baneful, horrible and fatal disease, when man happens to be the victim. It is no less so in the case of the noble horse, but though a noble, useful and admirable animal, he is still of less importance than man, his quasi master.

Any of our readers who may have seen a man die from this disease, do not need to be spoken to on this subject, and to those who have not, we will only say, we heartily and sincerely hope they never will see such a sight.

This disease is liable, and I am sure often is mistaken for catarrh, nasal gleet (ozena) and strangles. The characteristic signs of glanders were with peculiar accuracy described by Solley-sell in 1664. "The signs by which the disease may be known are when a horse, already too old to be troubled with strangles, without a cough, voids matter by the nose, and has a kernel sticking to the bone; and besides in glanders the matter usually flows from one nostril, whereas in a cold it runs almost always out of both. Some cast the matter that is voided by the nostrils into water, and if it swims on the top they conclude the horse to be free of this distemper, but if it sink to the bottom it is a sign of glanders; the principal use of this experiment being to distinguish the pus. But you must not depend on the certainty of this sign, for if the matter sticks to the nostrils like glue, it is a bad sign, and you may conclude the disease to be the glanders, though the matter does swim on the top. When either the breath or matter that comes out of the nostrils stinks, the disease is incurable. I have seen horses troubled with this disease without kernels, or if there were any they were little and movable; and the only sign by which we could discover it to be glanders was the glueousness of the matter."

The late Professor Percival, M. R. C. V. S. L., of the English army, says in his *Hippopatry*, that "our diagnosis must be grounded first on the circumstances of the discharge coming from one or both sides of the head; secondly, on the nature of the discharges; thirdly, on the presence of ulceration, and the character of it; fourthly, on the presence and character of glandular tumefaction; fifthly, on the state of the animal's health; sixthly, on the presence of farcy; seventhly, on the absence of symptoms proper to other diseases."

A decayed molar tooth, has, no doubt, in several instances, led to a fatal diagnosis.

There are two forms of this disease, acute and chronic. If the animal does not die at once, the former invariably culminates into the latter.

Acute Glanders.

We see this form of the disease best marked from the result of inoculation, as I have before remarked; that, generally speaking, if inoculation has been successful, that on the third day there will be swelling of the submaxillary glands, slight discharge from the nostrils inoculated, and in four or five days ulceration will appear. These symptoms are sometimes accompanied by farcy. In this, the acute form of the disease, the symptoms rapidly increase to such an extent that they frequently terminate in death as early as 10 days from the time of the virus being introduced into the system.

Chronic Glanders.

This form of the disease consists of a discharge from the nose, from one or both nostrils, accompanied by enlargement of the submaxillary gland or glands. We have no inflammation of the membrane of the nose, but we have milary ulceration.

Chronic glanders generally attacks a horse in a mild form; the animal is in good health and spirits and his appetite remains good. If matter be taken from a horse suffering from this form of glanders, and a healthy horse be inoculated with it, it is probable that the acute disease will show itself with all its alarming symptoms. If a horse suffering from the chronic form should take a cold, or his health in any way be impaired, the acute disease will often appear and speedily run to the destruction of the

animal. All at once the discharge from the nose will greatly increase, his hind legs will frequently swell, and farcy eruptions break out all over the body. This is the form of the disease where we will most frequently find disease of the lungs from the malady existing in the system for a length of time. These organs after death are frequently a mass of ulceration and of a black hue. The duration of chronic glanders is very uncertain. It may continue months, and even for years, before the acute form may show itself, as in the case of the celebrated trotting mare Proteine, which case I was called in to see in consultation with the late Dr. G. Bowler, V. S., of Cincinnati.

We must not think that every horse that has a discharge from the nose for a length of time is suffering from glanders, for he may be suffering from nasal gleet, which disease I will treat on in some future article. Aged horses seem to suffer most from glanders, but at no age are horses regarded as exempt from taking the malady.

Causes of Glanders.

The cause of glanders may be considered under the heads of predisposing and exciting. Predisposition may lurk in breed, in constitution. It is evident that there exists in the animal economy of some subjects, peculiarities of constitution termed idiosyncrasies (through ignorance of a better name) which, under certain circumstances, and on application of the cause (indirect) develop the latent pathological fire, and thus they become glandered. Horses inherit constitutions; they also become predisposed to certain diseases, particularly affecting the organs of respiration, and with these to glanders. Horses that are kept in badly ventilated stables, or are overworked, badly fed, exposed to wet or cold, are most susceptible to any disease; so constitutional predisposition may be natural or acquired.

The Exciting Cause.

That this disease is both infectious and contagious under certain circumstances, I have very little doubt, as I have seen animals in different parts of the same building, though entirely separated as regards attendant, harness, buckets, etc., become affected with glanders. A glandered horse inhabits a stable, and has besmeared with his discharge the mangers, etc., leaving upon their surfaces desiccated matter. This, in a short time dries; it is only necessary for moisture and heat to render it active and operative again. A sound horse may be placed in the stable and not in the stall that the diseased horse was in, he inhales the effluvia caused by moisture and heat that arises from the desiccated besmearments, and those effluvia entering the lungs with the air he breathes, therein become absorbed, and thus affect the system, breaking out afterward in the form of glanders or farcy. It is beyond a doubt that the virus will lie latent for a considerable length of time. I have known cases where the virus must have lain dormant for three months. Another exciting cause is exposure to cold when hot, and this combined with the predisposition induced by the heat and impurity of the stables (and I can safely say that the air in some stables is almost putrid) perhaps more frequently produce not only glanders, but every other disease that prevails among horses.

Treatment of Glanders.

I regret to say that all the experiments on this disease have proved useless. Confirmed glanders has baffled all skill. Numerous are the remedies that have been tried, among them sulphate of copper, sulphur, chloride of sodium, sulphate of iron, arsenious acid, cantharides, chloride of barium, diiodide of copper, iodoform, etc. There is no doubt these medicines are excellent in cases of farcy, and will frequently effect a cure.

However, I will treat on the disease termed farcy in some future article.

DR. A. E. BRZARD M. R. C. V. S. L.

No. 11 Seventh St., S. F.

ARBORICULTURE.

Mr. Heath on the English Walnut.

At the Santa Barbara Fruit-Growers Convention there was considerable time given to the English walnut. The following is a part of the discussion embodying the experience of Hon. Russell Heath. It was an *ex tempore* address, and therefore has not the finish of an essay, but our readers will be glad to hear the experience of so famous a walnut-grower as Mr. Heath, and we trust the reporter has not obscured his meaning:

There is a great diversion of opinion among walnut-growers with regard to the culture of the walnut. I believe I am the first man in this county outside of the Mission priests who attempted the culture of the English walnut; I commenced it in 1858. I listened with a great deal of attention to the essay of Mr. Sexton (See RURAL PRESS, May 5, 1883) to find the history of the soft-shelled walnut. In 1858, there being no trees in California of the walnut species to be obtained, I procured of Mr. Wolfskill, in Los Angeles, the nuts to plant the first nursery in this county. There was no such thing known in California then as the soft-shelled walnut. Of the thousands of trees that I produced in

my nursery, I raised one tree only that differed from the original stock—walnuts having always been understood to be true to its stock. Those trees were planted in the fall of 1858, consequently the trees were started in the winter of 1858-59; when Mr. Stowe came here in the spring of 1873 he applied to me for walnuts to plant in nursery as he could not obtain sufficient trees to plant the ground that he was desirous of planting; I furnished Mr. Stowe with a large quantity of nuts; I had the previous year placed walnuts in San Francisco, and very likely it was from that lot of nuts that Mr. Sexton obtained his first soft-shelled walnuts, because the first soft-shelled walnut was produced from a nut from the Wolfskill orchard in 1859 in my orchard, and I was not aware of the existence of that soft-shelled nut until my attention was called by Mr. Stowe to the trees in the nursery produced by himself from seed obtained from my farm, and that there was one tree different from the other trees. He desired to know how it was that there was so much difference in walnuts where the seed all came from the same farm. At that time I was not aware of the existence of a bearing soft-shelled tree in my orchard, and wrote Mr. Stowe that at my first convenience I would go out to his orchard and examine those trees. I did so and found to my surprise the soft-shelled walnut, a walnut that I was not familiar with, that I never had noticed in my own orchard at all. We watched that tree and that same fall in gathering the fruit of my own orchard, my superintendent called my attention to the existence of a tree which he said was different from all the others, and wanted to know if he was to put that fruit with the other fruit? I said no; don't put it in if it is different, as I wanted to examine it, and went down there and saw by the leaf that Stowe's was a soft-shelled walnut, and that the soft-shelled walnut undoubtedly came from that seed that I had sold to Mr. Stowe.

Now my belief is that the soft-shelled walnut was a chance fruit obtained from the seed from the Wolfskill orchard in Los Angeles, because before that time there was no such fruit. So much for the soft-shelled walnut. It may or may not be true that the seed obtained by Mr. Sexton from San Francisco may have been from that which I had in San Francisco for sale, as I had seed in San Francisco for several years for sale, and, being one of the first experimenters in walnuts, I had no trouble in selling the fruit.

Seeking Location for Walnut-Growing.

With regard to planting of the English walnut, it is a question that I approach with a good deal of delicacy, especially as I am led to differ from our president, a gentleman whom I esteem as high as any man in the State, as to the poisoning of walnuts. My place of 200 acres was one mass of oaks, and there is not one single acre of the 180 acres now in walnuts but what had oaks that would cut from 4 to 15 cords of stove-wood, and yet I never lost a tree planted among the oaks. Now whether it is poisonous in the soil occupied by Mr. Cooper's orchard and not in the Carpenteria is a question that only the analysis of the soil can prove; but in my locality the oak is not poisonous to the young walnut. The great mistake, in my opinion in the raising of the walnut, is that a suitable locality is not first obtained. I saw as early as 1854 that California was destined to be what she is only now realizing—one of the richest States of the Union—and that in the soil was the secret of her success. Realizing that, and being ignorant of farming, for I never had held a plow in my hand in my life—never had lived outside of large cities—I looked from San Louis Obispo to San Diego seeking for lands where I might plant the walnut, the almond and the grape. I first went to Ventura county, and after a year and a half found that I had made a mistake in my selection, and looking around other localities I found in Carpenteria a dense jungle such as could not be found outside of Santa Barbara county, and said to myself: "If this will grow this jungle it will grow the walnut, the almond, and it must grow the grape," and I cleared that land at an expense of from one to one hundred and fifty dollars an acre and I planted the orchard that I now have.

Varieties.

With regard to the soft-shelled walnut and its profit, and the hard-shelled walnut, so-called, I claim that no living being can tell the difference by the kernel of the two nuts. A few years ago there was a company of Eastern people visiting our city, looking around; a good deal of talk had already been created with regard to the soft-shelled walnuts. As I was getting fancy prices I didn't object. I got as high as 50 cents a pound from nurserymen who were making a big thing out of the soft-shelled walnuts. I put out a nursery and planted 400 trees, and I have got all the soft-shelled walnuts I want, and when one dies I don't want another, and my objection is this: That they are too difficult to ship, too difficult to handle, too difficult to market. I say that no man can tell the difference of the quality; I was firmly of that belief, and I am firmly of that belief to-day. There were ladies and gentlemen present at my table, partaking of a dinner, and there were hard-shells and soft shells in the same dish because I made no difference in selection. They said: "Yes, these are very nice walnuts, but I always prefer the soft shell; they are much higher flavored, a much better nut." "Well," I said, "that is simply a difference of opinion; some might think the common walnut equally

as good," and while conversing I used my nut-crackers because I didn't want them to see that I could crack my nuts with my fingers, which I could do with all the nuts on the table, and I cracked the soft shells and the hard shells and placed the two in dishes by themselves and passed them around to the ladies and gentlemen present and asked them to kindly tell me which was the hard and which the soft shell and which is the higher flavored of the two. The test was made and two ladies announced that they had made the discovery. They declared that no such nuts could ever be raised on a hard shell tree. I had the shells; kept one. My wife was looking at it. She thought I was going to try the soft-shell walnuts because I contended that there was no difference. I said: "Which do you call the best nut?" They said: "Why this; there is no mistake about it, there can't be any mistake," and lo and behold! they had selected the hard-shelled walnut and that is the difference, simple fancy.

Planting.

Now in the distance of planting the soft-shelled walnut—and I must refer a little to Mr. Sexton's essay with regard to transplanting trees—I don't know much about this thing, but I have experimented and that is the only way I had to learn. I didn't know anything about horticulture. I had everything to learn from books and experiments and all the knowledge I have was by books and by experiments. I commenced transplanting trees in my nursery at one year old. Each year I renewed my nursery rows, planting each year so as to enable me to have trees for my own land, which I was obliged to clear in order to prepare it for the orchard. I planted after the first year, I planted after the second year and continued that planting year by year from three different nurseries of different ages. When I arrived at the ninth year of the planting, my trees had then been in bearing one year in the nursery, and now this is the result as my experiment goes: The trees that I planted out one year will bear their fruit the seventh year. Now, with regard to the bearing of the walnut in four and six years and seven years, let me say this right here: That in its native country, Persia, it bears at eight years and never was known to bear in less than eight years. I know that California is excellent, I know that it excels in many respects, but I say Persia is good enough for me. Eight years from the seed is as soon as I ever had the walnut bear in my orchard. I planted the one-year-old tree, the two year old tree; I lost the two-year-old tree. My experiments prove that two years is an unnatural time to transplant the walnut. I will tell you why. The first year the walnut makes from three to seven inches without irrigation (and I should advise any man who desires to set out an orchard not to buy irrigated trees). There are two periods that the walnut ought not to be transplanted—that is, the second and after the fifth year. The root starts the second year and makes a partial growth and then it divides itself between top and root.

I will ask any Walnut grower that has watched his nursery, if that is not correct; the walnut will start and grow in root first without starting at the top until it has made a certain period of growth, and then the root grows if not forced. I want to emphasize that matter of forcing trees because I can take a fig and make it grow 10 feet from the cutting by forcing it. I can take a walnut and make it grow 10 feet the second year, but I say that is an unnatural growth and it ought not to be indulged in. The second year then is dangerous for transplanting; it is the period between the top and the root and when you take it up you destroy that growth, which may be owing to the root or to the top. The third year it makes top alone, comparatively no root. It is then that your little tree 12 inches high grows up to the height of 12 feet; it is the top that is making that year and of course you do not desire to transplant a tree that is all to top and not root, because when you take it from the nursery rows you must allow that tree to go down and make the root first before it can make the top. After the third year you can transplant it with safety. Why? It has made its top. The fourth year its tendency is to root and not to top because on the fourth year it makes its spurs two inches on the side of that growth of the third year. The tendency of that year is all root and if you want to transplant a young tree, then take up your three year old tree and transplant it and you will get your fruit then as quickly as the age of the tree will allow it to bear. After the fifth year the tendency is not to make root; then is the time those little branches two inches long send out the long arms to the distance of seven or eight feet; then it is that you want more care in your orchard than at any other time; then it is that your tender shoots, especially in exposed conditions, are liable to be cut upon the end by the frost; then it is, if you are in the interior, that one hot blast will kill the ends of every tree you have. The only remedy is then the knife, which any orchardist can tell when and where to apply; because when the tree is touched by either cold or heat you will see it by a little mark of black and you must use the knife below that black mark. I have never lost a walnut when I took that means of preservation. Transplanting six year old trees, my experience is that I never have had a nut from my trees that I transplanted from one year old to seven without waiting six years; Mr. Sexton has raised them in four years, I do not dispute his word, I only state my experience that I never have produced a

walnut in six years except as I am about to tell you.

Bearing Age in Nursery Rows.

In my experiments remember that I made them from three nurseries, growing at three different periods of time. I transplanted my trees after they had passed the age of bearing in my nursery rows; of course nurserymen cannot afford to raise trees of that description, but a man who stakes his money and his time upon an orchard can afford to wait; it takes time and requires money, but no man can succeed raising a walnut without the expenditure of money and time.

I transplanted 800 eleven year-old trees and did not lose one in transplanting, and last year I had fruit upon more than two-thirds of those trees. Two years ago I did not transplant because the season was not favorable. This year I have transplanted 600 trees more than 12 years old, and I will get fruit from those trees just as soon as the top forms, because I cut the top entirely off at 8 or 9 feet from the ground, regardless of limbs. I cut the top square off and some of my neighbors who came and saw what I was doing said I was putting out hitching-posts. I have a thousand out, and I wish I had 20,000 more, because those hitching-posts are now bearing and putting money in my pocket, and so I say to-day I had rather give \$10 for a tree that is nine years old than to give one cent for a tree that is four years old. I say there is money in it because it cost me no time to cultivate in the nursery. One man will go through a nursery and cultivate a thousand trees in a half a day, and if you place those trees in an orchard you are at great expense. Teams and men cost money; you can buy teams and hire men, but I tell you that even in California, with all its fruitfulness, you can't buy brains to drive those teams; that is the trouble of every single orchardist that does not do his own work.

With regard to the profit of the English walnut, you need have no fear. Plant your walnut; you have an investment safer than anything in these United States. There is nothing that yields so certain as the English walnut; there is no off year. You can hold your price better and the money will flow year by year, as every orchardist that has his orchard in a good place will tell you if he tells you honestly.

The Tap Root Question.

Now with regard to cutting the tap root: I did not know anything about walnut culture. I was more indebted to these priests at the Mission than any knowledge I could get from books. I went to Sansavain and Wolfskill, who had been in the business for many years, but I tell you that the observation of the cultivators of these trees in Los Angeles was of very little use to me; they could not even tell me whether there was two blossoms on a walnut tree. When I found out that there must be two blossoms in order to bear its fruit, and I wanted to know whether those two blossoms were on the same tree or on different trees, I went to Los Angeles and propounded that question to Mr. Wolfskill and Mr. Sansavain, experienced men in the business. They said: "You are the most inquisitive man I ever heard of in my life; never heard of such a thing there; I don't believe there is any blossom at all." I said: "Do all your trees bear? that is the question." "Yes, they all bear." Then I say they all have blossoms, and they all have two blossoms, and I watched my trees when they came to bearing this year, and lo! and behold! I found the two blossoms which they had never noticed. Now some wiseacre that thought he knew more of the cultivation of nuts than any other man in California, discovered in Los Angeles that if you cut the tap root your tree would never bear, and that was published in the papers throughout the State. I said: Here is a pretty kettle of fish again. I have cut all the tap roots in my orchard, and I don't know whether I am going to have any fruit. I will see about this thing. They said that where the tap root is cut, there the decay would commence, and an insect would attack the root and eat the life out of the walnut, and it would finally die. I determined not to be fooled much longer in spending more money, and took two men and went right down in my orchard. I could not make any mistake because I had cut off every tap root in the orchard. We dug down carefully by the side of the tree; I was going to be very careful about it, and I had a large magnifying glass and took that with me, and after they got down below where the tap root was cut I got my magnifying glass, and said: "Boys, you needn't use your shovels any more; I want to get at this thing with my hand," and took my glass and went down in the hole. I commenced digging like a gopher, and when I got down to where the root was cut, to my surprise there were two tap roots, beautiful as could be, sent out from the place where the tap root was cut. I examined five trees in that way, and each had two tap roots, and I made up my mind that the Los Angeles men that had been writing about tap roots were in a dream.

WRITE ON YELLOW PAPER.—A gentleman who has made a study of the eye says, for the benefit of the people who have to earn a livelihood with the pen: "Never write on white paper if you can get yellow paper. A sheet of card of the same shade placed on the wall over the desk will assist in giving the eye rest, and thus will facilitate the work." He has made this suggestion to many, and in each case has received the thanks of those benefitted.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Work and Progress.

[Contributed by MORIMER WHITEHEAD, Lecturer National Grange, P. of H.]

While the Grange, as an organization, is in no wise a party organization, and the discussion of partisan politics and sectarian religion is prohibited in its meetings, yet it is doing a great work in bringing about a purer atmosphere in the politics of our country. It does not try to make every member a Democrat or every member a Republican, but it does make better Democrats and better Republicans. It teaches the farmer to "affiliate with any party that will best carry out his interests," to "see that none but faithful, honest and competent men are nominated for all positions of trust, men who will unflinchingly stand by our industrial interests." And further, it encourages each member to do "all he can in his own party to put down bribery, corruption and trickery." Better men are being nominated in all parties. The power of the Grange education in this direction is being felt in all parties. Farmers are not only the balance of power in all parties, but the power itself. Parties are all right in their place, but the people should run the parties, and not the parties the people.

The Independent Voter.

"A few years ago the man who had the moral courage to refuse obedience to party mandates, and dared to be true to his convictions of right, was ridiculed and jeered at on every possible occasion. The vilest and most opprobrious epithets were heaped upon him, and partisan zeal applauded the man who excelled in this dirty work. But a more enlightened sentiment has entirely changed public opinion in this respect, and now no one entertains other than a feeling of contempt for the fellow who violates his sense of justice and honor, and servilely bowing to party dictation, joins in supporting improper nominations, no matter how corruptly secured, and blindly follows a leadership that seeks only self-aggrandizement.

The independent voter is the hope of the country. It is he who, being impelled in his course of action by something higher and nobler than mere partisan feeling, interposes a barrier to the onward sweep of the flood-tide of corruption that compels it to stop. Both political parties recognize the potency of this new factor in politics, and are casting about for men to place on the respective tickets who possess the confidence of the people. How silly for our citizens to suffer party feeling to influence their conduct in the selection of those who are to fill our public offices. What we need is men who are competent, honest, faithful and courageous; and when political bosses foist upon the ticket men deficient in these qualities, it is the duty of every good citizen to repudiate their action and support a man who does possess them."—*Farmers' Friend*.

Progress.

The Secretary of the Rhode Island State Grange writes: "We are getting along nicely, and the benefits are already apparent along the line. Our 15 Granges now number 670 members, an increase of 82 over last quarter, and little Rhode wouldn't cover one county of some States. Young and growing. For the cause."

South Carolina Patrons are arranging for their second annual summer encampment, lasting one week in August.

Sedgwick and Capitol Granges, Connecticut, have each resolved to hold a cattle show next fall.

The last "children's meeting" of Worcester Grange, Massachusetts, had 350 present. Music, recitations, supper, and a varied program was successfully carried out.

The 16th annual picnic—exhibition at Williams' Grove, Pa., at which upwards of 200,000 persons attend each year, will this year be on a more extended scale than ever. President Cleveland has accepted an invitation to be present.

Active Grange work is now going on in Minnesota under the direction of State Master W. S. Chowen.

BRO. PUT. DARDEN, Worthy Master of the National Grange, will visit Texas in August to attend the session of the State Grange, which convenes on the 14th of that month. It is to be hoped that the Worthy Master will honor the California State Grange with a visit next October. Such a visit would be appreciated by all Patrons in California, and, no doubt, would be the means of calling a large number of

brothers and sisters from Oregon, who would willingly travel that distance to be able to meet and confer with Bro. Darden. By all means Worthy Master come to California. Set the first example of a National Master's visit to this coast, and see what we will do for you and the National Grange in return. We need your help, and all will try to make you and other Eastern brothers and sisters who will come with you, more than pleased.

San Jose Grange.

EDITORS PRESS:—We had an interesting meeting to-day, presided over by the Worthy Overseer, Sister L. J. Watkins, with dignity and executive ability considering she is only a woman. Bro. Pomeroy is up in the mountains rusticated, and I presume will have some big fish stories to tell when he gets back. Bro. Jones gave us an interesting paper to-day, upon "What the San Jose Grange had accomplished since its organization," which should encourage us for future effort. The benefit which may be derived from co-operation, was clearly shown in the successful operation of the Farmers' Union of this city, which was started by the Patrons of the Grange, although now conducted as a corporation. The subject of co-operation is still before the Grange, and the committee appointed to investigate the subject have from time to time reported progress.

Last week Sister Hamilton gave us an interesting paper on the subject. In fact, whichever way we turn or whatever we do, we are forcibly reminded that there is strength in co-operation. It has been suggested that the farmers co-operate in the selection of their local officers with a view of promoting and securing their own interests. As it is now they are a very small factor in politics, when they should be a tower of strength, and united they would be. In the matter of State dues we decided to pay 20 cents for each member in good standing, until the next meeting of the National Grange. YELLAFO.

San Jose, June 23d.

A BOGUS PATRON.—Bro. J. H. Hale, Master of the Connecticut State Grange, writes that they have caught and jailed a fraud, who has been visiting Patrons and Granges in his State, and, on a plea of being in distress, obtains money to assist him on his journey home. He says he belongs to a Grange in West Virginia. We do not believe he ever belonged to a Grange in this State, but a few years ago a fraud claiming to live in Kentucky, who was posted in the unwritten work of the Order, visited several sections of this State and obtained money in exactly the same manner in which the man has been operating in Connecticut. *Farmers' Friend*.

A GRANGE NEEDED IN SHASTA COUNTY. Sister Lizzie Bowman, writing from Ono, Shasta county, Cal., June 22d, says: "We have no Grange at Ono, but hope by another year at least to break ground, as we have some good solid timber for the foundation to begin a good Grange Order with. We talk Grange all the time, and when Saturday comes around we feel like lost sheep in a strange pasture. We miss, Oh, so much! those pleasant meetings and the kind greetings of our brothers and sisters; but we shall have to bide our time, and hope before the close of another year to have a good healthy Grange at Ono."

BRO. J. M. MOORE has been appointed District Lecturer for Tulare county. We hope he will set a good example by writing to his fellow deputies and Patrons often through the PRESS. Also influence other good quills to scribble for us and exchange their ideas with the rest of the world.

BRO. D. O. HARELSON, of Tulare, writes to Worthy Master Overhiser that an experiment station has been established at that place, and that Grange influence had been an important factor in obtaining this result.

JUDGE KEYSER, of Marysville, fined James McIntosh \$500 on the 25th inst. for violating the anti-debris injunction. Other cases of the same nature are being tried.

WHEATLAND GRANGE mourns the loss of a loyal sister, Mrs. Dora Bennett, and has adopted resolutions of respect to her memory and sympathy with her bereaved family.

MRS. E. MAPLES of Tulare Grange has been appointed a member of the State Grange Literary Committee by Worthy Master Overhiser.

FREIGHT ON CANNED FRUITS.—A part of the concession asked for by the shippers of California canned fruits has been allowed and the rate will be \$1.10 instead of \$1.25 as announced June 14th.

PUBLIC AFFAIRS.

Our Local Interests in Tariff Reform.

(Being intended as a prize essay, in answer to an offer by the Reform Club of New York City, of \$250 for the best essay, and \$100 to the publisher, open for all parts of the United States.)

CHAPTER II.

God has a tariff that is felt and seen
In every league of land or sea between.

Yes, there is a natural tariff that covers the whole earth and affects all people. It is the tariff of transportation. Home produce always has that in its favor. It may be reduced to its lowest terms, but it never can be escaped.

The cost of transportation is forever in favor of the home producer.

In times past it was a most important ingredient in the price of commodities. When the best conveyance was a pack-horse even fine flour could not travel a hundred miles unless by water; hence little mills dotted the land, vegetables were not carried save to the nearest town. An excessive crop in any locality reduced prices to nothing, and a famine that reached a hundred miles round was a dreadful calamity.

We have largely overcome this element of cost by the aid of ships and railroads. Ere the Pacific railroad was built a pound of tea could not cross the continent without doubling its price. Now five cents will leave a profit to the carrier. Then grain, vegetables, fruits, were confined to a market close at home; now they cross the continent or go round by sea. California is the tea landing for all the continent, and sends her plums to be eaten in New York. The science of transportation is killing this natural God made tariff. In the near future it threatens to be almost extinguished.

And this is a natural consideration in devising a tariff system to protect the special business of one section of our country in other and remote sections against the products of foreign countries nearer to hand and with a less cost of transportation.

Thus in the New York fruit market, Spain, Portugal and all the Mediterranean coast have a cheaper access by sea than California. Shall we favor California and Florida by a tariff, or take these supplies from strangers. When a question of this kind arises, there can be but one answer. It is money saved to our great family, all of which tends to circulate and come back to us, enrich the whole family and make us more self-dependent. Let us do it!

Pennsylvania produces iron, but England, France, Germany, all as near to California as she is, produce iron also. Shall these strangers supply all our far West, or shall we aid the natural tariff so as to throw our business to Pennsylvania? Clearly the latter is indicated, for the same reason as before. We should give our own States the preference in all such things as they produce in abundance, and the difference in price or access favors the stranger. We shall take care to neutralize any advantage he may have over our own brothers, which the natural tariff does not equalize and aid it by a protective tariff of our own.

But this principle, once admitted, must go all around. It must favor every State alike. Any State able to say: "We produce coal, iron, oil, wool, cotton, wheat, sugar, in great excess. We want to sell it to our sister States. Some of them are so remote from us, or so near to strangers in the same business that we cannot do so. Give us a little aid." We conceive it to be a bounden duty and the best policy to do so.

But some consideration must be had as to the amount of the protection required, and the general effect on the whole country. Is the industry of National importance? Is the protection for healthy purposes, to expand commerce, or to foster monopoly? Its effect on those who are to be damaged by the protection and the high prices demanded in consequence. The exact amount to be collected, and whether it shall prohibit or only tax and discourage. And shall the taxation be for revenue alone, protection alone, or a mixture of both?

Let us suppose a case to illustrate how this tariff to neutralize location and cheapen transportation would operate.

Suppose we discover exhaustless and widespread lodes of iron ore in the center of our domain so as to be accessible to all workers, both great and small. It might be good policy to protect that industry so that not a pound of iron could come into the United States from any quarter. We could say we have enough! We have no need to import. To the remotest bound of our domain they shall pay transportation on that iron rather than buy from abroad. It would perhaps be wisely done. Prohibition would be to our best interest.

Now suppose that though the iron were plenty, yet it was in few hands, a combination, a trust; and all the protection would go to the trust. Surely it would be madness to protect.

Let the iron be so situated that though open to all, yet for many years sufficient for all our use could not be produced, then prohibition would be absurd and suicidal. A judicious tariff would be the thing, to make a good demand for what could be produced and encourage further development.

And this should yield gradually till the works could supply all our wants, then merge into pro-

hibition, to protect our own works and employ our own people.

It is contended that in most articles demanding protection, the operation would be the other way. Most of our manufacturers declare that protection is only to be temporary, till they acquire practice and skill and plant, when they will defy competition, dispense with the tariff and throw their goods on the world through open doors, as our wheat growers do.

In this protean shape does the tariff question come to us. Its object and ultimate, its quantity and quality, its victims or its beneficiaries, whether for protection or revenue, are questions that change with each item you name on the list. From attar of roses to coal, every article has a history and status of its own. It is not a question of protection or no protection. It is simply one of revenue, so levied as to do the most good and the least injury. A judicious revision as the President observes, is precisely what we want; not under a craze for Free Trade, nor with a false pretense of protecting labor; but, "To raise the revenue required, and no more, in such a manner as to conduce to the best interests of the whole country."

To do this with the best effect, we must classify the articles on which we exact our custom dues.

There are those we do not produce, do not expect to produce, and do not desire to produce, as tea, coffee, spices, etc. Take the whole class and divide them into two parts, necessities and luxuries. Tax the luxuries and let the rest go free.

There are articles that do us no good, as diamonds, jewels, perfumes, patent medicines, and all manner of useless finery. Tax them well. The buyers can afford to pay, and should, for retiring their wealth from the channels of usefulness.

There are articles that lead to evil continually, that are worse than a dead loss to all who use them, and to the Nation at large; tax them all, the traffic will bear, without too much encouragement to perjury and smuggling. Commit the Government for once to the side of virtue and order. Keep the taxes on all intoxicants, tobacco, opium and all of that kind, and pile them on. No good man will be injured thereby, and no bad one has a right to complain.

Let all the necessities of life for the poor go free, unless there is some irreputable reason for protection. Then protect judiciously.

All this done, wherever there is any industry that needs protection give it. Sum up your revenue. If you have sufficient, stand fast. If not, put what you need on the first class named. X. K.

Killed in a Harvester.

Ed. Patterson, a steady, hard-working young rancher, well known and liked in Southern Butte, lost his life suddenly on the evening of the 21st by getting caught in the gearing of a combined harvester.

It appears from the Gridley Herald that Mr. Patterson had been getting the machine ready for the season's work on Warren Green's ranch, and proceeded to try its working. He had started the team and was walking beside the main driving-wheel where he could see the cleaning apparatus. He could not be seen by either of his three companions, one of whom was driving the team, another was at the sack-sewer's post, while the third was on top watching the cutting attachment. Suddenly Patterson yelled, "Whoa!" His cry was heard and the ponderous machinery promptly stopped. As it came to a stand he was heard say: "I'm killed!" He gasped once or twice, but did not speak again.

His body was wedged in so tightly that it could not be extricated until help was procured from neighboring ranches and the machinery unguarled. The position of the body indicated that he had stumbled over a clod and thoughtlessly grabbed the chain-belt with his left hand. His neck was dislocated, left arm broken in three places, head and chest bruised and mangled.

Those who work about powerful machinery while it is in motion can hardly be too careful; they certainly cannot afford to become careless. "Eternal vigilance is the price of" life itself.

NOTABLE SALE TO COME.—We give early preliminary notice that Robert Ashburner, the well-known breeder of milking strains of Shorthorns, has decided to sell at public auction on August 16th, his famous Baden farm herd of Shorthorns. Mr. Ashburner sells because of the expiration of the lease of a part of the land he has occupied for a number of years. This sale will give opportunity to secure some of the best milking Shorthorn blood in the State, and all breeders should make note of the date. The sale will be by Killip & Co. on the farm at Baden station, San Mateo county. Fuller particulars will be given later.

HORSE AUCTION.—The combination sale of track and road horses, brood mares, colts, etc., by Killip & Co., at the Bay District track on Wednesday was well attended and the amounts realized were generally satisfactory. Names and prices will be given in a later issue.

ARTIS GRISELDA, one of the new accessions at Jersey Farm from Smiths, Powell & Lamb's Holstein herd, has been giving from eight to nine gallons daily on ordinary feed for a month past—so Mr. Sneath informs us.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

ABOUT LIVERMORE.—*Herald*, June 21: Wheat is ripening fast.... Our vine district is now a scene of beauty. The grafted vineyards are coming out finely, many of the young shoots being already stake-high.... The berries are setting on Chas. A. Wetmore's olive orchard. The crop is full, being all the trees should bear.

RECLAMATION.—The Rose-Black canal is now excavated to a point some distance above the bridge on the hill road between Pleasanton and Dublin. This first half mile is the worst part of the work. The depth ranges from 8 to 14 feet. The earth is lifted by means of derricks, the team walking away on smooth ground, and pulling a scraperful of mud up the steep bank at each haul. The soil is an alluvial loam, with streaks of clay. An occasional quicksand is encountered, which causes slides in the bank. The opening of this canal will sink the water level on the entire "bolea," and reclaim thousands of acres of fine land.

Contra Costa.

ALMONDS THRIVING.—*Antioch Ledger*: We have before remarked on the vigorous growth and unfailing productivity of Mr. Graves' almond orchard. He consented reluctantly to have the trees planted and was unwilling at the time to give more than two acres of his ranch to what he believed would prove a profitless experiment. Without exception these trees have grown rapidly, and for several years have yielded a return of \$100 to \$200 per acre. Last year they seemed as full of nuts as it was possible for them to be and this year there is an even larger yield. It is Mr. Graves' present intention to set 40 acres to almonds. He says these two acres have given him a net return greater than that received from 10 acres of grain.

El Dorado.

A NICE PLACE.—*Placerville Observer*: On the premises of E. A. Boles the first thing encountered was a fine lot of young cherry trees of excellent varieties, and potatoes growing luxuriantly. Green pea vines fully 12 feet long; oats standing thick on the ground, 5½ feet high. A large number of apple trees of the yellow Bellflower and other varieties; plums of the Golden Drop, Damson and Egg; and while there seems to be some complaint of insects in other places, there is not a sign of anything of the kind in Mr. Boles' orchard, which is attributed to his manner of caring for his trees and a proper cultivation. On the southwest side of his residence a narrow valley is covered with timothy and red-top clover as high as a man's shoulder.... He has a lot of young English walnut trees which are growing to perfection. He has pipes laid and hydrants round the entire lot, and water can be taken out wherever desired. There are about 4½ acres of ground in this lot with fine tree water privileges, which belong exclusively to this property. There are several small avenues leading to the residence from different parts of the grounds. Another attractive feature is a large lot of blackberries of the Lawton variety. This place produces each year from 10 to 12 tons of hay, besides large quantities of fruit and vegetables of all kinds.

Fresno.

FRESNO FAIR GROUNDS ASSOCIATION.—*Expositor*, June 20: Their latest move is the building of a pavilion, to be completed in time to receive the exhibits for the 21st District fair. It will be octagonal in shape, 300 feet in circumference, and 70 feet in height. There will be two galleries, each 20 feet broad, 10 feet of which will be at the disposal of exhibitors and the balance for a promenade. There will be two entrances to the building—one solely for exhibitors, and the other, 10 feet in width, for the use of the public. The center space will be reserved for pyramids of fruits, flowers, etc. The contract for the building has been awarded to W. S. Kribbs at a cost of \$4365, to be completed August 16th. There are other improvements going on at the fair grounds, chief of which is the erection of a large building for the accommodation of the teams of the many regular patrons of the fair grounds. This will contain about 30 stalls to be sold at \$25 each. The party buying a stall having the privilege of selling the same, and the purchaser is the owner of the stall so long as the Fair Grounds Association is in existence. Twenty have been sold already.

Los Angeles.

OSTRICH PROFITS.—*L. A. Herald*, June 23: An instance of the profits attached to ostrich farming in Southern California was told by Mr. Cawston, proprietor of the Norwalk farm yesterday. He has on his ranch, with one male bird and two hens, produced, principally by means of incubators, 18 chicks this season. Before they were ten weeks old he sold them to different parties for \$435, some of them going to Arizona where farms are being established, and others being purchased for exhibition purposes. He expects to have similar returns this fall, in addition to which the feathers will realize \$250.

Marin.

ONE STRAWBERRY.—*San Rafael Journal*, June 21: The largest strawberry we have ever seen was grown at B. F. Morse's yard, on Bolinas bay. This monster berry was 5½ inches in circumference and 2½ inches in diameter one way. It weighed 1½ ounces. It was a Perry.

NOVATO OATS.—Last week harvesters were engaged in cutting a field of oats on a portion of the Black Point ranch recently purchased by Mr. D. L. Hayden. The oats stood eight feet high, by actual measurement, and so dense was the growth there was no chance for the grain to lodge. The reaper would not work in such a heavy mass of vegetation, and so it had to be slashed down with a mowing machine, the grain in many places nearly hiding the horses from sight as they moved through it. Geo. Blodgett has done equally well. To Frank Sutton, however, belongs the honor of having raised the tallest oats in Novato, a single stock having attained an altitude of 14 feet.

Monterey.

THE BEET FIELDS.—*Pajaronian*, June 21: Dr. von Wachtel examined the Salinas valley beet-fields last week, and was much pleased with the good showing made.... The work of beet-thinning is pretty well along toward completion, and several gangs of boys have been laid off. They will be needed again next month when the work of picking and cutting the beets is begun. For a time last week it was feared that the warm weather would injure the beet crop, but this week they were much improved in appearance. The season has been very favorable for the beet-growers, and the crop is looking first class. It is hard to tell who has the best looking crop where there is such general excellence.

SALINAS VALLEY GRAIN.—*Salinas Index*, June 21: J. P. Raymond, a prominent local grain dealer, went on a tour of observation last week as far south as Templeton, and speaks in flattering terms of the crop prospects from Salinas southward to Kings City, a large proportion of the grain being barley. Owing to the hot weather in April the yield immediately around King's City will not be large—small compared to what it was two years ago. Across the river, however, on the Posa de los Ositos rancho, there is a splendid crop, the wheat especially being of very fine quality. At San Lucas, ten miles southeast of King City Mr. Raymond says immediately around the town he should think there were 11,000 acres in wheat, all new land, the yield good, and the quality exceptionally fine. In the little valleys tributary to San Lucas, say 8000 acres will have an acreage yield of fine quality. From San Lucas to San Ardo, especially at the latter point, the acreage sown to wheat was small, but quality fine. At Bradley, the yield is good; acreage, double of last year, and quality fine also. At Jolon the acreage in that valley is quite large, the yield good and quality very fine. Passing on to Paso Robles, there will be about 10,000 acres in grain, mostly new land, and of excellent quality, being about double the acreage of last year; the yield is good. Passing on to Templeton, here no grain-raising was ever attempted until within the past two years. He estimates the number of acres of wheat at about 8000. The quality in all the valleys tributary to Templeton is fine. Until the railroad made its appearance very little attention was given to farming.

Napa.

DISTRICT FAIR.—*Napa Register*, June 22: A meeting of the Directors of Agricultural District No. 25 was held in the court-house Saturday. Present, F. W. Loeber of St. Helena, chairman; John Even of Napa, L. W. Buck of Solano, and Joseph Kline of Benicia. Officers for the ensuing year were elected as follows: President, F. W. Loeber; secretary, A. H. Conkling. An executive committee consisting of F. W. Loeber, Ed. Leake and Nathan Coombs was appointed with power to make the premium list and distribute the State appropriation. It was agreed that the District Association and the Napa County Association act together and that the fair here be made the District Fair.

Placer.

OATS.—The *Auburn Herald* has received a sample of the Welcome variety of oats grown on J. M. Fulweiler's place that leaves in the shade all the other specimens of grain brought to that office this year. There are 31 stalks, fully seven feet in height, the product of two kernels, and they bear an abundance of large oats.

San Bernardino.

OLIVES BEARING EARLY.—*Ontario Observer*: The great objection heretofore made to olive culture in this country has been the long period of time required to bring the trees into bearing. From results obtained on Prof. C. H. Dwinelle's five-acre orchard in the northern part of the colony, it would appear that the old objection is groundless. The trees are less than five years old, and are now laden with fruit.

BARLEY AND POTATOES.—*Riverside Press*, June 23: Wm. John, who has a place near the mouth of the Gage tunnel, brought some fine specimens of the Mountain Burbank potatoes to the *Press* office, and on the test cook they proved excellent. Their skins are light, and the meat is pure white and has a fine flavor. The soil on which he raised them is composed of disintegrated granite, containing less desiccated vegetable matter than lower down in the valley. On one and a half acres he planted the seed in February last. The cost was: Plowing and cultivation, \$12; seed, \$8; total, \$20. (This did not include his own time and labor). He irrigated only once and that was in the middle of May. From this acre and a half he will now gather 100 sacks, averaging 120 pounds to the sack, or a total of six tons, or four tons to the acre. He readily retails them

in Riverside at \$1.75 per sack, or a total of \$175, a net profit of \$103 per acre, not counting his own labor.... Mr. John has just harvested 25 tons of barley hay from 23 acres of the same kind of soil, for which he gets \$250. He sowed 70 pounds to the acre, which cost \$1.30 per cwt., or a total of \$20.93 for the field. The planting cost \$1.25 per acre, a total of \$28.75. The harvesting cost the same. To summarize: Seed, \$20.93; plowing and seeding, \$28.75; harvesting, \$28.75; total, \$78.43; total net profit, \$171.57, or \$7.45 per acre. He sowed in January and did not irrigate.

San Diego.

CANNING COMPANY.—*San Diego Union*, June 21: The much talked-of fruit-canning company is now ready for business. Yesterday articles of incorporation were filed with the County Clerk. The name of the corporation is the New York and Linda Rosa Fruit Canning and Preserving Company, and the capital stock is \$200,000 divided into 2000 shares of the value of \$100 each. The purposes of the corporation, as set forth are the raising of fruit and vegetables and canning and preserving the same for sale; the acquiring by purchase or otherwise any patent or other rights affecting said industry; the buying, selling and exchange of lands and other property necessary or desirable for the successful prosecution and development of the business of the corporation; the purchase, manufacture, sale and general dealing with machinery and tools in any way connected with the industry. The principal place of business is designated as Linda Rosa, in this county. The capital stock has all been subscribed by the following gentlemen, constituting the directory of the company: W. C. Jacobs, Linda Rosa, \$196,000; J. E. Dean, Murrieta, \$500; A. G. Chapel, Los Angeles, \$500; James Tobin, Boston, \$2500; H. T. Mason, Murrieta, \$500.

San Joaquin.

JERSEYS FOR JAPAN.—*Stockton Independent*, June 24: K. Sato, a representative of the Japanese Government, and K. Tokashi, a veterinary surgeon, yesterday purchased from H. S. Sargent a thoroughbred Jersey bull and two cows, and from John E. Moore they bought two cows of graded stock. The foreigners are in the State to buy up a herd of fine cattle for shipment to Japan. They bought a drove of Jersey cattle in Marin county and came here to find a pure-blooded bull. The cows cost from \$40 to \$80 a head and the expense of transportation from San Francisco is \$50 a head. The buyers promise to make another call on San Joaquin stockmen next year.

THE CANNING COMPANY.—At a meeting of the board of directors of the cannery company, held yesterday, W. B. West was elected president; C. M. Weber, vice-president; John Herd, Jr., secretary, and the Stockton Savings and Loan Society bank, treasurer. J. M. Turner, who was with the Lusk company nine years, has been employed as superintendent. The subscription books will be opened to-morrow morning at Mr. Herd's office.

Santa Clara.

THE SAN JOSE SOCIETIES.—*Breeder and Sportsman*, June 23: The San Mateo and Santa Clara Agricultural Society, No. 5, has finally come to an agreement with the Santa Clara Valley Association on the following terms: All the outstanding notes of Association No. 5, amounting to \$1850, to be placed in the hands of W. D. Tisdale, President of the First National bank, and to be paid off by the Santa Clara Valley Society out of the money received from the State appropriation, \$900 to be paid this year and \$950 next year, providing the latter society has exclusive control of the fairs.

Solano.

FALLOW CLEANER.—*Dixon Tribune*: E. E. Krause, of Toland's Landing, has invented a machine for cleaning summer-fallowed land. It consists of three rollers in one frame, with sharp spikes, and a knife attached behind the rollers. It crushes the ground in fine shape and cuts all weeds. It cleans a space of 12 feet at one time, and can be operated by six horses, hitched either behind or before the machine. It also has an attachment for cutting tule. The machine has been thoroughly and successfully tested.

Sonoma.

QUAIL ON CHICKS.—*Petaluma Courier*, June 20: Last week a Portuguese farmer living in this township noticed a hen quail, with what he at first supposed were four little quail, running and feeding with his chickens. He noticed, however, that when he approached the old quail she would fly upon or over the barnyard fence, but her four little ones would remain upon the ground. Upon closer examination he discovered that the little ones were really chickens and had been hatched from four hen's eggs laid in the barn. The quail had evidently squatted upon them and driven the hen away after she had laid the four eggs. When the mother quail would cover the four chicks she had to spread herself, and they would sometimes raise her off her feet. After a few days the farmer thoughtlessly took the chicks away from their quail mother and gave them to a hen with other little chickens about the same age. The quail, after mourning a day or two, finding she could not reclaim her little brood, left the place. Why the farmer did not let her keep and raise the four chickens is past our comprehension.

Sutter.

HORTICULTURAL SOCIETY.—*Marysville Appeal*, June 22: The meeting of the Sutter

County Horticultural Society, held in City yesterday, was well attended. The subject of pests was discussed at length, and a committee appointed to confer with the Board of Supervisors in regard to passing an ordinance compelling owners of infested trees to disinfect them. A similar ordinance, adopted in Los Angeles, was read by the secretary. Four new members were added to the roll. The next regular meeting will be held on Wednesday, July 18th.

Tulare.

HONEY.—*Delta*, June 21: M. J. Twining, who lives eight miles south of Hanford, was in Visalia on Tuesday last. He reports that his bees, of which he has 80 stands, are doing well. He contemplates taking a large number of them to the west side, beyond Tulare lake, and believes that he can then have fresh honey during every month in the year. He has the best improved hives, and brought to Visalia several sections, containing honey in the comb, weighing one and a half and two pounds. Three sections were left at this office, and the flavor was pronounced excellent by all who sampled it.

Ventura.

BEANS AND CORN.—*Santa Paula Chronicle*: Between Santa Paula and Satcoy there are thousands of acres of corn and beans looking finely. The long straight rows and clean culture—not a weed to be seen anywhere—are a constant surprise to an Eastern farmer, who has been accustomed to a constant warfare with weeds from the time these crops are above the ground until matured.

Yuba.

MOUNTAIN CHERRIES.—A sample lot of mountain-grown cherries from W. B. Meek of Comptonville, received at the *Appeal* office the other day, were very large and again demonstrate that excellent cherries can be grown at a considerable altitude in the Yuba county foothills.

Yolo.

BIG FIGS.—*Woodland Mail*, June 23: Mr. E. B. Aldrich brought us yesterday from his farm in Capay a box of fine white Smyrna figs, the largest that we have ever seen. One dozen weighed exactly 3½ pounds.

PINS BY THE GIZZARDFUL.—*Yolo Democrat*: Ex-Town Marshall Hoyt vouches for the following: Upon returning home last evening from a drive with his wife, some one of the family had killed a chicken, and his attention was called to what was considered a remarkable freak of nature. The gizzard of the fowl was found to have tin points projecting from it in all directions. Upon cutting the gizzard open it was found to be filled with these instruments, which had literally pinned it together, and when counted 15 were found. Mr. Hoyt lives next to the schoolhouse lot on Main street and thinks the chicken had picked up pins that had been lost by school-children. The chicken was fat and healthy.

ARIZONA.

PEACHES AND APRICOTS.—*Phoenix Herald*, June 14: The admirable orchard of Mr. A. L. Henshaw lies one mile southeast of the city. If it could be seen as it stands to-day with its almost overloaded trees, by all the farmers in the East, South and West, our Immigration Union would henceforth have a sinecure. It consists of 2200 peach and 1800 apricot trees, all heavily laden with ripe fruit, and from their beauty and symmetry as they stand in parallel rows, it is evident that each particular tree was raised a pet. The trees are from four to five years old, and their average bearing was this year from 200 to 400 pounds each, the apricots as large as hens' eggs, while the peaches average as large as one's fist, and the blending of rose and sunset tints on their velvety cheeks makes each one of them a fit model for an artist. Mr. Henshaw has made large shipments from this year's crop to various parts of the Union, distant and near, but the fruit being now too ripe for advantageous shipment, he is gathering and drying the balance.

SAMPLE PRODUCTS FOR AUSTRALIA.—A fine collection of specimens of California-grown grain, pulse and other seeds, intended for the Melbourne Exposition, has been exhibited during the past week at the Produce Exchange in this city. The list of products includes buckwheat; yellow and brown mustard; castor beans; blue Prussian, sweet wrinkled and marrowfat peas; bayo, red, white, pink, Windsor, Lima, pea, butter and Lady Washington beans; white wheat, standard of 1887; Chili club, blue stem, red Australian, Proper, Sonora, amber and White Australian wheat; flaxseed, alfalfa seed, California rye, round white corn, lentils, Mexican corn, popcorn, Egyptian, round yellow, yellow dent and white dent corn; bald, bright feed, dark feed, brewing and Chevalier barley; and Norway feed, milling and surprise oats. Each sample has a little glass-covered box to itself, and they are all mounted in a handsome carved frame. The exhibit is to be shipped to Australia by the next steamer.

HEAVY floods in the cities of Leon and Silao, Mexico, have caused great damage and loss of life. About 2000 houses have been destroyed, and some 1500 people drowned.

THE Southern Pacific Railroad Company has bought \$72,000 worth of land near Tacoma, Washington.



Lost—Found.

To-day, while moving the eight-day clock
That had stood in its corner, tickety-tock,
Ringing the hours from night till morn,
Years and years before you were born—

What do you think we found, to-night,
Buried in dust, quite out of sight,
But the daintiest little baby shoe,
Tied with ribbon of brightest blue;

A baby block, once painted red,
With an O and a P and a lion's head—
Buried treasures, lost for years;
A button, a spool, and a pair of shears!

I know where to find the mate to the shoe,
Tied with ribbon of brightest blue,
With a little curl of yellow hair,
Folded away with tender care.

But where is the baby? Was she lost, too,
With the spool, the block and the little shoe?
Not lost, but found, my darling May,
Just fourteen years ago to-day.

This is she, my fair, sweet girl,
This the baby with yellow curl,
This the hand that lost the shoe,
This the foot that wore it, too.

This is my daughter, fair to see,
Dearer than all the world to me;
Would I could stay the hand of Time
As I stopped the clock, with its ancient chime.

O mothers, whose treasures are hidden away
In a deeper dust than were mine to-day!
They are not lost, but gathered in,
Where dust ne'er soils, where stains no sin!

—Deborah T. Williams in Boston Transcript.

Grandpa's Story.

"So it seems Fred Hayes has finally jilted Fanny Howe," said Grandpa West, one rainy morning, as he stood shaking off the drops from his great coat on our kitchen stove.

"Yes," replied I, as I filled a pan with apples and prepared to cut them, "and more shame to him, too. Brought her clear up to an engagement, and then left town with another girl, and without one word to Fan."

"Shame!" repeated good Grandpa West, with an indignant flash from eyes blue and clear as at 21; "it's a disgrace to any Christian church to let one of its members go on so. Time was when he wouldn't have gone soot free, as he has now."

"But what could have been done?" I inquired.

"Done? He'd have had the full broadside of church discipline on his shoulders 50 years ago. He ought to be dealt with as Harmon Page was," concluded grandpa, meditatively.

"How was that?" inquired I, interested at once.

"I wonder if you ever heard that story!" said he, with a curious glance understood better afterwards. "See here, it's a rainy day, and mother won't be expecting me home. Hand over a knife, and I'll help you with your apples and tell that yarn at the same time."

Well pleased with the plan, I took another pan, and our fingers flew as grandpa went on with the true and authentic history of Harmon Page.

"You see," he began, "all this happened fifty years ago, and Amityville wasn't then the slow-going, dull little place it is now. It was comparatively new, and was as lively and enterprising as the new places of the West are to-day. There were a good many old aristocratic families, though, and I tell you they held their heads high. The very meetin'-house steps had to be gaged accordin' to the rank of the buyer, and I tell you old Deacon Avery would never have got the scowl out of his forehead if Squire Page had happened to had a seat in front of his."

Deacon Avery had a daughter—a quiet, gentle girl, with a slight, graceful figure and a face—well, you don't see such faces nowadays. A clear, fine complexion, with a delicate pink trembling up into her lips when she was spoken to. Her eyes were great limpid wells, changing with every thought, and her hair was a soft chestnut brown, waving about her face in its own wayward style.

"She was a lovely girl, became a professor young, and was always to be seen in the end of the deacon's pew every Sunday, rain or shine. She'd never had much company, for there was a kind of dignified reserve about her that kept the fellows at a distance. But when she was long about 18 or 20, Harmon Page began to go with her."

"He was a handsome, high-spirited chap, lively and full of talk, and as different from Mercy Avery as two persons could well be. But they loved each other; there's no doubt about that. Many's the time I've seen her grand eyes sparkle and pretty cheeks flush at Harmon's witty speeches, till she was really brilliant."

And he, with all his proud spirit, always grow strangely gentle with Mercy.

"So, in spite of the rivalry that had always existed between the two families, no one would have disturbed the two, had it not been for Virginia Wake. She was a cousin of Colonel Ford's first wife, and came there visiting from the South."

"Virginia was called a handsome girl, with her brunette face, flashing black eyes and heavy black curls she was never tired of jingling around her neck. She had a good deal, too, of what you call 'style,' and Amityville folks, who didn't know as much of the ways of the world as they do now, were completely fascinated with her taking ways. The young fellows in particular hovered around her like moths around a candle."

"All except Harmon Page. He had engaged himself to Mercy, and at first gave the newcomer the go-by. The Pages and Fords had a family feud of a good many years standing, which kept them apart for one thing, and Virginia had plenty of company besides Harmon."

"But I suppose Harmon's indifference piqued the girl, and she snubbed the other boys and exerted all her charms on Harmon."

"She came in the fall, and along about Christmas time the neighbors began to notice that Virginia was mighty thick at the Pages."

"The two houses were pretty near together, and she used to run over to Mother Page's on some excuse or other 20 times a day. Perhaps 'twas't strange that Harmon began to be flattered by it. He had as good a turnout as any chap in the place, and he got in the habit of taking Virginia considerable."

"You see position's everything in more cases than one, and Virginia was right there handy, while Mercy lived at the top of one of our old-fashioned Connecticut hills, with a dreadful hard road leading to it."

"Whether she knew how much Harmon was taking the other girl wasn't known; some thought not. She didn't get out much except to meetin' that winter, and she had enough of her father's spunk about her not to let on that she saw Harmon foolin' with Virginia Wake at the noonin's."

"There was splendid sleighing that season—the kind we don't have these days—and some of the young folks wanted to have a general sleigh-ride. It was put off from time to time, till 'twas finally set for one Thursday night."

"It was the night of the regular weekly prayer-meeting, and after the time of the ride was all settled, Harmon, who was the only professor in the party, tried a little to have it changed. But Virginia Wake declared, with a wicked shake of those jingling curls, that she could say her prayers just as well in a sleigh as she could cooped up in that stupid barn of a meeting-house."

"Everybody thought afterwards that she fixed the ride for that night to show Mercy Avery the power she had over Harmon Page."

"Well, the party started from Amityville 'long about five o'clock. They were all in a big two-horse load except Virginia and Harmon."

"She had arranged for them to go ahead in his cutter alone, and I'll admit they were a splendid looking couple, he with his fine eyes and teeth, and she in a rich crimson hood that set off her dark beauty to perfection."

"Our route, for I was one of the party, lay straight up the hill toward Deacon Avery's. Just as we turned into it who should we meet but the deacon and Mercy."

"They were late, for the meeting was all appointed for early candle-lighting; but Mercy had probably waited awhile for Harmon, who for a year back had taken her to Thursday meetin' as regular as the day came round."

"She sat up straight and queenly beside her father as they passed, and seemed not to hear the malicious sally Virginia called out to her."

"We, in the back team, were near enough to catch the scornful glance she threw from those deep eyes, gray as steel that night."

"As for Harmon, he turned white to the lips, and for a mile hardly answered the banter that Virginia kept up. After that he seemed to grow perfectly reckless, laughed and joked louder than any of the rest, and was so careless that he drove on a stone wall; and we, following, were all upset in a heap together, and had hard work to get tied up so as to make our way home toward morning, more dead than alive."

"It was a sorry day for Harmon Page. He was waited upon by a church committee, headed by Deacon Avery, who denounced his whole conduct toward Mercy as unchristian and highly inconsistent in a church member."

"He didn't have much to say for himself, and they churched him on the spot. He was pretty down in the mouth, but kept up some hope till he saw Mercy Avery."

"He had refused to see Virginia Wake, and that night he went up the familiar hill to Deacon Avery's stone house."

"Mercy herself came to the door, calm and self possessed as if nothing had happened, and showed him into the sitting-room. There was a steady light in her gray eyes, though, that made Harmon tremble, and without beating about the bush a bit, he came right to the point and asked if all might be forgiven and forgotten, and they become as good friends as before. He worked himself into a passion, cried, and took on like a child, they said."

"But, law, it didn't move her an atom. She had the genuine old Avery grit, if she was mild mannered, and she told him that, as long as the church had put him out, she, of course, couldn't in conscience take him back."

"He pleaded and entreated until ten o'clock

at night, a late hour in them days, but it didn't make a mite of difference. She wouldn't overlook what the church had considered a gross breach of faith. He went out a crushed man, and from that time his spirit seemed to leave him utterly."

"And what about Virginia Wake?" I interrupted, unconsciously cutting my finger in my eager interest.

"Oh, after that girl had done all the mischief possible, public opinion toward her changed 'mazin' quick, and she left town in a few days, and never was heard from in these parts again."

"And Harmon Page; what became of him?"

"He never got over the shock. He became silent and melancholy, and finally had to be taken to the retreat. He grew worse, and the sight of a handsome woman with red cheeks and black curls would always throw him into his most violent tantrums. He died in the asylum at last."

"Now I think that was real mean," said I, wrathfully, winding cotton around my bleeding thumb. "If Mercy Avery hadn't turned him off his life might not have ended so sadly. I think she ought to have taken him back."

"Ah, ha," said Grandpa West, quizzically; "do you mean that?"

"Certainly," said I, with dignity, "why shouldn't I?"

"Oh, nothing," he replied; "only if she had, Harmon Page would have been your grandfather instead of me."

"My grandfather—why, then," said I, in some confusion, "Mercy Avery must be—"

"Mercy West, your grandmother," said grandpa, chuckling me under the chin. "Confess now that 'all's well that ends well.'"

"I suppose so," said I reluctantly. —*New England Magazine.*

The First Cloud.

[Written for the RURAL PRESS BY D. ROTHY SHIRLEY.]

It was the second anniversary of our wedding-day, and my baby Bertie had just begun to notice.

I was very happy, for I loved my husband, and not a cloud had marred the sweet sunshine of those first years of married life. My father and mother were spending the day with me, and we had such a happy time together. Baby Bert was on his best behavior, and all agreed that another such baby was never seen.

I was doing my own work, and either from excitement or the heat had a fainting spell while preparing to get supper. They were all so startled and worried, for I had seemed quite strong. Ned carried me to the lounge and mother finished getting supper. I went to the table and drank a cup of tea, while they all watched me with loving, anxious eyes. Soon afterwards they persuaded me to take baby and go to bed.

As there seemed to be no danger of a recurrence, Ned went down town on business. Father and mother had promised to stay till the next day, so as the evening wore on and he had not come, they went to bed, leaving the door unlatched for him.

He was often obliged to be away from home, and his business often kept him down town till late; so I sunk into an easy sleep from which I did not waken till near morning. Great was my surprise to find he had not returned.

He was so often away at night that I did not worry as under other circumstances I should have done; still, of course, I was curious as to the cause of his not returning, for it had always before been possible to send me word if he could not get home when expected.

The hours dragged away, and at last, as we were eating breakfast, he walked in. I had to leave the room to go to baby just as he came, so did not hear what he said to the rest.

When I came back I sat quietly down at the table and asked him if he had his breakfast. He answered cheerily enough that I might give him a cup of coffee.

The rest of the day was like any other, save that I kept out of his way as much as possible. Why? Well, anxious as I was to have him tell me all about it, a preverse spirit in me made me reluctant to give him a chance to talk to me alone.

Then I kept thinking about it and making the matter seem worse, as I turned it over in my mind, viewing it as I thought on all sides.

I thought of all the different reasons that had at various times made it necessary for him to be away over night, but none of them seemed to fit this especial time.

If he had to go a little ways out of town on business, he often came home in the "wee sma" hours of the morning rather than be away altogether.

So the more I thought of it the more I resented this apparent indifference to what might be my opinion. I brooded over it all day, angry that I was so ignored, half frightened and wholly grieved, for I could but think of—

"The little rift within the lute,
That by and by will make the music mute,
And slowly widening
Silence all."

However, I succeeded in keeping a calm exterior, until Ned said to me with a caressing hand on my head:

"How does my little woman feel to-night?"

We had gone to our room for the night, and I burst into tears. He drew me to him, with a tender concern in his face, and I whispered:

"O, Ned, I've felt so cross with you all day."

"Why?" he asked. And I answered without raising my head:

"Because you didn't come to me and tell me why you didn't come home last night."

"Ah!" he said, "I thought that was it. Well, I'd rather not tell you, but—"

I started away from him and exclaimed:

"What on earth do you mean?"

As he looked at me in some astonishment, I drew myself out of his caressing arms and ran out of the room.

I cannot well tell you how I felt. I was in a mental whirlwind of hurt surprise, indignation and doubt.

When I finally went back in the room he was lying with baby nestled up close to him.

He attempted to speak to me, but I put my fingers in my ears, and said stubbornly:

"I will not listen to you; if you had rather not tell me, you shall not."

A half-amused half-pained look passed over his face. He shrugged his shoulders and closed his eyes as if sleepy. In truth, I must have looked foolish enough, standing there with my fingers in my ears, lest he should tell me what with all my heart I was longing to hear.

He only spoke to me once again that night, and then said:

"In the morning we'll talk this over, and then I'll tell you what I think of such matters between husband and wife."

I only said coldly: "Of course you can do as you please, but I had rather you would never refer to it again."

This when I knew I shouldn't sleep all night for wondering what could be the reason he had rather not tell me, his "other self," as he had often called me. I fell into a troubled sleep toward morning and awakened late. I was hurried by my work all day and Ned was obliged to go away for a week. We parted with no attempt on my part to arrive at an understanding.

How long the days seemed till he got back! I had plenty of time to regret my refusal to listen, and made up my mind to tell Ned so when he was home again with me. Not that I meant to let him tell me about that night. No! No! I wanted to show him I was willing to trust him.

The first chance we had for a quiet talk was devoted to that topic. He began it himself, and I asked him if he had wished not to tell me because he thought I lacked trust in him.

"No, little one, I realized your right and your natural interest to know of my movements," he said, "and I had no thought of not telling you. I only wished, for the sake of the friend whose interests I had been guarding, that I had not needed to make his trouble known."

I only looked puzzled, for you see I had never thought of that as a possible reason.

"Yes," he continued, laughing at the expression on my face, "I stayed away on another's account, not through any carelessness or wish of my own. One of my most intimate friends, a young man whose only fault is his fiery temper, got into trouble and needed some one to help him out of it. I stood by him and prevented any disgrace; managed it so it need not reach his parents' ears till he himself told them, and it kept me too late to reach home in reasonable season, so I stayed all night at his home. He felt badly about the scrape, and of course wanted it kept quiet, but I should have told you, little wife, only you wouldn't—"

"I know, I know," I cried, throwing my arms about his neck. "I was foolish and unreasonable, but I've been well punished, for I've been so unhappy ever since. You have been very patient with me, Ned," and I pulled his head down for a kiss, feeling rather ashamed of myself.

"Well," he said, gently, "I had no right to be angry or impatient, for you had cause to be grieved; but don't fancy that I didn't mean to tell you, for I did, and will even now."

"No!" I exclaimed, stopping his mouth with a kiss, and to this day I haven't let him tell me what the trouble was that night, nor who was his friend. However, I think I could guess his name.

The New "World-Builders."

[Written for RURAL PRESS BY MAID-OF-ALL-WORK.]

Probably our most distinct and clear-cut picture of the early mining days in the California hills is that delightful novel of Joaquin Miller's, "One of the World-Builders," which was stolen bodily and dramatized on the stage as "49." "49" was the central figure, and a personality with which most people who have ever lived in the mining regions are more or less familiar. There were "49's" in or near every town of the gold regions. The successful ones, like Joaquin Miller's "49," appeared in the cities below or went East as capitalists, but the unsuccessful ones remained prospecting for rich strikes, and some of them, hidden away among the canyons and forests of the great mountains are there still, unable to break away from the old haunts.

"49," the old "World-Builder," had a tunnel and little else, and half-starved on "corn" and hope, while he picked and drilled his slow way toward the mountain's heart. Everything he had went into that tunnel, and the people said his reason had gone, too. At last, old and gray and worn, with starvation looking over his shoulder, he drove his pick into the great vein, and the world, the mining world there, was built up in a day into great prominence.

He had original thought, clung to it and had

faith in it, and in that sense he was also a world builder; and his title may be brought down the stream of time, and I may give it again to the heroes of the new era that has now come to the pine-scented flats and vales of the foothill regions.

Fruit planting in California has fought its way all along the line until quite recently. It is no wonder that doubt was strong when the settlers began to creep down the great central plains and built lonely looking homes, without the shadow of a single tree to break the monotony; but in the foothills, the natural home of the tree and vine, the backwardness of the industry is unaccountable.

It took many years after the railroad was built to find out that fruit could be shipped, and now, after all this delay, about two thirds of the hill country must be cleared, old ditches renewed, new ones dug, trees planted, and three or four years must elapse before the increase comes.

It is one of the failings of the human mind to have no faith in anything that grows till the proof stares us out of countenance. In certain localities on the plains where the grain crop seldom or ever fails under the new system of agriculture, they have a panic nearly every year in April when the lower leaves of the plant die and the upper leaves straighten up around the forming head. If a few hot days come at that time the fields look sickly and blighted, everybody looks sad and the "boys" strap their blankets and prepare to emigrate. But suddenly a cool wind springs up, the breath of the sea fog permeates the air, the fields revive, and, presto change, every one smiles.

In the growth of a tree there are several years in which panics can strike the owner who has risked his time and money, so that it requires not a little character of the fine heroic quality to start out on an enterprise in which, though Paul may plant and Appolo may water, yet only God giveth the increase. The little helpless tree with its roots tied up in a sack has no way of telling just what it wishes in the way of soil and care, and experiment is slow and expensive, so that the brave horticulturist has to whistle cheerfully over a great many things he don't know all about, while the panic-maker leans over the fence and sows his seed of fear and discord.

Many people who believe in God and his immutable laws, can't believe the laws of Nature and their own reason about anything that grows till a neighbor has tried the experiment at his own risk.

For this reason progress in horticulture is slow, and for the same reason State experimental stations will relieve beginners of a great burden of care, and accelerate in a remarkable degree the development of the State.

Meanwhile the new world-builders push forward with their silent and heroic work. It takes faith of the stalwart kind to begin on a rocky hill slope covered with brush and forest expecting to change it into a neat, tasteful, orderly home spot surrounded with a successful orchard, dropping its beautiful increase into the shipping boxes. It is a long strong pull from the first sound of the ax to the nailing up of the full, fragrant boxes.

But it is the genius of the world-builder that toils and struggles and waits. The heroic world-builder of the hills finds many ways to ward off the pinching hand of hard times, while his cottage, surrounded by vines and trees, and beloved of the Goddess Flora, grows in comfort and beauty. And it seems to me that those who demonstrate what despised brushy hills are good for and show to the home-hungry from everywhere what fair bright homes can be made among the rocks and glens, are the true world-builders of the age.

He is gratuitously told by the panic-makers over and over, that the soil is too thin for his trees, that it is too cold for his citrus fruits, and too hot for his vegetables; that the market will overstock; that the age will harass him, the scale bug overcome him, and all the miseries of life overtake him, because he has chosen horticulture for his occupation. But the brave world-builder is dumb as Excelsior, and calmly goes on setting strawberries between the rows and raspberries in the wet corners, and raises vegetables, and finds his market among old Californians who have been for many years practicing the strange economy of going without vegetables and paying doctor's bills.

He turns every way to meet expenses while he waits. He sells the wood from the clearing, handles the carpenter's tools and becomes a jack-of-all-trades in the neighborhood. His wife and children work in the garden and make play of it in the soft April and May weather. They seem never so happy as when weeding and picking berries, and the little ones are as proud of the clean garden rows as the little city misses learning their first graces at the dancing school, and are more justly happy because they are learning the laws of plant life and acquiring wisdom that will never forsake them.

It seems like the making of a new world indeed to drive up from the wide yellow plains and see the forests primeval giving way to the clearings and those hardly yet intruding on the forest altitudes that stretch upward to the Sierras. The old mining ditches, whose mission once was to cut yawning holes in the hills and carry the debris down over the home of Ceres in the valley below, now wind peacefully among the hills giving out its bright waters to spread the slopes with smiling orchards and the flats with

green gardens, so that the world of tailings and tunnels, of shafts and bare rocky desolation, is changed into a world where trees, gardens, building sites, views, lawns and avenues are the first considerations.

What has an hour brought forth when the housewife plants tender vines and flowers around the old rocks that held the hillside against the hydraulic pipe in the brave days of old! The first cottage of the new world-builder is but little larger perhaps than the cabin of '49, but the wife is there with the comfort her presence implies, flowers shine gayly about, and the garden rows surround it like a frame. Each year adds grace and utility—a room here, a porch there, one window more, and the ideal home approaches. Tree planting is like an education; it is never too late to learn, and the most determination and the best thought precedes the best results. The new world-builder must be a lover of his calling, and among the multitudes flocking to our State there will be enough who will be charmed by the healthful, picturesque placer regions to make the days of '89 a wonderful triumph of the days of '49, and a triumph that will be as enduring as the love of beauty and comfort in the human beast.

YOUNG FOLKS' COLUMN.

How Bessie Crossed the Ocean,

With Some Account of What She Saw on the Way.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

In a cottage where the roses
Have it all their way,
Lives the darlingest of neighbors—
Dimpled Bessie Gray.

Frank is Bessie's sturdy brother—
Thinks he's dreadful wise;
Has the saniciest of noses,
Shiniest of eyes.

When she calls the moon a lantern,
(She is under six)
He with gravity of seven,
Answers "Fiddlesticks!"

When she calls the bay an ocean,
You should hear him laugh!
"Silly Sis," he says, "it isn't
Big enough by half."

"Bess," said I one morning, smiling,
"Let us take a trip
All the way across the ocean
In the ferry ship!"

So we got aboard the "Newark,"
I took care of doll;
Much as Bess could do to manage
Tiny parosol.

Far and wide the wind was blowing,
Waves all capped with white;
Over them her brown eyes wandered
Dreamy with delight.

"Say, you know, I think it must be
Mermaid's washing day;
Cause the water's full of soap suds,"
Whispered Bessie Gray.

Soon she spied the distant hilltop
Shaped so like a face;
Little fleecy clouds around it
Gathered for a race.

Swiftly by the purple mountain
Bessie watched them sweep;
"That's Boy Blue," I heard her murmur,
"With his cows and sheep."

After this we saw the city
Looming thro' the smoke;
Gradually the cumbrous ferry
Steamed into the dock.

"Come my pet, here's San Francisco,"
"I was 'bout to guess
Maybe 'tis the giants' kitchen,"
Answered little Bess.

Alameda, June 19, 1888.

The Pleasure of Helping Mother.

[Written for the RURAL PRESS by M. L. R.]

Tears ago when I was a little girl, I was asked by a schoolmate if I helped my mamma any. "Why no, we keep a girl. I do not have to work," exclaimed I, proudly. "So do we," said she, "but I dearly love to help mamma do little things. I know how to wash the china, dust the rooms, dress myself, and lots of other things." Why I dress myself and help Tervy dress, thought I during the afternoon; but, child-like, I thought that was not washing the delicate cups and saucers, so I devoted my spare time to thinking. "Oh my! If I only could just once, all by myself, wouldn't it be splendid?"

I don't suppose she does it all by herself either. I would be ahead of her too. You see I was the least bit jealous of my friends accomplishments, so was more anxious to do and try than I otherwise would have been. But my chance came sooner than I expected. The next morning Biddy left without warning. Papa was mad and grumbled at "such a house." Ted was, if anything, meaner than usual. Tervy was peevish and cross, fires wouldn't burn, "little mamma" was about ready to cry. Now is my time, thought I, so I said: "Mamma, if you will let me I'll stay home from school to-day and help you."

She smiled at me through the swimming tears; stooping she gently kissed me, whispering low

"my little daughter." That was all, but it was enough. While the family was at breakfast I slipped into the hall and put papa's hat, gloves, cane and umbrella on a table near the door, then placed everything that Ted would want in one room; opening the windows and turning his bed to air while upstairs.

Not thinking of anything else to do, I returned to breakfast. As I took my chair, Ted said: "What makes Topsy's face so red, ma?" Ah, did I not know, was I not helping the dearest of mamma's? As they used to say "It never rains but it pours," so it was with us; for about nine o'clock mamma fell and sprained her ankle. With my help she limped to a chair, while Tervy ran to the door, called the first boy she seen, commanding him to "hurry and get a doctor, her mudder was killed."

It happened to be a neighbor boy so the doctor was soon with us. Imagine mamma's surprise when the doctor said she must not walk on that foot for six days.

There was the mornings work to be done, cooking to do, children to take care of, and no girl; "O dear, O dear." "We've got to mind little mudder, us tan do de worst," said Tervy. "That's right," declared the doctor taking his leave, promising to bring Tervy a hat full of candy if she would see that mamma minded him.

Ah, with what pleasure I washed the precious china that day, cleaning the silver and arranging it on the sideboard to my own satisfaction. How I cleaned the kitchen as mamma told me, slipping back half an hour after to give the range another touch, and for the fourth time setting the chairs; with what pride the sweep ing, dusting and making of mamma's bed was gone through with. How deftly the duster flew here and there, now over the cut-glass bottles, now the pink satin pin cushion with its bunch of pansies painted in one corner, then quickly over the mirror with a decided flourish at the chairs and sofa.

Then, with a tired little sigh I hung up my broom and duster. Tervy hearing me, I cried out: "Topsy, we's don nicer." How swiftly time passed talking with mamma in the cheerful, flower scented little parlor until lunch time.

The fairies must have waved their wands over that lunch. Was there ever one before or since half so good. No matter if the toast was cut unevenly and browned too much. Wasn't there a pure white lily (mamma's gift toward lunch) so heavily laden with perfumed nectar "fit for the gods," that it bowed its waxy petals to the board? What if the tea was boiled black, wasn't there luscious glittering bright red fruit to be eaten with pure cream? And above all, wasn't there the dear little mamma smiling sweetly at it all? CLIPPER MILLS.

GOOD HEALTH.

Animals as Doctors.

Animals get rid of their parasites by using dust, mud, clay, etc. Those suffering from fever restrict their diet, keep quiet, seek dark, airy places, drink water, and sometimes plunge into it. When a dog has lost its appetite it eats that species of grass known as dog's grass, which acts as an emetic and purgative. Cats also eat grass. Sheep and cows when ill seek out certain herbs. An animal suffering from chronic rheumatism always keeps, as far as possible, in the sun. The warring ants have regularly organized ambulances.

Latreille cut the antennæ of the ant and other ants came and covered the wounded part with a transparent fluid secreted in their mouths. If a chimpanzee is wounded it stops the bleeding by placing its hand on the wound or dressing with leaves and grass. When an animal has a wounded leg or arm hanging on, it completes the amputation by means of its teeth. A dog on being stung on the muzzle by a viper was observed to plunge its head repeatedly for several days into running water. This animal eventually recovered. A terrier hurt its right eye. It remained under a counter, avoiding light and heat, although it habitually kept close to the fire. It adopted a general treatment—rest and abstinence from food. The local treatment consisted in licking the upper surface of the paw, which it applied to the wounded eye, again licking the paw when it became dry.

Animals suffering from traumatic fever treat themselves by the continued application of cold water, which M. Delaunay considers to be more certain than any of the other methods. In view of these interesting facts, we are, he thinks, forced to admit that hygiene and therapeutics, as proposed by animals, may, in the interest of psychology, be studied with advantage.

Many physicians have been keen observers of animals, their diseases and the methods adopted by them in their instinct to cure themselves, and have availed of the knowledge so brought under their observation in their practice.—*New Orleans Picayune.*

TO RELIEVE HEART TROUBLE.—Mrs. E. L. Mayberry writes to the Los Angeles Times as follows: I suppose one would be laughed to scorn should they suggest to the learned physicians engaged in torturing the last days of brave Gen. Sheridan, that a common rubber bag filled with hot water, placed over the re-

gion of the heart at night, is more effective than cases of heart failure of any kind than torturing methods usually resorted to combined. I have suffered from heart trouble for the last ten years or longer, and have never failed in restoring it to its normal condition very quickly by this method, even when my limbs have become cold and purple. Although I cannot benefit brave "Little Phil" by this information, it may aid some other unfortunate who is being punctured, morphined and blistered into the grave or worse, if you will make it known.

THE "CIGARETTE EYE."—A New York oculist says that the greatest enemy to the eyes of young men is the cigarette. Recently a disease has appeared among smokers, which is dangerous, and after careful investigation, the best authorities, who, for a long time, were at a loss to understand the peculiar malady, have traced it to the small, paper-covered tobacco sticks. It is now known as the "cigarette eye," and can be cured only by long treatment. Its symptoms are dimness and film-like gathering over the eye, which appears and disappears at intervals.

COCAINE not only destroys the will-power, but will make a villain out of the honestest man in the world if indulged in to any great extent.

DOMESTIC ECONOMY.

Whitewashes.

A reader who has half a mile of fence and barns to whitewash asks us to give a recipe for a whitewash that will be durable. In answer to a similar request about two years ago we gave the following:

There are several methods of making serviceable wash. One is made as follows: Three pecks of water lime, one peck of silver sand, and a half a peck of salt. This is used for old, rough fences and outbuildings. The common whitewash is made by putting quicklime into a tight barrel, pouring on water to slake it, and adding water till it is of the consistency of cream. This is used for ordinary work. But a much better whitewash, which stands weather well, is made as follows:

Put half a bushel of quicklime in a barrel and add boiling water until it is covered nearly six inches deep; cover the barrel to keep the steam in, and when the violent ebullition is over, add water enough to bring it to the consistency of cream, allowing four pounds of rice flour to each half bushel of lime, or the rice flour may be mixed with the water for slaking, mixing the flour carefully in cold water before putting it in the hot water. Stir constantly in the hot water until thoroughly set, and then pour it all over the lime, as directed.

To improve the above, add two pounds of sulphate of zinc and one pound of salt. To change the color, add yellow ochre for cream tints, raw umber and lampblack for gray tints, and umber, red and lampblack for fawn tints. The permanence of whitewash, thus prepared, is remarkable, and, when once tried, will be used to the exclusion of the ordinary mixture. While on this subject we will add directions for making a wash

For Poultry Houses,

Which we found in an exchange a few days since: "Take one peck of burned stone lime and slack it with boiling water. Do not use more water than is necessary to have the lime slowly crumble, and use a tight barrel for the purpose. When it is fine, pour enough boiling water over it to make a thick mass. Now add one quart of kerosene to a gallon of skim milk, mix well and pour the mixture in the barrel. Next put a pound of carbolate of lime in the barrel. Stir the whole well and add sufficient hot or cold water to give it the proper consistency. Apply it once a month, and it will not only protect against vermin, but it will be durable and give neatness to the poultry house.

ANGEL CAKE.—The whites of 11 eggs, 1½ cupsful of powdered sugar, one cupful of flour, one teaspoonful of cream of tartar. Sift the flour four times. Beat the whites of the eggs to a stiff froth, add the sugar gradually, then the flour and cream of tartar. Bake in a pan with a tube in the center.

POTTED SHANK.—Boil a shank of beef till tender; chop the meat and season with salt, pepper, and (if liked) half a nutmeg. Reduce the liquor to three parts, add the meat, cool in a mold. It should turn out well when cold.

CHOCOLATE PUDDING.—Heat a quart of milk to near the boiling point. Thicken with dissolved cornstarch, and sweeten. Stir in half a tea-spoon of grated chocolate. Flavor with vanilla and serve with cream when cold.

WHITE CAKE.—Two cups of sugar, two cups of flour, one cup of cornstarch, one cup of butter, whites of five eggs, one teaspoonful of cream tartar and one-fourth of a teaspoonful of soda.

WHITE CAKE.—One egg, one cup of sugar, one cup of sweet milk, one-third of a cup of butter, two cups of flour, two heaping tea-spoonfuls of baking powder.

SUGAR COOKIES.—Two eggs, a little more than one-half cup of butter, one cup of sugar, one-half teaspoonful of soda (scant) in four tablespoonfuls of water.



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Patent Tule Covers—B. F. Gilman.
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The Week.

The strange weather seems to have worn itself out, and the old style of California summer, bright and warm and dry, has reasserted itself. Sun-drying of apricots in the earlier regions is therefore proceeding under clear skies, and a very fine article is being produced. Shipping of fruit Eastward is progressing at a rapid rate, and auction reports are on the whole favorable, though there is far too much delay on the part of the railways in the delivery of goods at Eastern points. Overland lines have much to learn in this matter.

We have just read that fruit-trains on the Illinois roads have the right of way, and even a special with the President of the United States on board would have to take a side track while the gooseberries flew by to market. That is just the rule that should be stretched across the continent.

The greatest event of the week has been the completion of the work of the Republican Convention and the nomination of Benjamin Harrison of Indiana and Levi P. Morton of New York as candidates upon a thorough protection platform. Now the music will begin. There are now three tickets in the field: Democratic, Cleveland and Thurman; Prohibition, Fiske and Brooks; Republican, Harrison and Morton—and plenty of time for more. The campaign promises to be warm and interesting.

Close of the Volume.

The last issue of June brings us to the close of another half-year volume and XXXV will go upon the shelf. It has been a volume full of practical information about our industries, our resources, our home life and aspiration, as the carefully prepared index upon the last page of this issue will certify.

Each new half year brings forward a wealth of information about the progress of our grand State and coast, and yet each succeeding period surpasses it in achievement and in the promise it discloses.

We have the experience of 17½ years in this work to warrant us in assuring our readers that the coming volume will be better than those which have preceded it, and upon the effort to secure this result we enter with full zeal and confidence, encouraged by our constantly growing circle of patrons and friends and incited by the growing cause in which we are laboring.

The Spirit of the Day.

It is one of the noblest endowments of our nature that while standing on this point of the fleeting present, we can look both ways. By memory and history we may in some degree recall the past, and by hope and imagination anticipate the future. Only so far as we can listen to the words and contemplate the actions of the good and great who have gone before, look at the world as they saw it, feel the thrill of ideas then in the air, shall we be able to realize the heroism of their lives and prize the work they have given us as a heritage.

The sentiment that gives meaning and fragrance to Independence Day is more than an attachment to the land of one's birth. Men cling to their native soil however cold and bleak it may be. The Iclander would grow homesick in our citrus belts and sigh for the frosts and auroral lights of his wintry home. But this feeling is not patriotism. It possesses no moral significance above the feeling shared by the Digger Indian. The patriotism that fired the soul of Franklin, Hancock and Washington, the power that won our liberty, was a moral force. This was the spirit that caused the elder Adams to exclaim as he heard the reports of the musketry at Concord and Lexington: "Oh, what a glorious morning is this!"—Warren to say, "Put me where the battle is hottest!" Putnam to shout out at Bunker Hill, "Powder! powder! Ye gods, give us powder!" And the New Jersey dominie, when the army was destitute of wadding, to rush to his little rural church and get a copy of Watt's psalms and shout out: "There, boys, put Watts into them!" The continental army was composed of farmers and artisans poorly armed and poorly clad. Baron Steuben said the only regularity he saw in it was that the short men were put in front and the tall men behind. Old Putnam gave him this explanation, that the Americans didn't care about their heads; all they cared for was their legs. Shelter their legs and they would fight forever. Baron Steuben attempted to organize them, lost his temper and swore at them in three languages at once. But those were the men who carried our new-made flag over many a bloody field till victory perched upon it at Yorktown.

They were inspired by an idea. It was patriotism, the love of liberty, the political idea embalmed in the Declaration of Independence, which finally crystallized into this glorious galaxy of States. Perhaps the most grateful contribution we can make to this day is to bathe our hearts afresh in this idea.

DESIRABLE IMMIGRANTS.—Word has just come from the agent of the Swedish Colonization Society that several families are soon to start from Illinois for California. After careful consideration, the agent has decided to settle a large proportion of the newcomers on the lands of the Miramonte colony in Kern county. The abundant supply of water, which is so easily obtained there by means of artesian wells, had much to do with his decision in favor of that locality.

THE SILK-WORMS at the rooms of the State Board have done spinning their cocoons, and the work of feeding is over for the season. Reeling will now go on until the time comes around for hatching the next batch of eggs.

THE proposition to annex Rattlesnake Island to the city of San Pedro was voted down.

Business Depressions.

More often than otherwise business depressions are merely the result of our imaginations; just as people often imagine themselves sick, when, in truth, they have no ailment at all. It is quite common to hear the expression—"Trade is dull," with perhaps the addition, "much more so than a year ago at this time." When any considerable number of people are impressed with such an idea, and are constantly giving voice to it, it will be so. Business will be dull because those who unconsciously work to that end make it so.

The disposition of the American people is to activity, to quick trading, to rapid progress in the developments of trade and industry. They would like a continuous boom. They are never satisfied with steady, legitimate trade. Money must be made rapidly; fortunes must be accumulated quickly. Some are thus in a hurry to the end that a period of rest and repose may be secured; but perhaps the majority continue the active pursuits of business for the mere love of excitement which it brings. The latter is more apt to be the case with the very wealthy—with the many millionaires. Our heavy millionaires do not continue in business merely for the love of money, or for what it will bring them so much as for the pleasure and excitement of getting it.

But to return; if people instead of saying "trade is dull" should on all sides agree in the remark that business is good, as good or better than it was a year ago, so it will be. Of course there are some times causes for genuine depressions in business; but as a general thing, such depressions are greatly intensified by the unconscious acts of the masses who are constantly complaining and imagining conditions which do not exist, just as many make themselves sick through the imagination. There is probably no part of the world where these things are more observable and real than in California.

If a man is out of business and has a little spare cash, the question is generally "What shall I do?" In this state he is quite too often down to the stock exchange, or allured by the seduction of corner lot speculations. Don't do either. If you have a little money and don't see just how you can get into any better business, get yourself a small piece of land that you know you can handle, set out fruit trees, sow a small patch of alfalfa to feed a cow or horse or both, if you can make a profitable use of them. Plant a few vegetables for yourself and family. Raise a few chickens as broilers and for eggs. You can always sell the surplus over and above your own wants. In the meantime, while your fruit trees are growing, improve as best you can the ground between them. It will neither impoverish the trees nor prevent their growing. By such a course you will soon place yourself beyond want, and you will be able to add from time to time to your possessions, until you are quite independent. Of people who will do this the country will never have enough.

If all our people who are out of business would pursue this or some similar course of life and cease repining over the lack and dullness of work, we should have fewer "depressions of business," less poverty and want, and a universal and continuous reign of prosperity and happiness.

BOGUS OLIVE OIL.—An interesting feature of the meeting of the State Board of Horticulture will be the report which the secretary, B. M. Lelong, will make of the tests which he has made of what is bottled and sold by grocers of this city as olive oil. Out of five brands purchased, and some of them purporting to be California olive oil from some non-existent and imaginary olive orchards, not a single bottle of pure olive oil was found. This report on olive oil and the essays on crystallizing fruits should make the meeting of the board, at 220 Sutter street, on Monday, July 2d, worthy the attendance of horticulturists.

FIRST CANTALOUPE.—Two consignments of cantaloupes, first of the season, were received June 22d by Allison, Gray & Co. and A. Lusk & Co. Both shipments came from Winters, being grown on the ranches respectively of H. B. Porter and L. Morris. The fruit was quite small, though ripe, selling at \$3 and \$5 per dozen. The Placer Republican notes the arrival of cantaloupes to Newcastle June 16th.

British Investments in America.

The frequent announcements in English and American journals of British companies organized for carrying on the various industries in this country has become a topic of much thought and speculation. There are two classes of organizations of this character—the one merely furnishes the capital and transfers all the profits thereof to England; the other is a bonafide investment of both capital and profits in this country. The first is a leech upon our people, and should not be encouraged. True, it furnishes employment for labor and adds somewhat to our population, but the business is generally of that character which employs the largest amount of capital and the least amount of labor.

The most noted of this class of investments, and the one most pernicious to our interests, is that of cattle-raising. A firm in Scotland has furnished statistics which show that the British capital invested in cattle companies in this country exceeds \$20,000,000. The statistics referred to enumerate eleven companies who own in the aggregate nearly 700,000 head of cattle and occupy 3,319,000 acres of land. The first organized of these companies, which was started in Edinburgh, declared dividends for the first few years of about 20 per cent on its investment. This success quickly led to the organization of ten other companies, which are enumerated. The heavy profits that were realized at first led to such close competition that little or nothing has been made by these companies during the two years last passed. The London *Financial News* speaks of the present condition of these companies as follows:

The English investors in American ranch companies, who are at present quarreling with their directors or their managers in this country [England], and are attributing their diminished dividends to mismanagement, will do well to study the report of the International Range Association. This organization was the outcome of the convention of cattle owners recently held in Denver. It declares that such a producers' combination as this is ominous of trouble ahead, even for a "ring" so immensely powerful as that which owes its existence to the so-called "butcher kings" of Chicago. All roads lead to Rome, and it is becoming exceedingly difficult for the Western producer, whether of cattle or corn, to clear his produce for the Eastern seaboard without leaving his entire profit in the hands of one section or another of the Chicago middlemen. It is notorious that these gentlemen have obtained such freight concessions from the trunk line railroads between Chicago and all Eastern points that they have secured the complete monopoly of the Western meat trade. In addition to this, the Western farmers and ranchmen in these depressed times have become largely indebted to Western banks, and these banks are in turn controlled by the great wealth of the Chicago kings. But the countermeasures thrown out by the Convention at Denver, which promises to combine and control all the local stock associations from the Gulf of Mexico to Puget Sound, may well commend the consideration of this, the greatest ring America has ever known.

So it appears that the railroads are getting the chief portion of the profits of the British cattle companies. It also appears that these foreign investments have served the useful purpose of lessening the price of beef in this country, and such being the case no one here is disposed to find much fault. At the same time the occupancy of such an enormous area of lands by these capitalists is a constant source of irritation and adverse criticism on the part of our people; but if they don't make any more money for the next year than they did last, they may be willing to sell out cheap, for there is such a thing in this country as a man or a company becoming "land poor."

The kind of capital which is most beneficial to our people, however, is that which is seeking investment in the manufacturing and producing interests in the Eastern and Southern States. A large number of plants in the silk, wool, cotton, and iron business have recently been either removed to this country from England, or established here as new enterprises. As a general thing the owners of these enterprises accompany them and bring large numbers of their own workmen to run them. Such investments add to the permanent and material wealth and population of the country, and should be, in every proper way encouraged. Uncle Sam can, and is ready to take them all in and do for them as he would for his own native-born children.

THE Bear and Crow Indians, in the Yukon river region, Alaska, are at war.

Effects of Dehorning upon the Animal System.

Bulletin No. 1 of the Tennessee Experiment Station contains a description by Prof. C. S. Plumb of a series of dehornings, which were practiced on the animals at the station with the object of determining the condition of the horn and the wound, the presence or lack of suffering, the after condition of the animal, and, so far as possible, the general effects of dehorning on the animal system. We are indebted to the officers of the station for the privilege of reproducing the sectional drawings of the horns which were removed, and we shall accompany them by a compilation from the descriptive matter of the bulletin, which will, we trust, enable our readers to understand the nature of dehorning better than they have been able hitherto.

In all there were four animals operated upon. They were strong, healthy animals, ranging in weight from 1000 to 1200 pounds. All of them had horns of good size, at the base covered with more or less flesh. The following are the notes of the operations:

Steer No. 1—Bled slightly, and did not bellow. Were 20 minutes doing the entire operation, from time of taking from barn to return. Animal was unruly.

Steer No. 2—Bellowed some, and bled to a medium extent. Complete operation lasted 18 minutes. Animal unruly.

Steer No. 3—This animal bled badly, and bellowed loudly, as though in severe pain or fright.

Steer No. 4—Did not bleed very badly nor bellow. The entire operation, from first to last, occupied 10 minutes.

The operation was observed by a veterinary surgeon who made careful note of the action of the pulse before, during and after the operation. The animals were also weighed from time to time to note effect upon live weight, etc. The bulletin shows that there was a very decided increase in temperature and pulse beat, even after four days. The most striking case occurred with steer No. 3, who bled the most severely of all, and who evidently suffered the greatest pain of any of the four. The increase of temperature, though slightest, is noticeable. In the matter of weight, No. 1 fell off three pounds the day after the operation, but the next day resumed his weight of the second day, and from then made a continual gain to the end of the month. No. 2 neither gained nor lost in weight for one day, and thereafter made a steady gain. No. 3 shows a heavy loss on the first, a noticeable increase the next day, followed by another decrease on the second day after being dehorned, and thence after, a constant gain. No. 4 shows the most striking loss in weight between March 2d and 7th, of the four animals, dropping from 1156 to 1075 pounds.

All of the above animals received the same kind of grain food, but 1 and 2 were fed ensilage, while 3 and 4 were given wheat straw, and this may account for the change in weight. Further, the rough food had been changed but recently preceding dehorning, 1 and 2 having been changed from straw to ensilage, and 3 and 4 from ensilage to straw. Hence these figures must be taken with consideration, and may not mean that the animals lost flesh from having undergone dehorning.

None of the four had much appetite for either water or dry feed at 6 P. M. of March 23, the day of dehorning, and No. 3 seemed somewhat indisposed for several days after. As late as April 1st one horn of this animal gave off a slight translucent, mucilaginous substance. It was further noted that those animals who appeared to suffer most from dehorning handled the head carefully about the manger at first, and would shake it slightly at times during the three or four days succeeding the operation, as though it irritated them.

Prof. Plumb concludes that their experiment indicates that the amount of suffering from dehorning depends very much upon the age of the animal, and the character of the horn, as we will endeavor to show in the engravings here presented.

A represents the horns from a steer of 22 months. These horns were cut off and taken to a professional artist the same day and drawn in colors at once. The illustrations of the three sets are slightly reduced. In A, 1 is a thin, hard, oily-appearing covering that entirely surrounds the bone. Fig. 2 is a thick, fleshy substance that extends a slight distance up the horn, this being the material that makes so

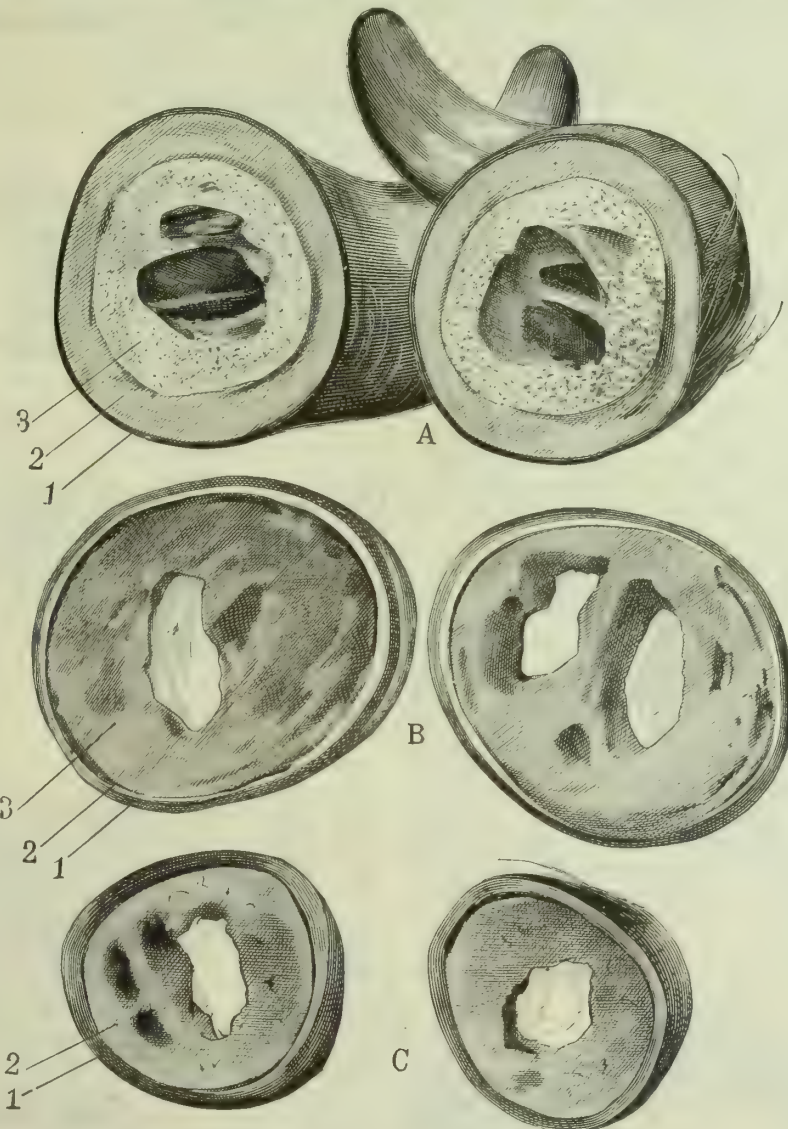
many horns thick at the base; this layer is quite yielding to the touch. Fig. 3 represents the true bony tissue of the horn, with the cavity in the center; this tissue is very porous.

B represents a cross section of the horns of an animal four years of age. The outer layer is 1; the next or fleshy is 2; and 3 the inner bony tissue. B and C were drawn after the horns had been cut some days, so that the fleshy matter had shrunk some. However, in an animal four years of age, in our experience, the layer of flesh about the base of the horn is not so thick as that in a younger animal. Further, the animal that appeared to suffer most from dehorning was the steer 22 months old, whose horns are figured at A.

The horns shown at C are from a cow 10 years old, and present but two striking layers, viz: 1st, the outer, hard, bony shell of the horn proper, and 2d, the bony structure within. There was almost no flesh about the base of the horn. This animal appeared to suffer dehorn-

for they conclude: "It seems clear that there are circumstances in which it is better for certain animals to be without rather than with horns, but as to which ones no person is so capable of judging as the one having the care of the herd."

PERSONAL.—We had a call on Tuesday from the well known New York Merino grower W. G. Markham, and our California veteran agriculturist, John D. Patterson. It is 10 years since Mr. Markham made us his last call, and then he was on his way to Japan with a fine selection of American sheep. Now he visits California on his way to Australia to look into the sheep interest there. Recently there have been quite considerable shipments of American Merinos to Australia by way of London, and the desirability of American-bred sheep is well recognized there. If the Australian wool interest is to be advanced and the American destroyed by the free-trade movement, it will



CROSS SECTIONS OF HORNS REMOVED IN DEHORNING.

ing none at all. So far as our experience will enable us to judge, the three sets of horns, A, B, and C, represent distinct conditions of development, and that the operation of dehorning becomes less and less painful as we approach C from A. While there is liability of the wounds about the stump of the horn, in A, becoming sore, and maturing for some little time, as occurred in the case of a steer the same age as that of A, they rapidly heal where the amount of flesh is very slight, as occurred with C.

In no case was any substance placed over the part of the horns left on the head. As soon as the horns were removed the animals were returned to their stalls. The cavities in the stumps if left to themselves gradually fill up, first with blood and serum and later with bony tissue, and the hairs about the horns gradually cover the stumps.

Dr. Gallraith, the veterinary surgeon who attended the dehornings, gives the following as his formal decision on the practice:

As I am called upon to give my opinion as to dehorning cattle, I will say the operation of amputating the horns is very painful and not infrequently followed by evil results. It is surely a cruel practice, excepting for disease, fracture, faulty direction, deformity, and to diminish damages from vicious cattle.

Prof. Plumb and his associates of the Tennessee Agricultural Station seem to agree with Dr. Gallraith in his conclusions on dehorning,

make Australia the leading market for our finely bred sheep. We hope it will not come to that, for we should have use for our best animals within our own borders. It is, however, quite in accord with the American spirit of enterprise for Mr. Markham to go to the great island continent to inform himself of the condition and needs of the wool interest, and we trust he will have a pleasant voyage and safe return.

GLANDERS.—Though we have had quite a number of articles on glanders during the last few months, we are very glad to give place to the very interesting sketch of the disease by Dr. Buzard, which appears upon another page of this issue. Dr. Buzard in his practice in this country and in Great Britain has had opportunity to become exceptionally well informed on this dread disease, and his experience can be made of wide practical use in California, now that the malady seems to be cropping out anew or with increased violence in some counties. County boards of supervisors will do well to act promptly in the repression of glanders as provided by law. It should be resolutely stamped out just as soon as competent veterinarians determine the fact of its presence.

SIXTY sheep were frozen to death June 13th in the Sierras.

QUERIES AND REPLIES.

Silos and Ensilage.

EDITORS PRESS:—Will you or some one of your many correspondents have the kindness to give me some information in reference to putting up feed for stock in a "silo?" Would like some information in regard to the whole process of preservation. Is it necessary to add liquid to the feed after being put away? What kind of feed is best to put up? And at what stage of ripeness should it be cut? What is the best plan for making a receptacle for the ensilage?—ENQUIRER, Winters, Cal.

We have, during the last few years, given drawings and descriptions of different kinds of silos, generally those constructed in France or in the East, because very little has been done with the silo in California. J. R. Jewell of Petaluma has done more with ensilage than any other Californian, and his practice and appliances were described in the RURAL of June 19, 1886. His silo was made of stone cemented on the inside, with a cement floor and a stone drain to carry off any water which might collect beneath, as his silo was in a side hill. Recently at the East, silos of plank, wholly above ground have become popular, and they are most cheaply constructed. The essentials of construction are tight walls of whatever material and a well-weighted cover which sinks as the fodder shrinks and thus keeps it well compressed.

Concerning the value of the silo in California Mr. Jewell says: "In a climate like this, where hay can be made from grain and the grasses with so little risk of loss or damage through rains or exposure, I would not recommend the building of silos, but for those who possess low bottom lands, adapted to corn culture, could largely increase their supply of feed to advantage by the use of silos."

Our own judgement of the matter agrees with Mr. Jewell's and we would add to his statement the other consideration that the climate favors the growth of squash and beets, etc., and as the absence of frost does away with the need of housing them, there is less to gain from silos than in wintry lands where the growing season is short and the freezing season long. However, there may be use made of the silo even here.

No liquid is added to the material in the silo. To answer our correspondents queries further, we make use of a condensed statement from an Eastern exchange, reviewing the condition of ensilage up to date.

Silos may be made with any of the various building materials, and some very crudely and cheaply constructed have been found to do good service. Silos may be above ground or under ground, or partly both; they should be water-tight, and preferably air-tight and frost-proof, although these two points are not essential.

The situation and construction of the silo and the arrangements for filling, covering and emptying, should be largely governed by local conditions. Several small silos, independent or connecting, are better than one large one, and the depth should be considerably greater than the length, width or diameter.

A silo that will prove efficient may therefore be built at a cost varying from 25 cents to \$5 for every ton of ensilage it will hold. But, like an ice-house, a well-built structure, costing about \$2 per ton capacity, will probably prove in the end the most economical.

Silos may be filled slowly or quickly, in all weathers, the forage plants cut or pitted whole, and the cover may be heavily weighted or not weighted at all; the ensilage produced will vary in condition and quality, but these variations of management do not materially affect the result. If the silo is not air-tight on the sides, however, it must be well covered and heavily weighted.

Any plant or vegetable product good for cattle food when green or fresh may be preserved as ensilage, in an edible and succulent condition, throughout the year, or for several years.

As a rule, all horses, mules, neat cattle, sheep, swine and poultry are fond of ensilage, if its material is ever such as eaten by them. Most farm animals prefer it to the best dry forage.

The best time at which to cut any growing plant to make good ensilage is when the plant approaches maturity and has begun to decrease in the percentage of its water contents.

The cost of preserving a given crop as ensilage does not materially differ from curing the same crop by drying, in a suitable season; but crops can be siloed and preserved in seasons when they would be lost if drying was attempted.

All considered, Indian corn makes the most economical and satisfactory ensilage in most parts of the United States, and with a crop of 20 to 25 tons to the acre, when cut, which is a good average, the ensilage may be made, ready for use, at a total cost of \$2 per ton, and for less, under favorable circumstances. An acre of corn as ensilage will weigh four times as much as the same crop dried as fodder. An acre of corn, field cured, stored in the most compact manner possible, will occupy a space 8 or 10 times as great as if in the form of ensilage.

The chemistry of the silo is still somewhat in the dark. The contents of any one silo filled with crops from the same land, apparently managed in the same way year after year, will differ in condition and quality in different years. Knowledge of the subject is not yet accurate enough to prescribe with certainty the proceed-

ure which will insure the best ensilage. Yet any forage crop can be preserved in a moist, fresh form, substantially unimpaired as food, although there is generally a considerable loss in the carb-hydrate elements, and with sometimes a partially compensating gain in the percentage of protein and an increase in the digestibility of the material.

Red-Polled Cattle.

EDITORS PRESS:—I see in your paper of June 16th inquiry in regard to red-polled cattle. I have a red-polled bull that I imported. He is about 2½ years old. I bred him to 11 Devon cows when but 15 months old. Have 11 calves. They are all muleys but one. I am well satisfied with the calves. I am importing another bull and some cows and heifers. I expect that they will be at my place near Petaluma in about two months. H. MECHAM.

Petaluma, June 21st.

[All our stock-breeding readers should place their cards in our Breeders' Directory for the information of those who are seeking new and improved blood.—EDS. PRESS.]

Cuyama Valley and Carissa Plains.

EDITORS PRESS:—The Cuyama and Carissa plains are settling up very fast. It is not quite a year since the first settler on Government land erected his cabin there, and to-day one can count more than 20 from Mr. Stubblefield's house.

The Cuyama valley is situated in the north-eastern corner of Santa Barbara county, the Cuyama river being partly the divide between Santa Barbara and San Luis Obispo counties. The soil is very rich and seems to be very well adapted for growing wheat. This should, in our opinion, be sown very early—about in November—so as to allow it to take root sufficiently before the winter sets in. It is pretty cold in winter, which, at an elevation of nearly 2000 feet, is not to be wondered at.

There is an abundance of artesian water and good springs, although the latter are, I am sorrow to say, nearly all taken in by land-grabbers. In some spots we observed much alkali, especially where the land was much drenched with water. In these places alfalfa grows to perfection without irrigation. Carr & Haggin have a large area in alfalfa, which they cut four times a year for hay.

Peaches and grapes do well, the first being of Placer county flavor. So far, of course, very little has been done in fruit-raising or cultivation, and farming is hardly more than experimental.

In the lower end of the valley wood on the south slopes of the mountains is plenty, mountain oak being prevalent. The upper end, especially the north side hills and the Carissa plains, are entirely destitute of trees. If water could be obtained, the Carissa plains would be converted into the best of raisin vineyards. The soil consists of the reddish sediment which we found in the Redlands, near Los Angeles, and in Sonoma. We believe that artesian water will be found at a depth of 150 to 200 feet, as this plateau lies that much higher than the Cuyama and Bakersfield plains, both of which seem to get the water of the mountain ranges inclosing the Carissa. Well-water has been obtained, though further north in the valley, at a depth of 25 to 30 feet (solid adobe) in various places.

It would now, of course, be unprofitable to attempt grain-growing here on a large scale, the markets being too far distant and hard to reach—to Bakersfield, on a good road, 75 miles; to San Luis Obispo, and to Santa Maria, over a very bad one, 65 miles in the bed of the Santa Maria river. But it is only a question of time when we will hear the whistle of the engine in the Carissa and Cuyama; meanwhile the settler will have to try to raise cattle on his 160 acres, and whether this can possibly be done at a profit without water and large means we don't dare to decide. J. G. H.

Santa Barbara, June 16, 1888.

EL VERANO.—An advertisement in this issue announces the sale on Saturday, June 30th, of lots in the new town of El Verano in Sonoma valley. We call the attention of our readers to this offering in one of the oldest and best known fruit valleys of the State. It has the advantages of well-tested resources, and any one who will visit the valley can see exactly what a splendid horticultural region it is. The sale is in charge of Briggs, Ferguson & Co., who made such a success of the Merced sale, as described in our columns at the time. The title is assured by the Pacific Improvement Co., a well-known organization. Parties looking for a rural home should not overlook the opportunity at El Verano.

STOCK FOR JAPAN.—Col. Peter Saxe reports shipment to Sapporo, Japan, nearly 400 miles from Tokio of 25 Berkshire swine all registered; one Devon bull registered, and three Bronze turkeys, the gobblers weighing 50 pounds and hens 30 pounds at maturity. These were forwarded on order for the Japanese Government, the stock to be placed on Government premises, of which W. P. Brooks (of Boston) is superintendent. This shipment and others like it show the esteem in which California stock is held in Japan and how California breeders may be profited by supplying the Japanese thoroughly good animals.

HORTICULTURE.

Nevada County Fruit Notes.

EDITORS PRESS: I have had several inquiries already about my ability to solve the prune problem this season; I have the pleasure to state that I will very likely be able to tell with certainty this fall whether we will be able in California to grow the same sized prunes from the same variety (the D'Ente) as they do in that privileged prune district in France, the valley of the Lot. My own imported trees from that valley, and from the very choicest types grown there, have enough fruit on this year to satisfy me as to our ability to grow or not to grow such nice D'Ente prunes in California as they do in France. I have taken extra care of my trees so that if the result is not satisfactory I will be certain that it will not be due to bad care. So I expect this fall to give your readers a full account of my experiments with results, good or bad, as the case may be.

The outcome for a heavy crop of fruit of all kinds is good in this part of the State. Of course, the codlin moth is bothering us, and apples are first to suffer as usual. Some people had an idea that the cold spell of last winter had made quite a havoc among the insect pests of our gardens, and had cleaned out the codlin moth. That belief was substantiated by such foolish articles as the following one clipped from a local paper: "The codlin moth and other fruit pests are kicking harder than any animal's thing because of the cold weather. The cold is causing many of them to give their 'death kick.' No such thing did happen for the codlin moth larvae in its warm little silk cocoon hermetically closed, and under the rough bark of trees, laughed at the cold weather. Upon my own place, with the thermometer 8° above zero, the lowest I ever saw it here, I took several larvae of the codlin moth from under the bands that I had kept around some of my trees, to my office, at a temperature of 60°, and I assure you that they were not long to spin some kind of a cocoon in a corner of the box they had been unceremoniously dropped in. Before publishing such incorrect and misleading items, editors should investigate first. It is safe to say that we will have from now on as we have had in the past, to wage war on these pests of our orchards."

I noticed that fruit of all kinds and nuts, except almonds, had quite a tendency to drop off this year, as I never saw it before; and it was not due to late frosts either, for we had none whatever this spring. Was it caused by the intense cold weather of last winter? The almonds are doing splendidly. I have a large Princess or paper-shell tree which I had to prop up, so heavily loaded it is. The Laquedoc is certainly the hardiest of all, at least in our mountains. Chestnuts are right now in the middle of June out in bloom and full as can be. The intense cold of last winter, nearing to zero in this vicinity, has done no damage to fruit or nut trees except olives and figs, which were more or less hurt. Olives, I noticed, and figs too, stand the cold well enough down to 20° above zero; below that point the trees are liable to be badly injured if not killed down to the ground. FELIX GILLET.

Nevada City, Cal.



Send stamp for 100-page ILLUSTRATED CATALOGUE OF FISHING TACKLE.

Guns, Pistols, Cartridges, Air Guns, Hunting Coats, Leggings, Loading Implements, Base Ball Goods, Lawn Tennis, Boxing, Fencing and Gymnasium Goods, Hammocks, etc.

Fine Gun work done by first-class smiths. GEO. W. SHREVE.

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SOLE MANUFACTURER OF

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For Bottles and Other Fragile Ware.

Patented Nov. 17, 1874, and April 25, 1876.

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Can be had of all Box Makers.

HALL'S SARSAPARILLA!

THE BEST BLOOD PURIFIER AND TONIC ALTERNATIVE IN USE.

It cures disease originating from a disordered state of the Blood or Liver. It invigorates the Stomach, Liver and Bowels, relieving Dyspepsia, Indigestion and Constipation; restores the Appetite and increases and hardens the Flesh. It stimulates the Liver and Kidneys to healthy action, Purifies the Blood and Beautifies the Complexion.

Sold by all Druggists.

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For The Nervous The Debilitated The Aged

URES Nervous Prostration, Nervous Headache, Neuralgia, Nervous Weakness, Stomach and Liver Diseases, and all affections of the Kidneys.

AS A NERVE TONIC, It Strengthens and Quiets the Nerves.

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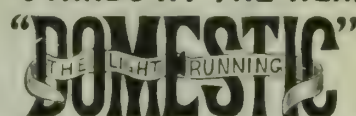
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Recommended by professional and business men. Price \$1.00. Sold by druggists. Send for circulars.

WELLS, RICHARDSON & CO., Proprietors, BURLINGTON, VT.

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DO NOT FAIL TO SEE THE "DOMESTIC"

Before Buying a Sewing Machine.

It is the leader in practical progress. Send for price list J. W. EVANS, 29 Post St., S. F.

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LARGE AND SMALL.

Received First Premium, State Fair, September 24, 1887.

400 IN FIELD USE.



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No Failures. None Ever Returned. Beware of Experiments. BUY THE HOUSER!

They Have a Larger Sale than all Other Harvesters Combined.

THE SMALL HOUSER

Is adapted for Small Farms—few animals; rolling or foothill land. In weight, one-half of the Large Houser. Both the Large and Small Houser have our

Improved Double Shoe Cleaner.

Which received the Premium over all competitors at both State and County Fairs and Field Contests in 1887.

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First Premium at State Fairs, 1884, 1885, 1886 & 1887.

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Gold and Silver Medals at Nevada and California State Fairs, and won Contest Money, \$50.

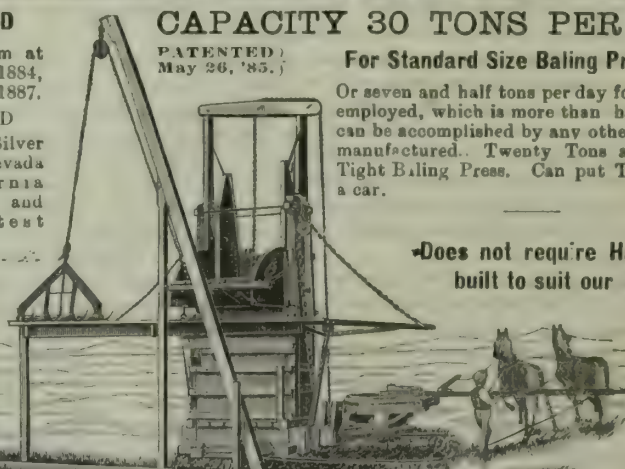
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Or seven and half tons per day for each man employed, which is more than has been or can be accomplished by any other Press yet manufactured. Twenty Tons a day with Tight Baling Press. Can put Ten Tons in a car.

Does not require Hay Stacks built to suit our Press.



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STOCKTON COMBINED HARVESTER & AGRICULTURAL WORKS,

Sole Manufacturers for the Pacific Coast,

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WHICH, Harrison or Cleveland?

THERE MAY BE SOME DOUBT

ABOUT WHO WILL BE PRESIDENT,

— BUT —

THE CYCLONE!

IS THE BEST WIND MILL,

And will Pump Water while You are off attending to Politics.

SEND FOR NEW

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TROPICAL WONDERLAND!

EARLIEST FRUIT LAND IN THE WORLD.

EARLIEST VEGETABLE LAND IN THE WORLD.

FINEST WINTER CLIMATE IN THE WORLD.

DO YOU WANT to buy a fine tract of land at a low figure, that will double in value in three months, and that will produce a crop in six months that will more than pay for the land?

DO YOU WANT a tract of land that will produce ripe grapes six weeks in advance of any other section of California now cultivated?

DO YOU WANT a tract of land that will raise watermelons that will ripen seven weeks earlier than they will in any other section in the State, and that will sell for a dollar apiece in Los Angeles, Riverside, San Diego, San Bernardino, San Francisco, or any other Pacific Coast town or city?

DO YOU WANT a tract of land where there is practically no frost?

DO YOU WANT a tract of land where no hard wind strong enough to blow fruit from the trees is ever known?

DO YOU WANT a portion of the tropical valley of the State?

DO YOU WANT to quadruple your money on short notice? There is a chance for you to do it.

THE PALM VALLEY LAND COMPANY

Has secured 2000 acres of this choice land; has subdivided it into 5 and 10-acre lots, which they are now selling at \$200 per acre, with a PERPETUAL WATER RIGHT, sufficient to irrigate the land.

The lands were placed on the market with the announcement that as soon as each hundred acres were sold, the price would be advanced \$25 per acre, and that this rule would be followed up to the selling of 500 acres. Two hundred acres have now been sold on this basis, starting at \$150 per acre. The price is now \$200 per acre.

The Company has a Stone-walled Irrigating Canal, over ten miles in length, completed.

They have completed a railroad from Seven Palms, a station on the main line of the Southern Pacific Railroad, to PALMDALE, the town site owned by the Company.

They are planting 160 acres to an orange grove, of Navel oranges, and many other improvements are now in progress, that will make this one of the most attractive Colonies in the State.

No safer place for the investment of capital, and no more delightful place to live in the winter can be found.

PALM VALLEY is sure to become the greatest sanitarium in the world.

THERE IS NO FROST, NO FOG, NO HARD WINDS.

There is here all that can be desired to make Palm Valley one of the most attractive places in Sunny Southland. Maps, circulars and further information by calling on or addressing

BRIGGS, FERGUSON & CO., General Agents,

314 California Street, San Francisco, Cal.

J. H. WYLIE,

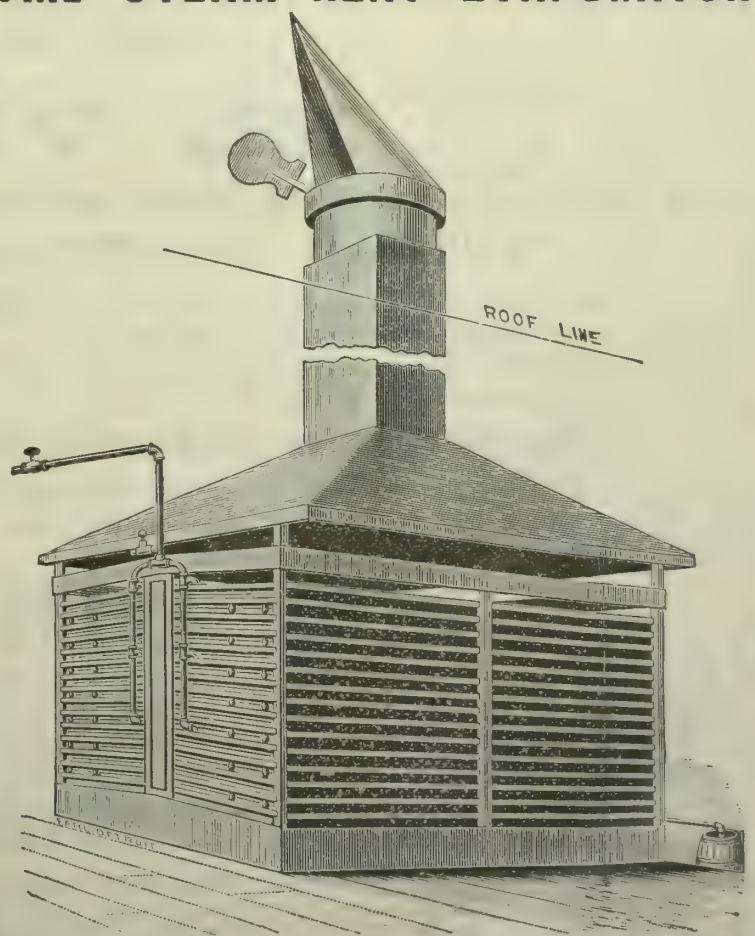
— SUCCESSOR TO —

BATCHELOR & WYLIE,

SOLE AGENTS FOR THE PACIFIC COAST OF THE

ACME STEAM HEAT EVAPORATORS.

ABSOLUTE SAFETY FROM FIRE.



EASILY OPERATED.

Not necessary to move Trays after Fruit enters the machine. Any temperature desired can be maintained uniformly throughout the entire machine. We can yield a heavier product, at less expense for fuel and labor, than is done by any other system.

J. H. WYLIE, 37 Market St., San Francisco.

BRIGGS, FERGUSON & CO.'S Great Sale at El Verano!

There could be no more opportune time for investment, either in Land or Town Property, than the present. There is now no undue inflation in prices, and the immense and constantly increasing influx of Eastern immigration will inevitably, within a short period, enhance real estate values far beyond the prices of the present.

ON SATURDAY, JUNE 30, 1888, WE WILL HOLD A Grand Credit Auction Sale! — AT — **EL VERANO!**

In the Beautiful Sonoma Valley,

BY ORDER OF THE

SONOMA VALLEY IMPROVEMENT CO.

CHAS. F. CROCKER, President; F. S. DOUTY, Treasurer. DIRECTORS—CHAS. F. CROCKER, F. S. DOUTY, WM. HOOD, F. A. FRANK, GEO. H. MAXWELL.

WHEN AN OPPORTUNITY WILL BE AFFORDED FOR INVESTMENT IN

Business, Residence and Villa Lots

IN THIS NEW TOWN, OR IN

ORCHARD AND VINEYARD LANDS ADJOINING,
IN TRACTS OF FROM FIVE TO TEN ACRES.

TERMS OF SALE:

One-fourth Cash; balance on Town Lots in Six, Twelve and Eighteen Months; balance on Acre Property in One, Two and Three Years.

EL VERANO

Is in the center of the Sonoma Valley, and is certain to be a large and flourishing city. It is the
CENTRAL BUSINESS AND SHIPPING POINT

of the Valley, on the line of the Santa Rosa and Carquinez Railroad, just completed. The vast quantities of Fruit and Wine produced in the Valley can now be shipped daily East over this road.

Sonoma Valley has long been known as one of the richest and most productive fruit-growing and wine-producing districts of the State, and in the Mechanics' Fair of 1887 Sonoma Valley was awarded

FIRST PREMIUMS FOR CITRUS FRUITS, TABLE GRAPES, VEGETABLES, OLIVES AND OLIVE OIL.

There are few places in the State where both soil and climate are so peculiarly adapted to the raising of Table Grapes as at El Verano, and its accessibility to the Metropolis of the Coast, and its beautiful location, scenery and surroundings, make it **UNEQUALED FOR A SUBURBAN HOME.**

SPECIAL EXCURSION TO EL VERANO

Via the New Santa Rosa and Carquinez Railroad will leave Oakland Ferry, foot of Market street, at 8 A. M., stopping at Sixteenth street, Oakland, at 8:30 A. M., and returning leave El Verano at 5:30 P. M.

Excursion via the San Francisco and North Pacific and Sonoma Valley Railroads will leave Tiburon Ferry, foot of Market street, at 7:40 A. M., and returning will leave El Verano at 5 P. M.

\$1.15---ROUND-TRIP TICKETS, VIA EITHER ROUTE---\$1.15.

For Maps, Catalogues and full particulars call on

BRIGGS, FERGUSON & CO., 314 California St., S. F.

NOTE.—Excursion Tickets can be had at \$1 each if purchased at the office of Briggs, Ferguson & Co. prior to the day of sale.

EXCURSIONISTS FROM WAY STATIONS CAN OBTAIN EXCURSION TICKETS OF OUR AGENTS ON THE TRAIN.

FRUIT MARKETING.

Auction Sales of California Fruit.

The first auction of California fruit in Chicago, June 21st. Two cars were sold, one bringing \$1120 and the other \$1230. The cars were delayed in transit and the prices secured were considered satisfactory in view of the delay.

The second sale in New York occurred on Wednesday, June 20th, and consisted of a carload of plums and apricots. The telegram received is as follows:

The car was delayed nearly three hours, and consequently most of the buyers were unable to wait in the auction-room and prices did not come up to expectations. The plums were small and the apricots dead ripe. They seem to have struck East just in the heated spell, and having been too ripe when picked, could not stand the weather. When exposed in the auction-room they showed up very soft, and some cases were leaking juice. The apricots brought from \$1.85 to \$1.50 per crate. The plums ranged from \$1.95 to \$1.30 per crate. On Monday a carload of 950 boxes of peaches, sent here from Chicago, was sold at auction, realizing from \$1.25 to 90 cents per box. They were soft, and showed considerable decay.

Later sales are given in our market reports.

Auction Rules in Chicago.

The following circular letter was issued at Chicago on the 16th inst., by Richard M. Montgomery & Co., the auctioneers who sell the fruit of the Union:

Gentlemen: We beg to inform you that we have perfected arrangements with the California Fruit Union, through the Porter Bros. Co., their agents in Chicago, to sell by auction all the California fruit shipped to this market by the Union.

The fruits of the California Fruit Union, as a rule, are shipped from the best and largest orchards and vineyards in California, and packed by the most reliable and experienced shippers.

As about 75 to 85 per cent of the deciduous California fruits received in Chicago are shipped by the Fruit Union, our offerings at auction will be necessarily large and most attractive.

Auction sales will be held every week day, at 8:30 A. M., at the commodious depot of the Northwestern railroad, Galena Division, foot of State street, Chicago.

The fruit will arrive at the depot every morning at 6 50 o'clock, and will be promptly arranged and exhibited so that the buyers will have time to examine every box offered and bid intelligently at the time of sale.

The fruit when received will be thoroughly examined and graded by competent inspectors, and each grade will be sold separately.

All the sales will be positively without reserve, and every lot will be sold absolutely to the highest bidder. All bidders and buyers will have the same privileges, and will all bid and buy subject to the same terms, conditions and regulations.

The terms of sale will be net cash, and the fruit will be offered in sufficiently large lots to protect jobbing interests.

At any time we will be pleased to give any information we possess concerning the fruit to be offered for public sale, and both by our catalogues and bulletins posted in the depot and our office, the trade can learn at any date exactly what fruit will be sold in the next two or three subsequent sales.

By this system the trade will be kept thoroughly informed as to the positive arrivals and sales of fruit.

The fruit offered under this system will comprise a large and attractive assortment of pears, peaches, apricots, plums, nectarines, cherries and grapes in their season.

With the inducements and advantages we offer to the trade, every Chicago jobber, shipper and commission merchant will have every facility to organize, develop and extend a large and profitable out-of-town business.

We would particularly emphasize the fact that we, as auctioneers, have a commission interest only in the fruit we sell. We are thoroughly disinterested parties, and every bidder and buyer will be treated with strict impartiality.

The first sale of fruit will take place Thursday, June 21st, at 8:30 A. M., at which time we will offer an assortment of peaches, apricots and plums.

A catalogue of this sale will be mailed to you at the earliest possible date.

If you find it inconvenient or impossible to attend the sales personally, we trust you will make arrangements to have your interests represented by some one of the numerous reliable fruit houses in this city, who will undoubtedly be pleased to bid for you and execute any of your orders for a moderate compensation.

Recognizing the growing demand for attractive lots of California fruit, we believe that our auction sales will extend to every wholesale fruit dealer the best facilities to make desirable purchases, and that every buyer at our sales will add to his business interests by patronizing our system of distributing fruit. Very respectfully,

RICHARD M. MONTGOMERY & CO.

THE society to import song birds into Oregon has sent 1000 marks to Germany for the purpose. Much interest in this object has been developed and funds for the same purpose are being subscribed by many of the interior towns.

PACIFIC COAST WEATHER FOR THE WEEK.

(Furnished for publication in this paper by NELSON GOROM, Sergeant Signal Service Corps, U. S. A.)

DATE.	Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				S. L. Obispo.				Los Angeles.				San Diego.			
	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.	Rain.	Temp.	Wind.	Weather.				
June 21-27.																																				
Thursday.....	.12	66	Nw	Cl.	.00	62	N	Cl.	.00	86	N	Cl.	.00	82	Nw	Cl.	.00	77	W	Cl.	.00	90	SE	Cl.					.00	90	S	Cl.	.00	70	SW	Cl.
Friday.....	.00	74	Nw	Cl.	.00	62	Nw	Cy.	.00	90	Ch	Cl.	.00	91	Nw	Cl.	.00	62	SW	Cl.	.00	91	N	Cl.					.00	82	SW	Cl.	.00	72	SW	Cy.
Saturday.....	.00	70	S	Cy.	.00	60	N	Cy.	.00	90	Ch	Fr.	.00	76	S	Fr.	.00	61	SW	Cy.	.00	92	Nw	Fr.					.00	76	SW	Cl.	.00	68	Nw	Cl.
Sunday.....	.00	66	Nw	Cy.	.00	64	Nw	Cy.	.00	86	W	Cl.	.00	80	Nw	Cl.	.00	67	W	Cl.	.00	86	Nw	Cl.					.00	86	SW	Cl.	.00	72	S	Fr.
Monday.....	.00	70	Nw	Fr.	.02	64	N	Cy.	.00	84	S	Cl.	.00	78	SW	Cl.	.00	62	W	Cl.	.00	86	Nw	Cl.					.00	78	W	Cl.	.00	72	SW	Cy.
Tuesday.....	.26	70	N	Fr.	.00	62	Sw	Cy.	.00	84	S	Cl.	.00	81	S	Cl.	.00	67	W	Cl.	.00	86	N	Cl.					.00	72	SW	Cy.	.00	72	SW	Cy.
Wednesday.....	.04	60	S	Ry.	.00	62	Sw	Cy.	.00	74	W	Cl.	.00	76	S	Cl.	.00	61	W	Cl.	.00	82	N	Cl.					.00	74	SW	Cy.	.00	70	Nw	Cy.
Total.....	.42				.02				.00				.00				.00				.00				.00				.00			.00				

EXPLANATION.—1. for clear; Cy., cloudy; Fr., fair; Fy., foggy; Ch., calm; — indicates too small to measure. Temperature, wind and weather at 12:00 M. (Pacific Standard time), with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

News in Brief.

SALT LAKE CITY is to have an industrial school.

THE monument to Francis Scott Key in Golden Gate Park will be unveiled on the 4th of July.

THE expense of constructing the Lick Observatory as reported by the trustees, was \$577,242.26.

THE Lick Observatory was formally transferred to the Regents of the University on Wednesday last.

A LIBERAL bonus has been offered the Moss Bay Iron and Steel Co., to locate their works in Ellensburg, W. T.

A WOOD PULP factory has been started at Gridley, Butte county. Hon. Marion Biggs is president of the company.

THE clay model from which the bronze statue of Marshall, the discoverer of gold, is to be made, has been completed.

A FIRE at Sierraville on Saturday caused a loss of \$40,000, the entire business portion of the town having been destroyed.

DR. SKETCHLEY is making extensive preparations for ostrich raising on a large scale on his 2000-acre Tehama county ranch.

STARKE'S mill at Wheatport, in Contra Costa county, has a capacity of 9000 barrels per day, and is the largest flour-mill in the world.

GOV. WATERMAN has announced that he will not interfere in the case of Alex. Goldenson, convicted of murder and sentenced to death.

LISLE LESTER, a newspaper and magazine writer formerly of this city, died in New York on Saturday, and by her last request her body will be cremated.

POSTOFFICES have been established at East Riverside, San Bernardino county, and at Sanger, Fresno county, and A. J. Ranker and Wm. B. Muller appointed postmasters of the respective offices.

THE Chesapeake & Ohio railroad and the Old Dominion line are cutting rates to Chicago, Cincinnati and San Francisco. Tickets on both roads are hawked about at extremely low figures.

A COMMITTEE of the French Chamber of Deputies has passed a resolution to enter into a perpetual treaty with the United States for settlement by arbitration of disputes that may arise between our country and France.

IN Wyoming carrier pigeons are rapidly being introduced. They are used in sending messages between Laramie and the big ranches. Homing pigeons will doubtless soon be put to the same use everywhere in the big cattle ranges of Idaho and Montana.

THE lobsters, which were recently brought to this coast from Massachusetts for propagation, were temporarily placed in fish cars at Monterey. They have recovered from the effects of their overland trip, and give evidence of possessing a good healthy appetite. They are waxing strong and fat on a daily diet of fish. One hundred and sixty, one-half the number have been placed in Monterey bay, near Point Pinos. The remaining lobsters, about 160 in number, will be placed in two places north of Point Reyes, where, it is believed they will multiply and spread up and down the coast.

Rural Health Retreat.

A recent visit to this rarely successful institution (situated on Howell mountain slope, 24 miles easterly from St. Helena,) shows it to be in a more flourishing condition than ever before. Although the number of rooms for guests and patients has been doubled during the past season, all are well filled with patients and guests, some of whom have come from distant parts of the Union.

Dr. J. S. Gibbs has been quite successful in his treatment of many patients cured, and others greatly benefited, at this institution during the past few years. He is now ably supported by Dr. Collville and a number of attentive male and female assistants.

Dr. Collville gave a lecture on health last Sunday evening, which proved very instructive and highly appreciated by a full audience. Reliable information of this institution can be obtained by any person upon sending their P. O. address to the Retreat.

In our business department appears an engraving and further mention of this worthy institution.

THE arrivals of coal at this port last week were 40,000 tons, and as there is much more on the way it is probable that the "coal corner" will be broken.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific States.

From the official report of U. S. Patents in Dewey & Co.'s Patent Office Library, 220 Market St., S. F.

FOR WEEK ENDING JUNE 19, 1888

384,682.—OBTAINING PRECIOUS METALS FROM SPEISS—L. W. Davis, Eureka, Nev.

384,742.—DISK CULTIVATOR AND SEEDER—B. C. Dorsey, Tulare, Cal.

384,755.—DANGER SIGNAL FOR BRIDGES—M. O. Godding, Monrovia, Cal.

384,631.—SHAWL STRAP AND FIRE ESCAPE—Lee & Acton, Dal es, Ogn.

384,706.—PUMP—J. A. Murry, Tucson, A. T.

384,707.—GAME COUNTER—F. G. Nash, S. F.

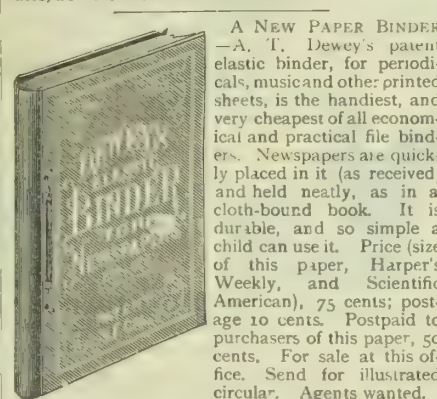
384,937.—FRED WATER HEATER—David Stark, S. F.

384,940.—PHOTOGRAPHIC CAMERA—H. Swain, S. F.

384,941.—STEAM GENERATOR—E. H. Thompson, Newark, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

A NEW PAPER BINDER—A. T. Dewey's patent elastic binder, for periodicals, music and other printed sheets, is the handiest, and very cheapest of all economical and practical file binders. Newspapers are quickly placed in it (as received) and held neatly, as in a cloth-bound book. It is durable, and so simple a child can use it. Price (size of this paper, Harper's Weekly, and Scientific American), 75 cents; postage 10 cents. Postpaid to purchasers of this paper, 50 cents. For sale at this office. Send for illustrated circular. Agents wanted.



Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, term of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription rate, \$3 a year. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, or beyond the time he intends to pay for it, let him not fail to write us direct to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to anyone who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

A 40-FOOT HARVESTER, believed to be the largest in the world, was lately shipped from the Benicia Agricultural Works to Visalia. It is to be driven by an engine of 40-horse power, which will be used to draw 24 twelve-inch plows, when harvest is over.

BERKSHIRE SALES.—Phil. M. Springer, secretary of the Berkshire Association, reports the transfer of Belle Roche Prince 11,955. Yamhill Maid 19 232, and Broadmead Duke 19 233, from Andrew Smith, Redwood City, Cal., to Ladd & Reed, Portland, Oregon.

WHOSE MONEY?—We received a letter from San Jose in which the writer sends several dollars in postage stamps to pay for subscription for the RURAL and for other publications of ours and does not sign his name to the letter. Who is it?

Carriages.

We are receiving 10 carloads of Carriages, Buggies and Wagons from the Briggs Carriage Company of Amesbury, Mass., which will be sold at prices that will be satisfactory, considering style and workmanship. Quality of material guaranteed the best.

M. A. BRIGGS & CO., 220 & 222 Mission St., San Francisco, Cal.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

JOHN G. H. LAMPADUS—Santa Barbara Co.
G. W. INGALLS—Arizona Territory.
A. F. JEWETT—Tulare Co.
C. E. WILLIAMS—Yuba and Sutter Co.'s.
R. G. HUSTON—Montana Territory.
WM. WILKINSON—Butte and Tehama Co.'s.
W. W. THEOBALDS—Solano and Sonoma Co.'s.

ANY ONE wishing a bargain in the way of a new carriage, or wagon, will do well to call at this office.

RURAL HEALTH RETREAT

At Crystal Springs, St. Helena, Cal.



This delightful Resort offers unrivaled advantages to Tourists and all classes of Invalids, both for Winter and Summer. It is situated on the southwestern slope of Howell Mountain, 50 feet above and overlooking the noted and beautiful Napa Valley, and 21 miles from St. Helena. It is noted for its Pure Water, Dry Atmosphere, Clear and Balmly Sunshine, Even Temperature, Mild Breezes, and the absence of high winds.

THE RATIONAL TREATMENT

By all known remedial agents is employed in this Institution. With these natural and acquired advantages, pleasant and desirable surroundings, thorough and judicious treatment, and wholesome diet, most invalids who avail themselves of these agreeable facilities, rapidly recover. Patients have the care of a regularly graduated Physician of experience, who is assisted by well-trained and courteous gentlemen and lady assistants.

All Invalids and Tourists will be courteously received and kindly cared for. For circulars and further particulars, address as above.

NOW READY!

A B C BUTTER MAKING

By F. S. BURCH.

ILLUSTRATED.



Sixty-four pages, cloth bound, containing chapters on Milking, Milk Setting, Cream Raising, Churning, Working, Salting, Packing, Shipping and Marketing. A Hand Book for the Beginner. Full of useful information and worth many times its cost. Price, by mail, 30 cents. Address, DEWEY & CO., 220 Market St., San Francisco, Cal.

Injurious Insects of the Orchard, Vineyard Field, Garden, Conservatory, etc.,

Remedies for their Extermination.

By MATTHEW COOKE.

Late Chief Executive Horticultural Officer of California. Illustrated with over 750 wood-cuts and 25 pages of classified illustrations. This book is designed for the use of orchardists, vineyardists, farmers and others interested in the subjects treated. It is designed to convey practical information concerning some of the species of insects injurious to the industries of cultivators of the soil, and those interested in earth produce generally. Price \$4, postpaid. For sale by Dewey & Co., publishers, 220 Market St., San Francisco.



GOOD CROPS EVERY SEASON WITHOUT IRRIGATION.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address, H. MEYRICK, Box 5, Santa Cruz, Cal.

Educational.

VAN NESS SEMINARY,

(RALSTON HOUSE) 1222 Pine Street,

BOARDING and DAY SCHOOL

—FOR—

YOUNG LADIES and CHILDREN.

ENGLISH,
FRENCH,
GERMAN
AND
LATIN

TAUGHT BY COMPETENT PROFESSORS.

A Sunny Primary Room and Gymnasium have been added to the establishment.

WILL RE-OPEN JULY 30, 1888.

For particulars apply to

MRS. SARA B. GAMBLE.



IRVING INSTITUTE.

A Select School for Young Ladies.
TWELFTH YEAR.

Fifteen Professors and Teachers.

For Catalogue or information, address the Principal,
REV. EDW. B. CHURCH, A. M.

1036 Valencia St., San Francisco, Cal.

FIELD SEMINARY,

SCHOOL FOR GIRLS and YOUNG LADIES

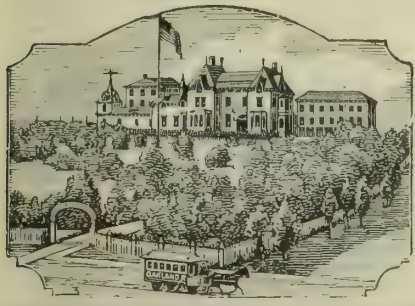
1825 Telegraph Ave., Oakland, Cal.

The Seventeenth Year of this well-known
Institution will open
WEDNESDAY AUGUST 1, 1888

For further information apply to
MRS. R. G. KNOX, Proprietor,
Or to MRS. D. B. CONDRON, Principal.

California Military Academy

OAKLAND, CAL.



NEXT TERM BEGINS.....JULY 23, 1888
Thorough instruction in all Departments. Business
Course complete. Location unsurpassed. Send for
Circular. COL. W. H. O'BRIEN, Principal.

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Business College

—AND—

NORMAL SCHOOL.

Institute of Short-Hand and Type-Writing
SACRAMENTO, CAL.

Send for Catalogue. J. C. BAINBRIDGE, Principal.
(Formerly Principal of Stockton Business College and
Normal Institute.)

THE OAKS,

OAKLAND, CAL.

The next year will begin on Wednesday, July 25, 1888.
For information address, MISS L. TRACY, Principal.

HEALD'S

BUSINESS COLLEGE,

24 POST ST., S. F.

FOR SEVENTY-FIVE DOLLARS THIS
College instructs in Shorthand, Type Writing, Book-
keeping, Telegraphy, Penmanship, Drawing, all the En-
glish branches, and everything pertaining to business,
for six full months. We have sixteen teachers, and give
individual instruction to all our pupils. Our school has
its graduates in every part of the State.

SEND FOR CIRCULAR.

E. P. HEALD, President.

C. S. HALEY, Secretary.

GATHER SAMPLES OF GRAIN!

DURING HARVEST

AND OTHERWISE

PREPARE COUNTY EXHIBITS

—FOR THE—

STATE FAIR, 1888,

—AT—

SACRAMENTO, Sept. 3d to 15th.

\$2500 CASH PREMIUMS FOR COUNTY EXHIBITS,

IN ADDITION TO WHICH IS

\$1500 FOR INDIVIDUAL PREMIUMS

That may be competed for by the contributors to the County Collections. These exhibits are seen during the Fair by more than 50,000 different people, and are fully described by the press of the State, and written up in detail by the Committee of Awards, which report is printed in the Annual Report of the State Agricultural Society and distributed throughout the civilized world. In no other manner can the counties receive such a full, complete and comprehensive notice. The County Exhibits have proved the most effective means of advertising the resources, developments, and advantages of the different localities of the State, and should be made by authority and with the aid of the Board of Supervisors of each County. The State Agricultural Society will afford every facility for the exhibition of the products of the State, and would advise those intending to exhibit to WRITE FOR SPACE AT ONCE. The first come will be the first served. Premium Lists now ready. Address the Secretary for information.

EDWIN F. SMITH, Secretary.

L. U. SHIPPEE, President.

GRANGERS' BUSINESS ASSOCIATION,

SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries
and Merchandise of every description solicited.

E. VAN EVERY, Manager.

A. M. BELT, Assistant Manager.

INSURE YOUR GROWING GRAIN

CROPS

IN THE FIREMAN'S FUND OF CALIFORNIA.

CALIFORNIA CHIEF GRAIN CLEANER

Will Clean 1600 Bags
of Wheat in a day.

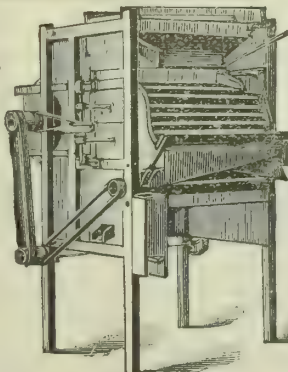
Manufactured by

HENRY N. DALTON

& SONS,

OAKLAND - - CAL.

Send for Illus-
trated Circulars
and Price Lists.



LITTLE CHIEF GRAIN CLEANER
For Combined Harvesters
WILL CLEAN 600 BAGS IN A DAY

GRANGERS' CO-OPERATIVE BUSINESS ASSOCIATION,

SACRAMENTO, CAL.

Hardware and Groceries

AS CHEAP AS THE CHEAPEST.

Agents for Studebaker Wagons, Carriages and Buggies, Oliver Plows,
and Cassidy Sulky and Gang Plows.

Country Orders Solicited.

T. A. LAUDER, Manager.



REMNAINT PALACE,

1326 Market St., opp. Odd Fellows' Build'g
LEON LEMOS, Proprietor.

Remnants of Domestic Suits to Order,
\$15, \$16, \$17, \$18, \$20; Imported
from \$20 to \$30.

California is a Paradise, but the people would object
to go in Paradise toilet. Leon Lemos has contracts with
several leading Woolen Mills to buy all their REMNANTS,
and can make a fine fitting, well-trimmed suit from \$15
upward.

Farmers will save money by calling on him, as he
makes suits to order for the same price as ready made.
Samples and prices by mail. Don't forget.

LEON LEMOS,

1326 Market St., opp. Odd Fellows' Build'g

BRICK AND TILE MACHINERY

CLAY CRUSHERS.
BEST IN THE WORLD



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& SON, Willoughby, O. P. O. Box 16

FLORIDA Agricultural Weekly, 20 pages. Estab-
lished 1869. GARDENING, FARMING,
FRUIT-GROWING, HOME-MAKING. Full
information about the State. \$2.00 a year, 3 months,
50 cents. SPECIMENS FREE. THE FLORIDA
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Commission Merchants.

DALTON BROS.,

Commission Merchants

—AND DEALERS IN—

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans and Potatoes.

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501, 503, 505, 507 and 509 Front Street
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FIVE DOLLARS.

The perfection of simplicity. Rights to manufacture
larger capacities sold at reasonable price

LEONARD COATES,

Proprietor Napa Valley Nurseries,
NAPA CITY, CAL.

S. H. MARKET REPORT

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, June 27, 1888.

Warmer weather and clearer skies, with less dew at night, has caused fruits to ripen more quickly, and also creates a more cheerful feeling among orchardists who sun-dry. Harvesting is more general throughout the States, with crops being secured in good condition. Trading in farm products the past week was active, with good prices for the season very generally reported. The wheat markets abroad and at the East have been dull and lifeless. The following is to-day's cable:

LIVERPOOL, June 27.—Wheat—(Quiet, but steady, 6d; just shipped; 3s 6d; nearly due, 3s 6d; cargoes off coast, steady; on passage, quiet, but steady; French country markets, rather easier; wheat in Paris rather easier, flour steady.

California Produce at Chicago.

CHICAGO, June 23.—California fruits are selling moderately well, and bring good prices both in the stores and at auction sales. Peaches were in good supply. The demand was rather light, and even choice stock sold slowly.

Peaches in good order brought \$1.25@1.40 for 20-lb cases, and poor sell lower.

Plums continue plenty. They sold slowly and were easy. Plums and Royal Native plums brought \$2@2.50, with some extra higher.

Barlett pears bring \$2.50 per box. Apricots in 20-lb boxes sold at \$1.25@1.50. The supply of California is generally quite small and the inquiry is for small parcels. Trading continues at former prices and the market was quotably quiet and steady.

Apricots, sun-dried 1/2 lb., 8c@9c; do, bleached, prime 14c; do, bleached, choice, 15c; do, bleached, fancy, 15 1/2c; do, evaporated, choice to fancy, 14 1/2c@16c; peaches, sun-dried, 1/2 lb., 9c@10c; do, evaporated, 1/2 lb., 14c; do, evaporated, peeled, 1/2 lb., 16c@20c; plums unpeeled, 1/2 lb., 6c@7c; do, pitted, 10c@11c.

Raisins, loose Muscatels, 2-crown, 1/2 box, \$1.35@1.40; do, 3-crown, 1/2 box, \$1.45@1.50; do, London, 1/2 box, \$2@2.25.

Prunes, small, 1/2 lb., 6c; do, large 8 1/2c@9c.

The hop market is quotably firm. A very fair demand now exists. Choice hops are in light supply and the stock of ordinary grades is moderate. Pacific Coast, choice, 1/2 lb., 12@13c; do, common to prime, 8@11c.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York:

Day.	Cash.	June.	July.	Aug.	Sept.
Thursday	80	80	80	80	80
Friday	80	80	80	80	80
Saturday	79	79	79	79	79
Sunday	79	79	79	79	79
Monday	79	79	79	79	79
Tuesday	79	79	79	79	79

The closing prices for wheat have been as follows, at Chicago:

Day.	Cash.	June.	July.	Aug.	Sept.
Thursday	80	80	80	80	80
Friday	80	80	80	80	80
Saturday	79	79	79	79	79
Sunday	79	79	79	79	79
Monday	79	79	79	79	79
Tuesday	79	79	79	79	79

CHICAGO, June 27.—Wheat—88 1/2c for cash, 86 1/2c for July, 87 1/2c for August and 88 1/2c for Sept. Corn—49c for July.

NEW YORK, June 27.—Wheat—88 1/2c for cash, 86 1/2c for July, 87 1/2c for August and 88 1/2c for September.

California Fruit at New York.

NEW YORK, June 25.—Another lot of California fruit was sold to-day. It was all in good order. Peaches brought \$2.50@1.85; plums, \$2.95@1.45; apricots, \$1.75@1.55. A carload which was to have been sold on Saturday was held over and sold to-day. As was predicted the fruit was almost ruined by the intensely hot weather and prices were accordingly next to nothing. Bartlett pears sold for \$3.25; plums, \$2.10; apricots, 75c; peaches, 60c@55c. The apricots and peaches were melted, showing conclusively that no California fruit should arrive Saturdays.

Fruit Sold at Auction.

NEW YORK, June 26.—One carload of California fruit was auctioned to-day and the following prices were obtained: Bartlett pears, \$3.70; peach plums, \$3.25@3; peaches, \$1.62 1/2@1.50; apricots, \$1.50@1.12 1/2. This car arrived too late for yesterday's sale, and had to be held over. The weather is a little cooler and the fruit stood it well. Three carloads are announced for to-morrow.

Boston Wool Market.

BOSTON, June 22.—The state of the wool market in this city can be easily understood when it is stated that fully three-quarters of the trade left their offices to view a game of base ball between two nines made up from local traders. The week has been uneventful and was interrupted by the Bunker Hill celebration on Monday last. Transactions have been limited and values of all grades are nominally unchanged. Inquiries for delaine wool are reported, but stocks are small, and large lots are not available owing to the high prices asked. No demand of consequence is anticipated, as many New England mills are shutting down, and others are likely to join in the procession as soon as their orders are out. Their action is, of course, not unusual at this season, but the effect is felt more seriously on the demand for raw material because manufacturers are buying only as wanted. Transactions in this market are weak, aggregating 1,704,000 lbs. Receipts of the week have been 6633 bales of domestic and 334 foreign, against 17,767 bales domestic and 1563 bales foreign for the corresponding week in 1887.

Wool.

NEW YORK, June 24.—The Commercial Bulletin says of the wool market that the movement from the buying side is not a contributor of much strength to the market, the call running mainly in the old groove of handling merely enough for early wants and taking chances for the future. The mills have got along

very well for a year past by allowing supplies to remain in dealers' hands until wanted, and it is thought a reasonable policy to adhere to the system as much as possible. About the only movement of importance in wool at this point has been of Texas growth, and the prompt manner in which receivers part with it would seem to indicate that no great future in the early future is entertained. Indeed, holders generally meet the call as it develops without an effort to advance cost, and want more customers on the same basis. From primary points we learn that most of the fleeces are ready for market, with growers acting somewhat more conservatively. California is said to be fairly well sold up, and it is said that most of the wools coming eastward are to dealers, either on purchase or commission. Private cables from London sales report good Port Philip firm at 10 1/2d; cross-bred, 9 1/2d. English combing is stagnant, and carpet wools are unchanged.

Hops.

NEW YORK, June 24.—The new prices show a rather better outlook for hops. The top price for York State is 13c; for California 11c.

Local Markets.

BAGS—The forepart of this month a syndicate was perfected at the East to control jute bags in the United States. Since then the pool in this city has not only held stronger but asked an advance. Outside holders who sold for less money were cleaned up, and consequently prices have been advanced. It is said that several firms are still selling to their regular customers for less money than asked by the pool. The pool price for Calcuttas range from 7 1/2 to 7 3/4c.

BARLEY—The market is barely steady. Dealers are only buying in a hand-to-mouth way. Options have been exceedingly dull the past week. Prices have dropped so low that the bears do not care to hammer them still further. At to-day's Call the following are the reported sales:

Morning Session: Buyer 1888—100 tons, 91c; 100, 91c. Seller 1888, new—100 tons, 82c 1/2 c. Afternoon Session: Buyer 1888—300 tons, 91 1/2 c. 100, 91c.

BUTTER—Choice to fancy is scarcer and commands full figures. Poor stock sells slowly. There is more doing in pickled, as the warm weather causes distant buyers to take it in preference to fresh roll. Eastern continues to press the market.

CHEESE—The market is strong, under a good demand and moderate receipts.

EGGS—Throughout the week the market has been most remarkably steady.

FLOUR—The market is steady, with a good trade call ruling.

WHEAT—New No. 1 shipping sold the past week at \$1.32 1/2. Part Costa delivery. The tonnage load is steadily increasing. The market has been quiet the past week, with buyers trying to obtain concessions. Receipts at Port Costa are increasing under freer deliveries by farmers. In options trading on Call was light the past week, with prices lower yesterday. The following are to-day's reported sales:

Morning Session: Buyer 1888—200 tons, \$1.45; 200, \$1.45 1/2. December—100 tons, \$1.41 1/2 c. Afternoon Session: Buyer 1888—100 tons, \$1.45 1/2. 200, \$1.45 1/2; 100, \$1.45 1/2; 600, \$1.45 1/2. December—100 tons, \$1.41 1/2. 100, \$1.41 1/2 c.

[COMMUNICATED.]

Market Information.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco, from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1 '86 to June 25, '87	July 1, '87 to June 23, '88
Flour, qr. sks.	4,109,167	3,668,275
Wheat, cts.	13,135,239	8,347,079
Barley, cts.	2,263,697	2,305,742
Oats, cts.	135,189	159,869
Potatoes, sks.	864,015	1,133,248
Corn, sks.	133,868	245,186
Rye, sks.	28,184	18,850
Buckwheat, sks.	5,911	3,054
Beans, sks.	446,583	394,912
Bran, sks.	442,389	510,549
Hay, tons.	107,008	120,753
Salt, tons.	23,148	17,590
Wool, bales.	90,974	74,942
Hides, No.	110,377	106,715
Raisins, 20-lb boxes.	130,580	112,040
Quicksilver, flasks.	18,791	30,353
Hops, bales.	13,393	15,918

The receipts of certain articles of produce from Oregon, Washington Territory and other distant points, for the same period, compare as follows:

	July 1, '86 to June 25, '87	July 1, '87 to June 23, '88
Flour, sks.	257,760	433,116
Wheat, cts.	998,374	1,213,169
Barley, cts.	6,198	75
Oats, cts.	342,022	285,536
Corn, cts.	117,804	12,590
Wool, bales.	22,768	13,539
Bran, sks.	31,893	73,501
Hops, bales.	801	529
Hides, No.	37,703	33,330
Rye, cts.	5,827	5,827
Potatoes, sks.	144,834	82,365

Cereals.

At the end of May the cereal crops in the United Kingdom were backward, but as a rule were promising. There has been a lack of moisture in the soil, owing to the deficient rainfall during the last 15 months. The future of the crops will depend more upon the moisture that shall be supplied by the rain-falls and dew than to that stored in the soil. Such a year the deep-rooted plants, like wheat, thrive better than shallow-rooted plants.

The New York Produce Exchange Reporter says: According to the Bureau estimates the crop of winter wheat will amount to about 238,000,000 bu., and that of spring a little short of 162,000,000 bu., or a grand total of 400,000,000 bu., from which to deduct 60,000,000 bu. for seed and 285,000,000 bu. for consumption or an aggregate of 345,000,000 bu., leaving 55,000,000 bu. for exportable surplus, allowing the admittedly small quantity to be carried over this year to stand for reserves. In supposing, for sake of argument, that foreign countries will only need to import 55,000,000 bu. from the United States, is

putting it down to a very low notch, to say the least. Although exporters told us very seriously a year ago, that Europe was not going to require any appreciable quantity of wheat during the season of 1887-88 from this country, we have already cleared close to 80,000,000 bu. since September 1, and the total is likely to exceed 90,000,000 bu. before August closes. Hence if they took over 90,000,000 in a year, when we were told they "didn't want any," it is not unreasonable to venture the opinion they will take half or even three-quarters of that aggregate the ensuing season, even if they don't want any. Assuming that these deductions are anywhere near correct, we dare to hazard the opinion that at current prices, choice red wheat of hard spring cannot be regarded as fabulously dear. Of course, in what direction the option market may drift during the hot weather, is entirely problematical.

The test of the thrashing machine indicates that the wheat crop has been over-estimated fully one quarter in New Zealand. There was in January hot dry weather, when the wheat was in bloom, that caused great damage to the wheat crop. The quality and condition is good, but the yield per acre is the poorest for many years. Prices are ruinously low, and farmers find it difficult to make the ends meet. Lonnage is scarce. The farmers are being paid about 60@66c per bu.

H. Kains Jackson writes to the London Farmer as follows: Our exchanges are probably paying too little attention to the news from France. Our neighbor has not bought of American, Indian or Russian wheat very largely during the past few months, owing to her own large home yield; but with a deficient crop this summer France may easily require from two to three million quarters of wheat from all the three countries which are England's main sources of supply. The pressure of competition with France and Italy might send up prices very materially, and it is therefore important to note that the backwardness of the crops in France is becoming more and more apparent. At the end of May wheat is not in a more advanced position than it ordinarily occupies at the end of April, the situation is so much the more disquieting from the fact of the weather having been very unfavorable for the tillering of the plant, and consequently the fields are generally patchy, especially on the light soils. It is now accepted by farmers that even a fine June cannot prevent the crop of 1888 proving inferior to that of last year.

The closing sales on the San Francisco Call Board were as follows:

Date.	Buyer Season.	Buyer Year.
Thursday	81.36	81.36
Friday	81.46	81.46
Saturday	81.52	81.52
Monday	81.45	81.45
Tuesday	81.45	81.45

FEEDSTUFF.—The consumption of ground feed is increasing, but the market does not strengthen, owing to liberal supply—bran and midlings from Oregon, and ground barley from this State.

Under heavy receipts, considerably in excess of consumption, hay is weak, with a lower range of quotations reported. Very few dealers will carry large stocks at this season of the year, owing to the danger of fires and also to receipts being free, unsettling prices. The consumption continues large.

Hops.

The market for futures has a firmer tone, but then it is difficult to get quotations. Spot parcels of choice are hard to get. The consumption in this State so far this year has been very light owing to the cool weather. The Mark Lane Express, June 4th, reports the English crop prospects as follows: Although the bine has grown fairly well during the past week, it is still in a very backward condition for this time of the year; there is a great lack of cultivation, and the hop gardens are evidently quite out of heart, many not having been mowed for the past three years; but the most serious feature that we have to note is the appearance of a few fly in the Weald and Mid divisions of Kent, although this is by no means general yet. Two, three, four, and five fly have been found upon a leaf in the neighborhood of Laddock Wood; in the present weak and backward state of the plant, the aphid fly would do a great amount of damage, especially now that so few farmers can afford the outlay of washing. With regard to the market, it remains exceedingly firm, choice hops being scarcer than ever.

The local wheat market ruled dull and inactive throughout the past week, with no change of moment looked for until the character of the crops abroad and in the United States are more fully determined. All present indications point to a short crop not only in the United States but also in Europe, particularly in Austria-Hungary and in France. With the crop, taking all the wheat-growing countries as a whole, throughout the world, short, and the carry-over of old small, it seems next to an impossibility to keep values down any material length of time. The stock of choice old wheat on this coast is light while the crop is all of 100,000 tons less than in 1887 and the tonnage in sight to carry the surplus away is largely in excess of this time in 1887. The returns from harvesters in this State report the outturn spotted and decidedly irregular. While in some localities the yield is above an average in other localities they are barely an average while in others again it hardly paid to harvest the grain. Oregon advices do not report any material change since our last week's issue.

Barley has come in only fairly the past week, barely up to requirements, which necessitated drawing on warehouse stock. The supply of choice is light, but then the Call is light which keeps values from advancing, particularly with harvesting well under way. The yield and grade of barley, like wheat, is spotted and irregular. There is a growing impression that after farmers who are forced to sell dispose of their crop, or at any rate a part, and others have warehoused theirs, the market will advance for the crop of the coast is short and the consumption steadily increasing.

Free receipts of oats the past week weakened the market still more. To save expenses several consignments were sold on the wharf at concessions on current quotations. Crop advices are unchanged. Corn under freer receipts is easier, with some

shading in prices. Crop advices continue favorable.

The market is dull and weak for both rye and buckwheat. New rye sold at \$1.60.

At the end of the season, with harvesting underway and the midsummer holiday and vacations at hand, the market for all kind of cereals is hard to report correctly, and still more difficult to quote, for quotations are more or less nominal and governed from day to day by the urgency of the demand or selling.

Live-Stock.

The market for dressed meat is quotable as follows by slaughterers to butchers (to get the price of stock on foot, take off one-third of the price for stall and grain fed and one-half from the price of grass fed, that is, animals running at large.)

HOGS—On foot grain fed, 6 1/2@6 3/4c 1/2 lb.; dressed, 9 1/2@10c 1/2 lb.; soft, 5 1/2@6c 1/2 lb.; dressed, 8 1/2@9 1/2c 1/2 lb. Stock hogs, 4@5 1/2c 1/2 lb. BEEF—Stall fed, 8@8 1/2c 1/2 lb.; grass fed, extra, 7@7 1/2c 1/2 lb.; first quality, 6 1/2@6 3/4c 1/2 lb.; second quality, 6@6 1/2c 1/2 lb.; third quality, 5@5 1/2c 1/2 lb. VEAL—Choice 8@9c 1/2 lb.; fair to good, 6@7c 1/2 lb. MUTTON—Wethers, 6 1/2@7d 1/2 lb.; ewes, 6@6 1/2c 1/2 lb.; lamb, spring, 8@9c 1/2 lb.

Choice bullocks and mutton sheep continue scarce, with an advance in the latter, owing to the warmer weather being more favorable to their consumption. That is, butchers can sell them quicker, thereby not losing so much. Hogs are scarcer and higher. In horses there is nothing new to report. Last week's report covers this week's advices regarding the market.

Poultry held strong throughout the past week under light receipts and a good demand.

Honey continues slow with more or less of a deadlock reported.

Hides are improving at the East.

Wool has a stronger tone for the better and more desirable clips. Some dealers report they are able to get a slight advance on last week's prices. Common, dirty and undesirable wool drag.

Vegetables.

The demand for garden truck is not very good, owing to peas being, as a rule, too old for general use, tomatoes too high for canners, and cucumbers too high for picklers. Other vegetables are without much change. Canners are still buying beans at from 3/4c to 1 1/4c per lb.

The demand for potatoes having fallen off from the more distant points, stocks accumulate under freer receipts, necessitating lower prices to induce buying. The quality of this year's potatoes appears to be better than last year's.

Onions continued to strengthen the past week, although at the close a further advance appears to be checked, under freer receipts, and buyers not disposed to take hold so freely.

Fruits.

Orchardists should always keep three things in view in marketing fruits, viz.: First, canneries and also dealers pay the best prices for fruits not too ripe, well selected, and of as even size as possible. The finding of either small-sized or soft fruits below the first two or three layers condemns the entire shipment and causes buyers to bid down. Second, they should advise the firm to whom they ship a day in advance of a free shipment how much they intend to send, quality, size of boxes, etc., which will allow the merchant an opportunity to have buyers for the consignment. Third, it is impossible for any one to give correct quotations of the market, for the writer has known early received in the day fruits to command higher prices than those that come in later on in the day, and then I have seen the early received sell for less money than those received later on. Again some commission merchants will sacrifice one man's consignment for that of another who is a larger grower. Soft fruits are only taken by trucksters or canners, the former to peddle them and the latter to can pie fruits, and consequently there not being much competition, they sell low. The practice is failing to sell the entire crop either in the field or f. o. b. (free on board) of cars to either a dealer or canner, than to take chances in marketing the fruit from day to day.

Cherries are in lighter supply, but then prices do not show much improvement. Dealers are running chiefly on other fruits, and canners only buy certain varieties. Canners continue to pay prices heretofore given.

Apricots have a wide range. I saw some taken by canners which were too soft for fine canning at prices ranging from 1c per lb. up to 1 1/2c, and some better selected and firmer taken by the same canner at a range of 2c to 2 1/2c. The market for apricots of good size and firm is strong.

For peaches canners pay from 1 1/4 to 1 1/2c per lb. f. o. b. the cars, and the same for pears, although it is stated that 2c is paid for better selected. For plums, I do not at this writing hear prices named to canners. The light crop of fruits in France is helping our market for canned fruits. During the past ten days over 30,000 cases have been sold for shipment to England. The demand for canned fruits from the East is increasing, causing a better feeling and strengthening prices for all kinds of fruits. The shipment of fruits to the East are still on a large scale.

In currants canners are buying at \$1.75@2.25 per chest, and the trade at \$2@3, and at times slightly more. In other berries the market is without change. The advance in canned strawberries at the East causes a slightly more increased attention to be paid to the berry by canners here. The market from day to day is regulated by the demand and supply.

In dried fruits there is nothing doing. The warmer, clearer weather allows more sun-drying. It is thought that a good demand will rule for the new crop, particularly as the market is well cleaned up of old both here and at the East.

Raisins are cleaned up. The market is in good position for new crop both here and at the East.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.			
WEDNESDAY, June 27, 1888			
BEANS AND PEAS.	Extracted, light	6 1/2	7 1/2
Bayo, cts.	2 1/2@2 1/2	do dark.	5 1/2@6
Butter	—	HOPS.	—
Peas	3 40@3 05	Oregon	6 1/2@15
Red	1 75@2 00	California	6 1/2@15
Pink	2 00@2 25	ONIONS.	—
Large White	—	New	55@70
Small White	3 00@3 00	NUTS, JOHNS.	—
Lima	3 00@3 00	Walrus, Cal	6 1/2@8 1/2
Flt Peas, bkg	2 00@2 20	do Chile	6 1/2@8 1/2
do green	3 00@4 00	Almonds, bld shd.	5 1/2@6
do Niles	1 90@—	Soft shell	11 1/2@

BROOM CORN.			Paper shell.....	14 @	15
South'n 3/4 ton... 60 @ 00			Brazil.....	9 @	11
North'n..... 60 @ 00			Pecans.....	10 @	16
CHICORY.			Peanuts.....	4 @	6
California..... 6 @ 7			Filberts.....	10 @	12
German..... 7 @ 8			Hickory.....	5 @	8
DAIRY PRODUCE, ETC.			POTATOES.		
BUTTER.			Early Rose.....	20 @	60
Cal. Com. to fair, 25 @ 24			Chile.....	50 @	55
do good to choice 25 @ 26			Peerless.....	40 @	60
do Fancy brands 27 @ 27 1/2			POULTRY AND GAME.		
do picked..... 27 1/2 @ 28 1/2			Hens, doz.....	6 50 @	8 50
Eastern..... 14 @ 20			Roosters.....	5 50 @	10 10
CHEESE.			Brilliers.....	3 00 @	5 50
California, lb..... 9 @ 11 1/2			Ducks, tame.....	4 00 @	7 50
Eastern style..... 10 @ 13			Geese, pair.....	1 25 @	1 50
EGGS.			do Goslings.....	1 75 @	2 00
Cal. ranch, doz..... 25 @ 26			Turkeys, lb.....	15 @	20
do store..... 20 @ 24			Rabbits, doz.....	1 25 @	1 50
Eastern..... 16 @ 19			Hare.....	1 00 @	1 75
FEED.			PROVISIONS.		
Bran, ton..... 15 00 @ 17 00			Cal. Bacon.....	11 @	12 1/2
Feed meal..... 29 00 @ 30 00			Heavy, lb.....	12 @	12 1/2
G'd Barley..... 18 50 @ 20 00			Medium.....	12 @	—
Midlings..... 17 50 @ 19 00			Light.....	12 @	—
Oil Cake Meal..... 23 00 @ 25 00			Extra Light.....	13 @	—
HAY.			Lard.....	9 @	11
Wheat, per ton, 10 @ 15 00			Cal. Smoked Beef.....	11 1/2 @	12 1/2
Wheat and Oats 10 @ 12 00			Hams, Cal.....	12 @	14
Wild Oats..... 10 00 @ 11 50			do Eastern.....	14 @	15
Clover..... 12 00 @ 14 00			ALFALFA, SEEDS.		
Tame Oats..... 10 00 @ 12 50			Alfalfa.....	8 1/2 @	9
Barley..... 8 00 @ 10 50			Canary.....	3 1/2 @	4
Barley and Oats 10 @ 11 00			Clover, Red.....	11 @	11 1/2
Alfalfa, 1st cut, 8 @ 9 00			White.....	20 @	22
Straw bale..... 40 @ 50			Cotton.....	20 @	—
FLOUR.			Flaxseed.....	2 @	2 1/2
Extra, City Mills 4 @ 4 35			Hemp.....	4 @	4 1/2
do City Mills 3 75 @ 4 00			Italian Rye Grass.....	10 @	11
Superfine..... 3 25 @ 3 50			Perennial.....	7 @	9
GRAIN, ETC.			Millet, German.....	5 @	6
Barley, feed, chl..... 80 @ 92 1/2			do Common.....	5 @	6
do Brewing..... 95 @ 115			Mustard, white.....	12 @	13
Chevalier..... 1 10 @ 1 20			do Brown.....	2 @	3
do Coast..... 1 50 @ 1 70			Rape.....	14 @	2
Buckwheat..... 1 50 @ 1 70			Ky. Blue Grass.....	15 @	17
Corn, White..... 1 45 @ 1 55			2d quality.....	13 @	15
Yellow..... 1 25 @ 1 30			Sweet V. Grass.....	7 @	—
Oats, milling..... 1 40 @ 1 50			Orchard.....	17 @	18
Choice feed..... 1 32 1/2 @ 1 35			Red Top.....	9 @	10
do good..... 1 27 @ 1 30			Hungarian.....	8 @	—
do fair..... 1 22 1/2 @ 1 25			Lawn.....	30 @	40
do Gray..... 1 35 @ 1 37 1/2			Mesquit.....	8 @	9
Rye..... 1 50 @ 1 60			Timothy.....	7 @	—
Wheat, milling..... 1 45 @ 1 50			TALLOW.		
Gilt edged..... 1 38 1/2 @ 1 40			Crude, lb.....	3 @	5
do Choice..... 1 35 @ 1 37 1/2			Refined.....	6 @	7
Shipping, choice 1 33 1/2 @ 1 35			WOOL, ETC.		
do good..... 1 31 1/2 @ 1 32 1/2			SPRING—1888.		
do fair..... 1 30 @ 1 31 1/2			Humboldt and.....	15 @	18
HIDES.			do Mendocino.....	15 @	18
Dry..... 11 1/2 @ 12			Sacramento valley.....	12 1/2 @	15
Wet salted..... 5 1/2 @ 6			Free Mountain.....	15 @	18
HONEY, ETC.			S. Joaquin valley.....	10 @	13
Beeswax, lb..... 20 @ 24			do in outfit.....	12 @	17 1/2
Honey in comb..... 11 @ 15			Cal's & Fithell.....	12 @	17 1/2
do fancy..... 14 @ 15			Oregon Eastern.....	— @	—
			do valley.....	— @	—

Fruits and Vegetables.

Extra choice in good packages fetch an advance on top quotations, while very poor grad's sell less than the lower quotations.

Apples, bx, cov	30 @	75	do evaporated	5 @	7
do Choice.....	1 00 @	1 50	Plums, evapor'd	10 @	11
Apricots, bx....	37 @	60	do unpi. ted..	4 @	5
do Royals.....	40 @	65	Prunes.....	5 1/2 @	9
Bananas, bunch	2 00 @	4 00	do French.....	8 @	11
Blackberries, ch	50 @	7 00	RAISINS.		
Cherries, wh, bx	50 @	75	Dehesa Clus, fcy	3 25 @	3 50
do black, bx....	40 @	75	Imperial Cabin	2 00 @	2 25
do Royal Ann..	50 @	85	et, fancy.....	2 00 @	2 25
Cranberries.....	10 00 @	12 00	Crown London	2 00 @	2 25
Currents, ch....	2 @	3 50	Layers, fcy..	2 00 @	2 25
Go seberries lb.	1 1/2 @	7	do Loose Mus-	cats, fancy	1 90 @ 2 10
Limes, Mex....	2 50 @	4 00	do Loose Mus-	cats.....	1 60 @ 1 90
Lemons, Cal, bx	2 00 @	3 00	Cal. Valencia..	1 50 @	1 80
do Sic ly, box..	4 50 @	6 00	do Layers.....	1 50 @	1 60
Oranges, Com bx	3 00 @	4 00	do Sultanas....	1 60 @	1 75
do Choice.....	— @	—	Dried, sacks, lb.	5 @	6
do N avels.....	3 50 @	5 00	Outside brands of raisins	sell at from 25 cts to 50 cts less	than above quotations.
do do Con.....	2 00 @	3 00	Fractions come 25, 50 and 75	cents higher for halves, quar-	ters and eighths.
Peaches, bx....	40 @	65	VEGETABLES.		
Pineapples, doz.	2 50 @	4 50	Asparagus, bx.	75 @	1 25
Raspberries, ch	4 00 @	6 00	do extra choice	2 00 @	3 50
Strawberries ch.	3 50 @	6 00	Okra, dry, lb..	15 @	25
Pears, bx.....	40 @	75	do Green lb....	25 @	30
Plums, 3/4 bx...	50 @	1 25	Pars ips, ctd..	1 50 @	1 75
Pl s, black, bx..	40 @	1 00	Peppers, dry, lb.	8 @	10
do white, bx....	25 @	50	do green, bx..	75 @	1 00
Grapes, bx.....	1 00 @	1 50	Squash, Sum-	mer, bx.....	25 @ 40
Nectarines, bx.	1 25 @	1 75	String beans, lb.	1 @	3
Watermelons, cr.	2 50 @	3 50	Turnips, ctd..	1 @	1 25
Cantaloupes, cr.	3 00 @	6 10	Beets, sk.....	1 25 @	1 50
Blackberries, bx	5 00 @	6 00	Cabbage, 100 lbs	90 @	1 00
			Carrots, sk....	30 @	50
			Green Corn, sk.	50 @	1 00
			do Sweet doz.	10 @	15
			Green Peas, sk.	75 @	1 00
			Sweet Pea, sk..	75 @	1 25
			Mushrooms, lb.	5 @	25
			Rhub, lb, bx...	25 @	75
			Cucumbers, bx.	25 @	75
			Garlic, lb.....	3 @	1
			Tomatoes, rv, bx	1 00 @	1 25
			do Vacaville, bx	30 @	45
			do Alameda, bx	— @	—

GRANGERS' BANK

OF CALIFORNIA,
SAN FRANCISCO, CAL.
INCORPORATED APRIL, 1871.



Authorized Capital.....\$1,000,000
Capital paid up in gold coin.....624,160
Reserved Fund.....40,000
Dividends paid to Stockholders.....515,620

OFFICERS.
A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver.
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and country produce a specialty.
Jan. 1, 1888. A. MONTPELLIER, Manager.

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Self-Regulating
WINDMILL

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Solid Wrought iron Crank Shaft
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to work in, all turned and run in ad-
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Positively Self-Regulating,

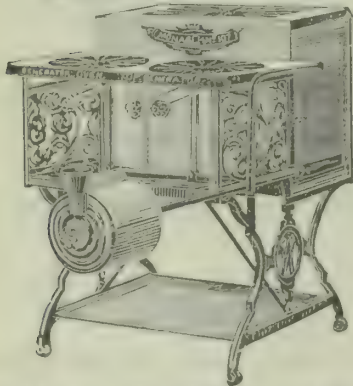
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Using the Benoit Corrugated Rollers.

STILL AT THE FRONT.

VALUABLE IMPROVEMENTS HAVE BEEN
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This Mill has been in use on this Coast for 7 years,
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It is the most economical and durable Feed Mill in use. I am sole manu-
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M. L. Mery, Esq.—DEAR SIR: The No. 14 Barley
Crusher bought of you and used in the California Mills,
gave entire satisfaction; have crushed 8000 pounds an
hour. I have also crushed as much or more on set 10x20
when working for General Bidwell, which set he is using
in his mill to-day. Yours truly,
GEO. SHAND.

ORLAND, CAL., August 5, 1887.

Mr. M. L. Mery—DEAR SIR: In reply to yours of
August 1, 1887, regarding the mill I bought of you, would
say that the No. 2 gives perfect satisfaction, and that I
can crush from 1000 to 1200 sacks of Barley per day. I
will recommend it to the public for good work and lots
of it. M. C. DILLMAN.

I thank the public for the kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY, Chico Iron Works, Chico, Cal.

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For Squirrels, Gophers, Birds, Mice, Etc.

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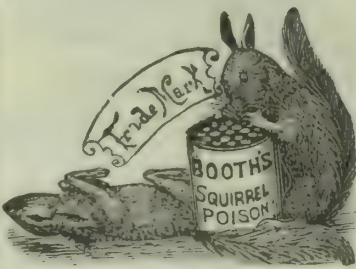
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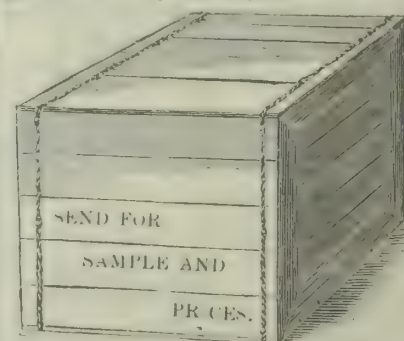
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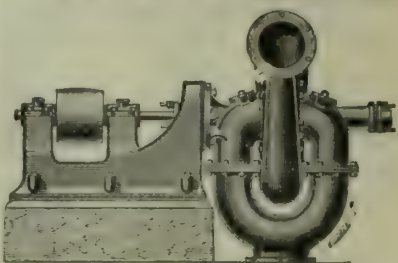
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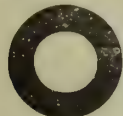
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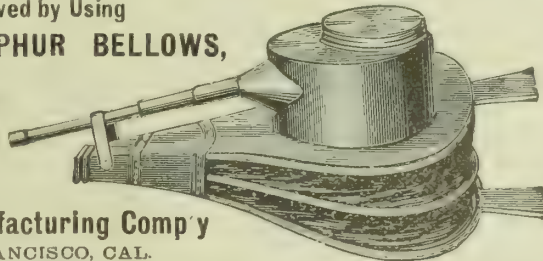
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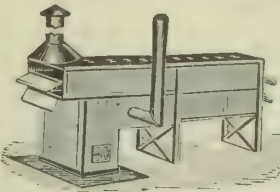
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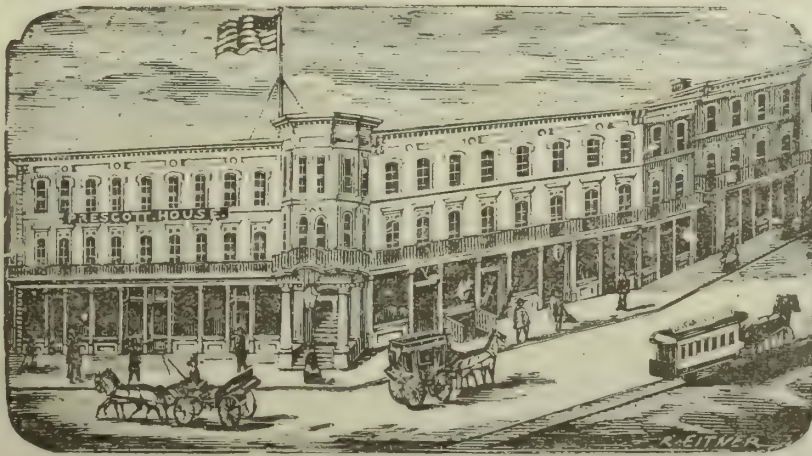
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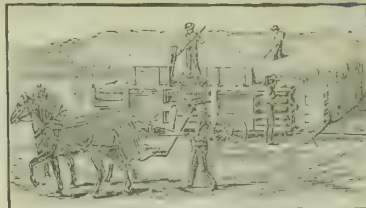
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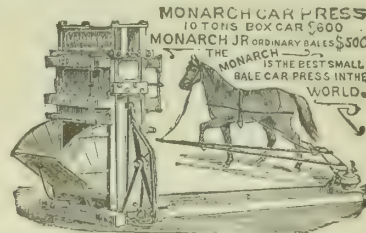
A mounted, horizontal double-ender. Size of bale,
when in the press, 17x22 1/2 inches. Average weight of
bale, 220 pounds. Capacity, from 16 to 25 tons per day.
Uses 4 men and works with 2 horses. Requires no
tramping. Puts 10 tons or over in a box car.

Price.....\$1000.

THE HURRICANE—Size B.

Size of bale in press, 22x24x46 inches. Average
weight of bale, 260 pounds. Capacity, from 20 to 35
tons per day. Uses 5 men and works with 1 or 2 horses,
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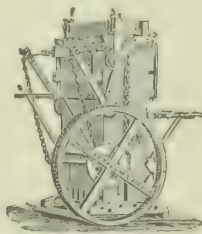
Size of bale in press, 22x24x46 inches. Average
weight of bale, 260 pounds. Capacity, from 15 to 25
tons per day. Uses 3 or 4 men, at option of baler.
Works with 1 or 2 horses. Uses rope or wire. Does its
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Price.....\$500.

THE MONARCH.

Same principle as Junior Monarch, only smaller and
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Average weight of bale, 220 pounds. Capacity, from 12
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Puts 10 tons or over in a box car.

Price.....\$600



THE GENUINE PRICE PETALUMA.

Size of bale in press, 24x24x50 inches. Average
weight of bale, 250 pounds. Capacity, from 10 to 15
tons per day. Requires 4 men and 2 horses. Uses rope
or wire. Hay has to be tramped into the press. Puts
from 5 to 6 1/2 tons in a box car.

Price.....\$350.



THE IMPROVED EAGLE.

Size of bale in press, 26x26x60 inches. Average
weight of bale, 235 pounds. Capacity, from 10 to 15
tons per day. Requires 4 men and 2 horses. Uses rope
or wire. Hay must be tramped in the press. Puts from
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